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INTERNATIONAL EXPERIENCES**

Evžen Řehulka (ed.)



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SCHOOL AND HEALTH FOR THE 21ST CENTURY

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INTRODUCTION

The staff at the Faculty of Education at Masaryk University in Brno have been concerned with health education for almost twenty years now, during which time it has gradually become a separate discipline, though continuing to draw on their many years of experience, with lecturers in various fields at the Faculty of Education incorporating ideas about health, prevention, health promotion, quality of life and so on into their teaching. Without attempting to enumerate all the individual fields concerned, we should give a mention here to pedagogy, psychology, special pedagogy, social pedagogy and physical education, for which the new conception of health “as a state of complete physical, mental and social well-being, rather than merely the absence of disease or defect”, as health is defined by the World Health Organisation (WHO), has been an inspiration. All disciplines that play a part in the education of mankind have found their application here, with their importance being further underlined by additional materials such as HEALTH 21 (WHO) and the pertinent passages of the General Educational Programmes that have given a new direction to the Czech educational system.

The Faculty of Education at Masaryk University contributes to these endeavours with various projects, pieces of research and studies. The research project SCHOOLS AND HEALTH FOR THE 21ST CENTURY (*MSM0021622421*), implemented in the period 2005 to 2011, is a relatively large project of this kind. With the issuing of this publication, we now find ourselves in the final phase of work on this project, and the anthology is taking its place as the latest of a series of publications that we have already issued as part of the given research project.

The basic project team working on this piece of research is comprised of staff from Masaryk University, and the Faculty of Education in particular, though over the number of years of work on the project the topic of our investigation has attracted a number of external collaborators from both this country and abroad. We are delighted that our work has received a positive response abroad, and that our foreign colleagues are taking part in our activities and likewise inviting us to work with them.

Although foreign experts publish in practically every anthology we issue, we have devoted this publication to them to a much greater extent in order to show how issues associated with health education are studied abroad. We have also included papers by a number of Czech authors in the anthology, ensuring that the publication offers an interesting comparison of specialist work in the area of health education in the international context.

The publication as a whole is, as usual, of a working nature. The authors are completely responsible for their own texts, and contact details for all the authors are given at the end of the publication. Their studies offer diverse material in terms of

both content and form, and the editor of the anthology hopes that the book *Schools and Health – Health Education – Experience in This Country and Abroad* will prove inspiring and interesting, and encourage discussion.

Brno, November 2010

Evžen Řehulka
researcher

SCHOOLS AND HEALTH FOR THE 21ST CENTURY

IMPLEMENTING HEALTH EDUCATION IN SCHOOL PRACTICE

Josef MAŇÁK

Abstract: *As a pressing problem, the modern man's health draws a lot of attention from world organisations, and health education has become an obligatory requirement of school reforms. In the CR, health education is an obligatory part of both framework educational programmes and school educational programmes, where it features in education areas of „Man and His World“ and „Man and Health“, and it should in fact be present in all education work. Its implementation into everyday practice, however, is not satisfactory. Reasons for the slow implementation of health education in the practice are both general and specific. With little attention being paid to their analysis, declarations of demands and organisational proposals predominate. Health-promoting education can successfully be implemented in schools only through a change in people's thinking and their lifestyles. Health-promoting education cannot be perceived as a supplement to curriculum topics, but it should rather be integrated as a necessary part to the structure of the entire system of education. The author mentions several well-proven approaches that deserve to be incorporated to work of every school.*

Keywords: *health-promoting education, school educational programmes, implementation, change in thinking, lifestyle, systems of education*

1. Health Education – An Urgent Problem

Compared with the recent past, human life is getting better and growing longer. Yet, a global movement to promote health is gaining strength. Isn't it paradoxical? Not really, because this is a new concept of health that encompasses not only the person's physical self but also his or her mental and social persona, in other words the entire habitus of contemporary man with the emphasis on quality of life. In that sense, not all is well with our health, because the factors that jeopardize our wellness are on the rise, such as still-untamed pandemic diseases, the prospect of new contagious ones, growing drug dependency, psychological pressures, etc.

These threats to our health are under intense scrutiny, but the field of inquiry is so broad that causal relationships are not always readily apparent. The spotlight has been on the various branches of medicine but those tend to treat the disease only. Much emphasis is placed on a healthy diet, but it is not easy to overcome those entrenched

habits and stereotypes. There is a growing awareness on the social and psychological fronts, but that too is hindered by the ever-faster pace of life and data overload from the information explosion, combined with thrill-chasing and rising hedonism.

A common denominator of all factors that impact a modern man's well-being and are positively supportive of health is obviously the effect of education. Not a one-time verbal indoctrination of an individual, but a deliberately structured ambiance with a system of conditions and incentives designed to attain, by means of societal cooperation, some specific goals. Schools, with their potential for making a major contribution to health education, are indispensable in that process.

2. Health Education in School Documents

The current schooling reform certainly recognizes the need for health awareness, starting with the goals of basic education: "To teach students how to actively develop and protect the physical, mental and social health, and be responsible for it" (Framework Educational Program for Basic Education, 2005, 13). The educational segment *Man and Health* has a definite role in that regard, namely the modules *Man and His World* (from the thematic area *Man and His Health*), *Health Education*, and *Physical Education*. In addition, the *Health Education* unit ties in with an interconnecting theme called *Individual and Societal Education*. Learning about health, and actually supporting and protecting it, is being stressed as one of the priorities of basic education. An analysis of the reform package in terms of health education was discussed in an earlier study (J. Maňák, 2008).

All prerequisites for an effective health-oriented program are spelled out in the reform-defining documents. They set clear objectives, outline the content of health-related issues, give instructions, methodological guidelines and organizational directives. Yet, in spite of all that, health education falls short of the expected results. This is yet another paradox engendered by our daily reality in a tangible display of relationship between theory and practice. Some studies have pointed out the unsatisfactory state of health education as it is currently taught, contrary to proclaimed intent, but a correction is nowhere in sight.

3. Theory and Practice in Philosophical Reflection

The endeavor to carry out a reform, especially in health education, is likely to run into difficulties, both objective and subjective in nature. Obstacles exist at all levels and frequently present serious problems. What they have in common is a dichotomy between theory and practice. Already in antiquity, philosophers pondered the dialectic nexus between the two. Aristotle recognized skills (*techné*) and practical understanding (*phronesis*) as opposed to theoretical knowledge (*sophia*). He considered teaching to be a skill that has to emanate from practicality but rest on theoretical foundations, since practice alone is not good enough for higher aspirations. For Plato, however, the ideas and concepts (*spistémé*) were primary, for being common and universal - true representations of the real world. In the middle ages, the issue of ideas vis-à-vis concrete things surfaced again in controversies about the so-called realism (*universalia sunt realia*) and

nominalism (*universalia sunt nomina*). This conflict between the ideal world (theory) and the real world (practice) manifests itself in a variety of ways to this very day.

Even though the link between theory and practice is well known, it still causes a certain amount of tension and a tendency to deal with each category separately. The antinomy of theory versus practice is also reflected in different pedagogical concepts, as well as in the actions of individuals and institutions, with the theoretical part being viewed as superior and dominant. An example of this may be the traditional faculties that pursue certain disciplines but also train professionals. The newly created pedagogical faculties emphasize practice, which makes them less valuable in the eyes of the old academia (in this case the faculties of philosophy and natural sciences).

The question of theory and practice is also a key issue in the cognitive process. Building on what started as a practical orientation in its environment, mankind progressively gained a deeper understanding of things. The civilization and culture arose thanks to the emergence of speech and the development of thinking, which enabled the theory to flourish in dialectic unity with evolving practice. The history of human society affirms that these are not two separate approaches to reality, but a continual, mutually pervasive interaction of both domains. The relationship of thinking and practical activity keeps unfolding along an exponential curve with a varying ratio of the two factors. This relationship may be analyzed for quality or functionality but without an implication of superiority of theory over practice or practice over theory.

The linkage of theory and practice is also an important subject in some philosophical concepts and thought systems. It became a centerpiece of the Marxist philosophy, which says that it mirrors the spiritual and material character of a socio-historical process that examines and transforms both nature and society. However, the relationship of theory and practice is present vicariously in other philosophical schools and spiritual movements because it poses the fundamental epistemological question, although not formulated as such and overshadowed by other aspects. Let us mention two contradictory examples: The „realistic“ philosophy of K.R. Popper, particularly his “three-world theory” (physical reality – human consciousness – theory and problems), may be seen as an attempt to find a new solution to the juxtaposition of theory and practice. On the other hand, movements that consider thinking to be the basis of all existence are becoming fashionable, for example shamanism, which posits that „everything is moved by a hidden intelligence“.

4. Implementation - The Road from Theory to Practice

While theory and practice may be antithetical, they are also closely related as they define and influence each other. This dialectic bond comes to the fore as we move from generalities to the realm of concrete and practical activities, when the theoretical precepts encoded in plans, projects and laws start to materialize as various tasks and actions impinging directly on a given situation. It is about breathing life into intentions, goals and concepts disguised as directives, regulations, etc. In the educational arena, when the ideas turn into acts of nurturing and teaching, we talk about a reform, an innovation, an implementation.

To reform is to transform, adapt or improve something, to effect a permanent

change by charting the main course of action without getting deeper into the process. Innovation is different in that it implies an immediate practical adoption of all the changes, novelties and suggestions, along with a methodical application of all incremental improvements. The transition from intention to action is best expressed by the word implementation, which denotes the process of transferring a theoretically expressed idea or concept into reality, with the intent of changing a practice or structure in accordance with the participants' new insights, abilities, attitudes or activities. Implementing a reformed concept in health education thus tends to satisfy the White Book theses, the General Educational Program for Basic Education, and other relevant documents, by means of the pedagogical work of teachers in charge of the various educational activities. This is the final, and the decisive, part of the schooling reform.

On one side are the elements of implementation: goals, visions and ideas articulated in the school papers (the theoretical part), on the other is the educational process (the practical part): the tutelage of teachers and the learning of students in a supportive atmosphere (school, classroom, family, fraternity). These elements represent an open system that yields the desired results only if all components function properly. Implementation is actually a process with three distinct phases: cognitive, transformative and evaluative. The first phase (understanding, acceptance, identification with the reform) is critical, because the subsequent implementation phases cannot be brought to fruition without a conscious acceptance of the objectives. The implementation process depends a lot on the program management, which has to ensure democracy in leadership and encourage everybody to take responsibility for his or her assignment.

5. Problems in Implementing Health Education in Schools

Upbringing may be viewed as an open system geared to achieve certain educational goals. Like any other system, it is a complicated network of individual elements which cannot be disrupted without serious consequences. Health education, being a subset of the entire education system, is bound to exhibit the same correlations. Checking the outcome of completed reforms, some problems (non-functionality of systemic elements) were noted also in the area of health education. That hampered, and even threatened the success of, the reform.

In implementing some general school innovations, H. Altrichter (2004) found that reforms in many schools run into teachers' reluctance to do things differently because there is a lack of preparation due to insufficient central management. There is no continued training, the school supervision is incompetent, etc. This finding is fully applicable to our reform and to health education as well. The stifling effect of mushrooming curricula on the acceptance of innovations was pointed out by L. Mužíková (2009). T. Janík's research (2010, 148) confirmed that „a critical transition from the text of a concrete document to an instructional practice easily evades the reach of concentrated attention” - whereupon everything goes back to business as usual.

S. Štech (2007, 332) stated that the area of responsibilities suffers from a nebulous connection between the theoretical ideas and actual practice. V. Mužík found that “the new concept of motion in school requires a novel teacher preparation and a modification of established procedures” (1997, 14).

Other investigative probes and observations of teachers' efforts to innovate mention similar shortcomings. For example M. Fullan (2008, 121), investigating the acceptance of innovations in schools, concluded that the theses on which the reform intentions are based often does not even reach the student, so the intentions have no effect. The conclusions of the listed, and unlisted, research reports about introducing reforms into school practice confirm that even a theoretically well-thought out reform frequently encounters minimal readiness on the implementers' (i.e. the teachers') part. This has to do with poorly managed implementation, inadequate control of the applied measures, insensitivity to the uniqueness of educational phenomena, and the like. The management typically focuses on organizational matters and tends to address isolated problems rather than the systemic ones, so the problem fixing is slow and it often ends in going back to the old routine.

A success of the new concept in health education also depends to what degree the efforts to inspire all influential parties (elements of the system) to do their part in the reform succeed. It is highly desirable to select an educational strategy that will be effective under local conditions. Moreover, it is essential that the teachers identify with the reform objectives and establish a close cooperation with the family. It is further important to lead the students toward synthetic reasoning (R. Rybář, 2009), show them new ways of thinking, give them facts about health education and incorporate adequate physical activities in scholastic work (V. Mužík, T. Janík, 2007). To make such changes in the established practices is certainly challenging, which is why a dose of positive psychology might be helpful in reinforcing optimistic attitudes (A. Lehersová, 2009). Success in implementing this type of a reform will portend a gradual emergence of a new lifestyle, including working and eating habits, as well as cultural behavior consistent with a fulfilling life in an information-oriented society.

Suggestions how to improve health education include both general didactic measures and specific methodologies that may differ in nature but should be always aligned with the overall thrust of the educational task at hand and tailored to local conditions. Every school should be able to offer healthy meals to the pupils and do away with vending machines for sweet drinks, while maintaining a hygienic and esthetically pleasing environment.

A greater change in the curriculum is to introduce an extended break and use it for some organized physical activities. It would be actually a return to similar practices in the reform schools of the 1930s. Every school should have a summer camp in its program, patterned after the Boy Scouts, and hold athletic contests suitable in the local setting. An inspiration could be drawn from the school systems in other countries where such fitness activities abound, for example the so-called "Bewegte Schule" (School in Motion) in Austria. As evident from these and other verified and proven examples, health education is possible - if you take its goals to heart and get involved to make it happen.

6. Conclusions

Foreign research of these issues also addressed the question of how conservative are school teachers (H. Eichelberger, 1981). Other investigations (J. Maňák, 2001) concluded that the Czech teachers are still affected by the suppression of unauthorized

initiative as practiced by the former regime, which made some teachers just to follow orders and instructions. The situation is slowly improving but there is still not enough initiative, individuality and creativity. Our survey also confirmed that the educators read few professional books and magazines, and that meetings and seminars dedicated to innovation are only sporadic.

Health education cannot be separated from the school's main mission: to expose young people to interesting activities that will allow each student to find his or her own path to growth and self-improvement. Health awareness should of course permeate all scholastic work naturally as an essential ingredient in the development of a healthy and harmonious personality. Likewise, the educators should embrace this philosophy and continue to grow professionally. It is therefore imperative to enable a continual training and self-education of teachers without waiting for the central authorities to bring about the necessary conditions. One way to do it is to encourage involvement, strengthen the teaching ethos, and foster a new mentality.

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IMPLEMENTACE VÝCHOVY KE ZDRAVÍ DO PRAXE ŠKOL

Abstrakt: Zdravotní stav moderního člověka je jako naléhavý problém předmětem intenzivního zájmu světových organizací a výchova ke zdraví se stala též závazným požadavkem školských reforem. V ČR je výchova ke zdraví povinnou součástí rámcových vzdělávacích programů, i školních vzdělávacích programů, je zařazena do vzdělávacích oblastí „Člověk a jeho svět“ a „Člověk a zdraví“ a měla by prolínat veškerou edukační práci. Její zavádění do denní praxe škol je však neuspokojivé. Příčiny pomalé implementace výchovy ke zdraví do praxe jsou jednak obecné, jinak specifické, jejich analýze se však věnuje malá pozornost, převládají proklamace požadavků a organizační návrhy. Cesta k úspěšné realizaci výchovy ke zdraví vede hlavně přes změnu myšlení a životního stylu. Výchovu ke zdraví nelze totiž chápat jen jako doplňující kurikulární téma, nýbrž je nutno ji začlenit jako nezbytnou součást do struktury celého edukačního systému. Stať upozorňuje na některé osvědčené postupy, které by bylo žádoucí zařadit do práce každé školy.

Klíčová slova: výchova ke zdraví, školní vzdělávací programy, implementace, změna myšlení, životní styl, edukační systém

CHILDREN HEALTH SAVING TOPICAL CONCEPTIONS IN THE CONTEXT OF EDUCATIONAL AND PEDAGOGICAL HISTORY

Yelena Viktorovna KOVALEVA

Abstract: *This article focuses on the main ideas of health keeping in the context of the history of education and pedagogical thought. The main attention is concentrated on the disclosure of the ideas of Czech pedagogue Yan Amos Komenskiy and Russian pedagogues: Peter Frantsevich Lesgaft, Konstantin Dmitrievich Ushinskiy, Vasilii Alexandrovich Sukhomlinskiy, Shalva Alexandrovich Amanashvili. Nowadays the address to the ideas of famous pedagogues is not only actual but also necessary for bringing them into life during the search for the solutions of the problems of preserving the health of the children.*

Keywords: *The conservation of health (health conservation), the principle of the responsiveness of the child's individual peculiarities, problems of psychophysical formation of personality, research monitoring of children's health*

The dictionary by Ozhegov treats the notion of health as normal and regular organism activity. It is obvious that our understanding of the word "health" makes it the corner stone of human wealth. Only a healthy person can be the master of his or her destiny and be successful in private and professional life. Due to this fact the preservation and improvement of children health should become the major task of any state. However contemporary states of things demonstrate the worsening of pupils' health. It causes the concern of teachers and parents of the pupils.

It should be mentioned that the federal decree about education which guarantees the right of education says: 'An educational institution is to create the appropriate conditions to provide the preservation and improvement of pupils' health. According to the Russian legislation and the institution regulations the officials of the educational institutions are responsible for creation of appropriate conditions of studying, work and rest. Unfortunately the guaranteed by law right of health preservation is usually not expressed in a practical way. We think that it is caused by the fact that the education in this country is still not orientated on the shaping of the priority of health as one of the most important human values. And so a pupil has to pay an extremely high price for his or her education. The students of pedagogical specialties of Vitus Bering Kamchatka State

University in the course of their pedagogical practice demonstrate strong emotions after their acquaintance with the medical records of the pupils containing the information about their chronic diseases. The primary perception of the problem of pupils' health by the future teachers brings the students to the assumption that medics should give more serious attention to the issues of children's illnesses prophylactics. Gradually, analyzing the lessons they attend, the students recognize the crucial role of the educators themselves in children's health conservation.

At the same time, most of the teachers consider that only are responsible for children's health. However the system of health services makes an emphasis on the illness, but not on health. We are sure that the education and upbringing of children should become health-preserving and health-improving on the basis of purposeful cooperation of physicians and teachers.

We think that the educational process should be organized so that at each lesson the teacher could favor the preservation of pupils' health. To achieve this we should develop pedagogy in the stream of health-preservation. There are a lot of solutions of this problem in the history of pedagogy.

The Great Didactic by Yan Amos Komenskiy we can learn that it is very important to organize the process of education so that "all young people of both sexes could study sciences, master their knowledge of rights, get suffused with piety so that to learn everything which is important for life. Briefly, pleasantly, well." We think that a pupil enjoys it when the teacher tries to diminish the negative influence of educative process on children's health. To do it he or she tries to change kinds of activity during the lesson, to appeal to personal experience of his or her pupils, to create "situations of success", but what is the most important the teacher should go by the principle of conformity to nature. It is not a secret that for the majority of children the process of studying is not motivated enough and so it turns out to be forced, tedious and leading to the worsening of health.

It is important to emphasize that Yan Amos Komenskiy was the first among the educationists who successively justified the principle of nature-congruity based on the humanistic principles of his predecessor. This principle was successively described in Komenskiy's Didactics primarily in the conception of nature imitation (the so-called natural method of education) [2]. This idea implies putting into correspondence the pedagogical laws and laws of nature. The works of Ya. A. Komenskiy are full with the faith into human personality whose blossom had always been the sacred dream of the outstanding Czech's educationalist. Assignably he writes in the first lines of his Great Didactics: "A human being is the most supreme, the most absolute, and the most perfect creature" [2]. The Czech's educationalist confirmed that human entity possessed the independent and automotive force. On this basis the scientist couched as the pedagogical requirement the principle of educatee's independence in the apprehension and active absorption of the out world. Rethoughting at present these ideas in the context of children's health conservation we are to mark the necessity of operation of active educators-teachers interaction in the processes of education and upbringing. The most important here is the Socratic Method in education stipulating the self-maintained pupil's search in the educational process.

We would like to mention that the systems of Vasiliy Alexandrovich Sukhomlinskiy and Shalva Alexandrovich Amanashvili created in Russia contribute to the preser-

ving of pupils' health. These systems are considered as "the seats of humanistic culture of Russian education of the 60-80Th. Speaking about the humanization of education we should put the stress on the fact that among its factors should be the attention paid to the psycho physiological peculiarities of children, which presupposes considerable joint work of psychological and pedagogical services. Unfortunately, modern educationalists have got limited knowledge in this field. This fact could be treated as the obstacle standing on the way of children's health conservation. It is important to revise currently the names of the scientists from the history of pedagogics who gave the priority to the teachers' education in the issues concerning children's physical development.

We would also like to mention that Peter Frantsevich Lesgaf't takes his place among the most important figures of Russian pedagogy.

Already at the end of the 19th century in his work "Family education and its importance" the scientist paid attention to the necessity of thorough study of children's peculiarities in school and family educative work. Peter Frantsevich Lesgaf't could be called by right the founder of school hygiene and medical-pedagogical control in physical education, the fact, which emphasize again the crucial role of the educationalists themselves in their educatees health protection.

In his work "The Guidance to physical education of schoolchildren" P.F Lesgaf't proposes a highly original system of physical education based on the principles of gradual development and the principles of harmony. The interaction of physical and intellectual upbringing is the major idea of Lesgaf't's theory of physical education. According to the Russian scientist physical exercises contribute to the practical mastering of theoretical knowledge and improve the general level of children's readiness to act on their own. The anthropological principal lays the foundation of the theoretical pedagogics of P.F. Lesgaf't. Its goal is to specify the importance of child's personality as the greatest value for the educator. The basic assumption of educational theory of Russian educator, anatomist, and doctor was in the unity of human's physical and mental development [4].

The whole system of P.F Lesgaf't is devoted to four pedagogical tasks of personality shaping. They are : 1. to train to doing physical exercises and to familiarize with their importance for difficult work ; 2. to form persistence in long activity and the ability to control oneself during work processes which need a lot of effort; 3. to train to greater amount of independence in the actions; 4. to contribute to the expressions of will. Peter Frantsevich offers a lot of advice which has not lost its actuality. According to Lesgaf't a teacher should remember that each monotonous action becomes tedious for a person, all commands of the teacher should be simple and clear, all required actions should be expressed in words and not in motion as this demands a more deliberate work and more attention; the school years should be the period of idea, the time when the moral values of the child and his or her ideas of a person who can control him- or herself form. In this context we would like to mention that only the person who control his- or herself is able to understand the importance of healthy way of life and preservation of health which demands special organizational conditions.

Among the most important conditions we could mention the following:

1. the improvement of professional skills of the teachers in the problems of the preservation of pupils' health;

2. the active drawing of the children into the process of health preservation (the keeping of “health diaries” where a child can at the beginning with the help of his or her teacher mark the successes in the process of physical training, form the plan of conditioning to the cold);
3. the development of special courses for children aimed at shaping of views and the necessity of healthy life;
4. the health monitoring of children with the help of medical workers;
5. the long-term cooperation of school and family in the questions of health preservation;
6. the organization of out-of-school forms of physical education.

If we look at the period of the formation of soviet pedagogy we can see that the main attention was devoted to labor upbringing of the rising generation in its organic tie with intellectual, physical and esthetic ones. A child’s health was viewed in the light of realization of manual labor (Blonskiy, Shazkiy, Makarenko). There appeared a wide chain of health institutions of the new type, health playgrounds, outdoor schools-in the forests, in the field, at the coast. This experience is almost forgotten but due to the general deteriorating of children’s health it is important to remember it to support the younger generation.

It should be mentioned that in his work “ the ways to the labour school” S. Shatskiy emphasizes the idea of the importance following the principle of “bringing childhood back to children” during cooperation with children. S. Shatskiy wrote: “Even the elementary analysis of children’s life can show the sufficient differences between an adult and a child. The main difference is that childhood, adolescence and youth are the periods of development, while we have already finished the process of growth. The characteristic trait of children is their ability to move. To deprive a child of movement is like to dam a river. Another characteristic trait of children is their desire to play, to realize life experience in the form of play. The play is the life laboratory of the childhood”. Taking into consideration the idea of reasonable school according to its contribution to the development of the child S. Shazkiy adds: “School is a place where the the results of individual experience are systematized and shaped and where they get bound to the experience of other people. Thereby the possibility of important intellectual activity is created, the natural forces are developed and mastered”. We would like to add that these natural forces of the child are important for active transformation of World and the person as a part of this world which can contribute to preserving of health of contemporary children.

The famous Soviet educationalist set a high value on the children’s ability to unite the efforts in the sense of common deed in the processes of education and upbringing. We treat this idea as an important one in the context of children’s health conservation as the common interesting work fastens children, motivates them to the high-grade outcome, develops their activity and initiative affecting children’s general emotional tune. In the final, as Ya. A. Komenskiy notes: “... in the youth age one could study all he/she needs for present and future life. Shortly, pleasantly, thoroughly” [2].

There are many conceptions related to the issue of children’s health conservation, therefore, this article does not pretend to the exhaustive solution of this problem and could have further development.

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AKTUÁLNÍ KONCEPCE OCHRANY ZDRAVÍ DĚTÍ V KONTEXTU HISTORIE VZDĚLÁVÁNÍ A PEDAGOGIKY

Abstrakt: Tento článek se zaměřuje na hlavní myšlenky ochrany zdraví v kontextu historie vzdělávání a pedagogického myšlení. Hlavní důraz se klade na objevy českého pedagoga Jana Amose Komenského a ruských pedagogů Petra Franceviče Lesgafta, Konstantina Dmitrijeviče Ušinského, Vasilije Alexandroviče Suchomlinského a Šalvy Alexandroviče Amanašviliho. V současné době je návrat k myšlenkám významných pedagogů nejen aktuální, ale také nezbytný pro hledání řešení problémů ochrany zdraví dětí.

Klíčová slova: ochrana zdraví, princip reakce na individuální rysy dítěte, problematiky psychofyzického formování osobnosti, výzkum zabývající se zdravím dětí

RUSSIAN MODELS OF “HEALTH SCHOOLS”

Vladimir KOLBANOV

Abstract: *Health of pupils in consciousness of majority Russian teachers is connected mainly with exclusion or prevention of disease or indisposition. Hygienic security of educational process is a basis for the most of “Schools of health”. Other ideas and models are: educational institution for weak and ill pupils; centre of assistance to strengthening of pupils health; school, assisting to conservation of children health. All these models are insufficient for the ensuring pupils many-sided development and health. Author demonstrate his own model as the model of healthy life forming for any school.*

Keywords: *common education, pupils health, health school, model, self-analysis, motivation, passport of health*

School of health – what is it? School in which all pupils are absolutely healthy? But it is non-really.

School, where anybody is teaching pupils to be healthy?

Educational program for different groups of population (ill and healthy, both) as a course of elementary medical knowledge?

Medical training centre for adult men, where prophylactic programs are realizing?

We imply the second of four versions: School, which is teaching pupils to be healthy.

In frames of International conference “Health, training, upbringing of children and youth during XXI century” (Moscow, 2004) one of speakers was said opinion: “Thou it is heard paradoxially, but common education in contemporary Russia is dangerous for pupils” [2].

These words are actual today.

“Education and...or health?” – it is one book title. This book edited by Center “Education and Ecology” in Moscow and put on discussion two questions: who is contemporary teacher and who (which person) is pupil today [4].

What we must do today for pupil’s health? Government of Russian Federation connected decision this problem with work of Health Ministry in traditional key medical treatment and prophylactic of diseases. Attempts of some scientists directed on search other paths. These attempts are reflected in publications some periodic editions. The journal “School of health” is edited in Moscow since 1994. This journal was planned as

an inter-disciplinary scientific periodic edition, but really its main contents have a prophylactic or rehabilitation direction of medical or psychological character. Journal give not any answers on teachers questions. Such tendency is typical and for other editions. Other journal “Valeology” edited by Rostov University, its publications more promote decision of school-children problems, but valeology as science about health is persecuted non-official in contemporary Russia.

Notion on health in a majority of people is connected with the absence of any disease. Therefore pupils health in teachers consciousness is connected mainly with exclusion or prevention of disease or indisposition.

Hygienic security of educational process is alone decision of problem in school today. This thesis mostly is a basis for the “School of health”. Such choice was proposed many years ago. Extremely permissible total daily mental educational loading (6–6,5 hours per day for teenagers) was proposed by the V Congress on School and University Hygiene (Prague, 1967). This standard was impossible in the USSR, it is non-real today in Russia.

Other ideas and models were proposed during a few last year.

1. Educational institution for weak and ill pupils. All educational process in this variant is subordinated to medical requirements and use some medical technologies for health. As a rule it is correction school.
2. Centre of assistance to strengthening of pupils health. This unit in school was permitted by Ministry of education of Russia (Order No 1418 in 2000, May, 15). It may have several specialists (psychologists, valeologists, social teachers etc., which is absent in usual schools and whose work is paid by school administration, not by government).
3. School, assisting to conservation of children health. Actualization of health as a basic component of education directed on optimal level competence and development. Lessons of health are included in educational plan of such schools, but they oriented mainly on the sport and physical culture.

Our model of healthy life forming for any school.

Components of model:

- Organization (planning and ensuring).
- Cognitive (health education).
- Methodical (educational methods).
- Diagnostical (objective and subjective data).
- Analytical (analysis and self-analysis).
- Behavioral (way of healthy life forming).
- Informational (data bank).

Organization component included next measures complex:

- teachers qualification increase in sphere of healthy life;
- advising of children and their parents on question of healthy life by all speciality teachers;
- school service of health;
- lessons of health;
- active rest arranging for children and teachers as a means for fatigue prevention.

Service of health is a structure unit of educational institution; it is organization form of interaction of specialists on ensuring a conditions for a forming, preservation, strengthening of health and for a many-sided development of pupils by means of healthy life style. Health service guarantee a realization of pupils rights on development during whole educational process.

Organization principles of health service:

- service has been created by order of institution director;
- leader of health service is a vice-director, assigned by director's order;
- specialists of service are bound to take a training course on the basis of healthy life style;
- director introduce changes in post instructions for specialists of service.

Service doesn't identical or alternative to medical service but consolidate efforts of different specialists for pedagogical, psychological, medical, social, juridical etc. help in rights realization for creating, security and strengthening of pupils health.

Purpose of health service is allround assistance to pupils in education acquisition without waste of health and help in choice of ways of individual activities for health life.

Tasks of health service are:

- Building the educational process in confirmity to pupils individual possibilities;
- Co-operation of all specialists activity in educational institution (school) for realization health programs;
- Creation the condidions, adequate to educational process and maximally favourable for pupils self-development and health in school.
- Main directions of helth service activity
- Diagnosty and forecasting (pedagogical, psychological, medical etc.);
- Prophylactic measures;
- Pedagogical and psychological correction;
- Health education;
- Scientific-methodical ensuring.

An advancement from ideal to real model is performed as a spiral gradually becoming complicated process, including program elements of healthy life style. This is a planning of individual program, its approving and correction step by step.

Cognitive component is began with obligate study of positive and negative factors, having an effect on a human health and prolonged by scrutiny of basic concepts of life stile and scheme of individual health program realization.

There are carried out:

- lessons of health according to education program, passed an consultant's investigation (specially trained teacher may be permitted to carrying out these lessons);
- teachers and parents education planning in sphere of health and healthy life style with using of different educational forms (lectures, seminars, consultations, joint activities);

- elective studies of cognition cycle “A health”, which permit to receive the practical experience in healthy life.

Particular attention is paid on predominant significance of life style among other factors, having an influence on human health.

Results of this activity have been evaluated by means of questionnaires. Cognitive component yet don't form a healthy life style, but create first premises for its shaping.

Methodical component is directed on development of qualities, determining basic properties of individual pupil's health. We distinguish next aspects of pupils well-being in methodical work: moral, physical (motion activity), psychical, somatical (all organism well-being), sensory, reproductive and social.

Moral aspect signify the responsibility for own health and attentive relation to other people health.

Physical aspect have a basic principle of “nearest development zone”, proposed by L.S.Vygotskiy [3].

Psychical well-being of pupils is created not merely by psychological comfort, but at first by forming a stress-safety.

Somatical status is provided by nutrition full value, optimal hygienic conditions and hardening procedures. Medical technologies are addition to health-improving educational process.

Sensory sphere have a fixed teachers attention (there are visual load optimization, gymnastics for eyes, vestibular training).

Teachers care about **reproductive potential** of individual health have two sides: instruction to hygienic self-care about intimate parts of own body and gender education with orientation on male or female behavior forms in family and society.

Social aspect has main accent on communicative culture and ability for social adaptation.

Teachers methodical work consists of common educational methods and methods for training to behavior, assisting to a healthy life.

Diagnostical work main purpose is a monitoring of pupils health and life style with purpose of correction and promotion educational system for successful children development. At the same time level of teachers professional authority is observed and improved.

Informational component is aimed at data accumulation according to problems and achievements monitoring. Data bank is a foundation for correction process in a school health-saving activity. It is a feedback in a model work.

Important peculiarities of **analytical component** is a development of pupils creative mentality in direction of healthy life way.

- First of all – analysis and ranging of personal values, comprehension of health value and healthy life stile.
- Secondly – construction the personal pyramid of needs (true, not invented).
- Forming the motivation of healthy life (step by step).
- Creation the individual passport of health and the diary of life style.

Behavior component is realized little by little after mastering other components elements. Specialists interaction in frames of health service permit to achieve success in healthy life forming simultaneously with common education.

Achievements in this component:

- Choice and using of technologies (medical and educational), promoting a health.
- Regulation of educational regimes and motion activity.
- Training for self-control.
- Avoidance from risk factors.

For a normal development child must realize himself not as passive executor or consumer, but as creator of own life and health, and also help to realize rights of other persons be same creators. Motives of self-creative activity is born on the basis true needs understanding. Non-stop search and utilization of adequate means serve to realization of needs. This search children and adult people (teachers and parents) fulfil together.

Community of education (or self-education) and health forming is main principle our model. If awared need is used by pupil independently in spite of all obstacles, stress of victory (eustress) generate some new abilities. In this case health and education are coming beside and help each other.

Pedagogical principles of healthy life forming

1. At first, use positive pupils qualities for success achievement, and defects eradicating must be non-imperative.
2. Take bearing on pupil individual possibilities, but not on compulsory harmony achievement in development.
3. Work in “zone of nearest development”.
4. Complete comfort must be excluded. Studies must be difficult, but within pupil’s powers.
5. Appraise not the person, only actions.
6. Give not prepared truth, teach to find it.
7. Live and work in a confidence and co-operation.
8. Help in self-control.
9. Create an educational environment promoting pupils health and development.

Results of our model using

Accumulated experience of our model using in St.Petersburg schools permit to affirm that health forming by pedagogical means give more sufficient results than now existing system of therapeutic-prophylactic measures. Our model using in schools give next results for pupils:

1. Availability of sustained motivation of healthy life.
2. Minimization or refusal of risk factors.
3. Increase of nonspecific resistance of organism.
4. Increase of individual physical and mental development indices and decrease of sick rate.

5. Increase of psycho-emotional stability and psychological protection in social environment.
6. Successful educational activity.
7. Maximal development of health and intellectual potential.
8. Getting over a passive, consumer's relation to own personality development.
9. Creating the feeling of responsibility for health not merely own and future posterity too.

Main principle in pupils activity for healthy life stile in our schools of health is such: "Own efforts, permanent and consider-able, are necessary in order to be healthy. Nothing can replace them". It is quotation from book of Soviet surgeon N.M.Amosov "Reflexions about a health" [1]. We confirm author point of view.

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RUSKÉ MODELY ŠKOL ZDRAVÍ

Abstrakt: Zdraví studentů je v povědomí většiny ruských učitelů spojeno hlavně s odstraněním nebo předcházením onemocnění nebo indispozici. Hygienické zabezpečení vzdělávacího procesu je základem většiny „Škol zdraví“. Další možnosti a modely: vzdělávací zařízení pro oslabené a nemocné děti; středisko podpory upevnění zdraví studentů; škola, podporující zachování zdraví dětí. Všechny tyto modely jsou nedostačné pro zajištění všestranného rozvoje a zdraví studentů. Autor by rád předložil vlastní model jako model formování zdravého životního stylu pro všechny typy škol.

Klíčová slova: obecné vzdělání, zdraví studentů, škola zdraví, model, sebeanalýza, motivace, zdravotní průkaz

SOVIET PERIOD OF DEVELOPMENT OF THEORY AND PRACTICE IN CHILDREN'S AND TEENAGERS' HEALTH FORMATION

Vyacheslav I. SHACHNENKO

Abstract: *In the article the progress of the first steps of the Soviet authority concerning the creation of the Central Pedological high school in Moscow (1921) is elucidated, which became the famous centre of the science of children with its regional and district links and development of physical movement. However, in terms of Y. Stalin's struggle for power, formation of the totalitarian regime, Pedology examining the parents' biography (but the leader of all nations had a criminal past), Pedology was liquidated by the resolution of CC A-UCP (the Central Committee of All-Union Communist Party of Bolsheviks) "About Pedological Misrepresentation in the System of People's Commissars" as harmful, pedologists were subject to repression or were shot. In terms of the totalitarian regime the matter of the physical training and children's and teenagers' health developed in the pedagogical activity of A. S. Makarenko and V. O. Suchomlynskyi. However, on the one hand there are many pedagogical acquisition and on the other hand, the totalitarian regime and colonial system hindered the implementation of these ideas in practice of the school work. After the breakup of the Soviet Union in terms of the destroyed nature, environmentally polluted territory and awareness of people appeared the necessity of seeking ways and means of saving and strengthening the rising generation, preparing it for the healthy life-style including the usage of famous domestic teachers' heritage.*

Keywords: *pedology, "exclusive" children, health, healthy life-style*

Introduction

Statistic data show that population in Ukraine totaled 51,994 million people at the time of the breakup of the USSR and was 46,372 million in January, 1 2008. The natural population growth was -39,1 in 1991 and -290,2 thousand people in 2007. Meanwhile the duration of women's life shortened from 74,18 in 1991-1992 till 74,06 in 2005-2006 and correspondingly of men from 64,2 to 62,38 years. Meanwhile the total number of the dead was 669,9 thousand in 1991,762,9 was in 2007. The mortality of diseases concerning the blood circulation system increased from 349,6 thousand to

580,6 thousand and composed 349,3 thousand in 1991, but 480,6 thousand in 2007. Correspondingly 105,1 and 90,0 thousand died in the result of morbid growths including malignant tumor, 6,4 thousand and 10,6(in 2004, there is no data of 2007)in the result of temulence. From 2001 to 2006 the nominal gross domestic product increased from 200490 mill. to 544153 mill., the salary (in total) did accordingly from 67389 to 205120 mill., public assistance from 23978 to 103092 mill. hryvnas. But the minimal salary is 100 hryvnas lower than the subsistence level.

Thus the increase of population with the sign of minus was about 742% from 1991 to 2007 in Ukraine. The death rate totaled 113,8%. Where the mortality in the result of diseases concerning the blood circulation system and morbid growth, the main reason of which is smoking, obesity, alcohol abuse and other totals 570,6 thousand(486+90,0) at present, that is 74,8 per cent from the whole number of the dead.

Taking into consideration that person's health depends on the gene pool of the nation and heredity on 18-20%, on both social – economic and ecological conditions on 18 -20%, on health protection system and medicine on 8-9%, on life – style on 51- 53%, we can make a conclusion that the reason of the demographic crisis is an unhealthy way of people's life starting from the school age. Proceeding from this, there was a necessity to make an analysis of education quality in the former USSR and heritage of the teachers of our country over the latest period – Makarenko and Suchomlinskyi, so what we offer further is to look for ways and means of curb or just softening the demographic crisis in Ukraine on the ground of the results of this analysis.

The article was carried out according to the plan of Research Council of V.N. Karazin Kharkiv National University.

The aim of the research is to study and analyze the papers of CC A-UCP (b) (the Central Committee of All-Union Communist Party of Bolsheviks) and CPSU, heritage of Makarenko and Suchomlinskyi concerning children's and teenagers' health formation, preparing them for lead a healthy way of life.

Ways of solving the problem

The period from the end of the 19th till the beginning of the 20th century was the characterized by a rapid industrial development, construction of large plants and factories. The uneven development as well as a series of contradictions between the labor and the capital provoked a crisis this covered all aspects of the society life. M.D.Yarmatchenko pointed out that the conventional school with the predominance of text books in teaching, scholasticism and formalism contradicted life demands. There arose a school crisis. That's why the best pedagogical intellects of Europe and the USA started strenuously seeking a way out of that crisis. And in such complicated conditions the search still continued. Scientists and teachers followed attentively the development of pedagogical thoughts in the West. Translations of the main works of E. Meyman, A. Lay, H. Kershenshteyner, H. Sharrel'man, F. Hansberh, B. Otto, D. D'yui and other teachers were published in Russia. This enriched Russian and Ukrainian Pedagogy and had a positive influence over their further development.

In addition to this, there was also a social crisis in the Russian Empire, which led to the downfall of tsarism, breakup of the existing state structure. Under such con-

ditions the colonies of Russia - Finland, Poland, Baltic Republics, the Caucasus states and others tried to break free from the colonial and national oppression. Ukraine gained sovereignty. However all those countries except Finland were sooner or later united into a new colonial system one by one – the Soviet Union, a new colonial state with the totalitarian communist regime.

The first decades of the soviet rule were marked by the democratic innovation in Pedagogy. Attention was paid to the issues of children's health improvement, teaching them the factors which contribute to this.

The decree of CC A-UCP (b) (the Central Committee of All-Union Communist Party of Bolsheviks) "About sports movement" (1929) led physical training to the state level. In 1930 All- Union Council concerning physical culture at the CEC (Central Executive Committee) of the USSR was created, it initiated the introduction of the complex "Ready for work and defense (RWD)" for adults and in 1934 "BRWD" (Be ready for work and defense) was created (for children and teenagers). Since 1928 there have been held All-Union sports contests, international sport relations were arising, range of institutes of higher education and technical secondary schools on training specialists in physical culture were developing. Sportsmen took an active part in the Great Patriotic War. But since 1948 the Soviet sport entered the international scene and became one of the leading in the world step by step. However, at the same time with high achievements of the Soviet sportsmen, the level of sports enthusiasm among children, teenagers and young people remained low. It could not be different because in the process of forming of the totalitarian regime (Gendarme – prison system, starvation, Stalin's repressions, armament drive and aspiration for creation of the superpower) the matter of children's health was constantly getting in the background. Popular schooling, medicine, environmental protection, physical training and sport were developing according to the leftover principle. There were many mottos such as "People's health is a public wealth" in various resolutions, party and state papers, but there was no further development. Interests of the powerful state were in the foreground, but not interests of an individual and his health.

In the comprehensive schools of the tsarist Russia the anthropometric research were held. They included the measurement of growth, weight, chest size, vital capacity and some data from kephalometry (measurement of head size, length and width). The measurement of the head circumference of boys and girls in the age of 7,5 – 8,5 was held in this way and analyzed with their progress at school.

The abovementioned measurements were held at the beginning and at the end of the school year with some reservations drawing conclusions concerning the level of intelligence [30,167-177].

The further development of practice of anthropometric measurements of development and children's health got in the USSR and especially after the creation of Moscow Central Pedological Institute (1921), which became a scientific center in the field of children's science.

The anthropometric measurements included such measurements and indices: 1) growth in the sitting and in the standing position; 2) length of lower extremities; 3) height of the skull and its horizontal circumference; 4) head length and width; 5) chest circumference in the calm state during inhalation and exhalation; 6) front and back chest diameter and their side diameter; 7) vital capacity; 8) muscular power; 9) weight.

These data were written into pupil's individual anthropometric card. Meanwhile the indication of proportionality (index of the correlation of body length to the general height in centimeter, which depends on child's age) was determined. By the age of 12 it approximated 53%, the same as of an adult. The chest circumference of a healthy child, composing a half of his growth, is an indicator of the norm of health and of a harmonically developed child. The determination of the level of child's physical development was held comparing the received data with the existing standards for each age. The level of intelligence was determined with the help of proper tests.

The pedagogical measurements were held to determine "norms" and "exclusive children". The children of the first group, "normal children" attended the usual comprehensive school. To "exclusive children" referred physically disabled children: cripple, blind, deaf, not enough gifted, nervous, problem child, shy, undetermined, with neuropathic and psychopathic constitutions. In this connection one of the reasons of having exclusive children pedagogists viewed in social-economic conditions: results of the First World War and Civil War, devastation, poverty, unsanitary conditions, malnutrition in poor families, homelessness and so on. To this category referred extremely talented children with special mentality, memory and in general child prodigy [23,178-214].

The pedagogical measurements included the study of development conditions as a result of interaction of both factors – heredity and life conditions. They used the following data: 1) child's heredity (genealogical materials – "the ancestor's table"; 2) life conditions; 3) child's development process itself. Meanwhile it was emphasized that the conclusions on heredity and child's development level must be made quite attentively and deliberately [23,151-178].

On these grounds the National Commissariat of Education of the RSFSR created research institutes, regional and district pedagogical cabinets, which on the basis of anthropometric measurements determined normal children and a great amount of groups with different aberrations ("exclusive children"), which required a great number of special classes and schools to be opened for such children.

All this had a positive influence on the development of the Soviet comprehensive school. But together with the positive experience there were shortcomings and mistakes in pedagogists' works. Probably the greatest guilt of pedagogists was that it contradicted views of the then leading Bolshevik authorities.

1. The most part of scientists and teachers in their views and actions freely referred to bourgeois authorities. Besides in the pedagogical press gave statistics about spending on popular education. So the pedagogical encyclopedia [23, 10-50] provided such data: spending on popular education were 6,3% in 1918, 8%-in 1919, 10,4%-in 1920, 8%-in 1921, 4,2%-in 1922 of the state budget. That number might cause speculations that Moscow authority was taking less care of the rising generation.
2. To provide conditions for study and upbringing of "exclusive children" with different aberration in the development, it was necessary to open a great amount of different schools and classes; appropriations on the education were shortening year in year out. A delay in deciding this question cast a shade on CC A-UCP (b) (the Central Committee of All-Union Communist Party of Bolsheviks) and the Soviet government.

3. There is evidence that Stalin's private interests were also affected. As it's well known, the pedological measurements, besides other parameters, included the study of child's genealogy that made people study parents' biography.

At that time the cult of Stalin was forming in the USSR. But it's well known that his genealogy was not an ideal one. To tell the truth he was not an ideal of fidelity, honesty and decency, these qualities had been apprized since time immemorial in the rural regions in Russia. Besides, to fill up the party cash desk J. Dzhugashvili (Stalin) carried out a criminal attack with hijacking of money collector vessel and shot to death his accomplices. Besides, according to H. S. Kostyuk our psychologist's evidence, one of Stalin's relatives gave low results of test [16, 22] and this lowered the authority of "the leader of all nations". So the best solution in this situation was a liquidation of Pedology. On July, 14 1936 with Stalin's initiative CC A-UCP (b) (the Central Committee of All-Union Communist Party of Bolsheviks) adopted the resolution "Of pedological twisting in the system of National Commissars", in which Pedology was severely criticized. It was called an unscientific theory, ignorance, and its law of fatal conditionality of children's fate by biological and social factors, influence of heredity and environment was considered as strongly contradicting with Marxism and practice of socialism construction. That's why pedologists' activity was labeled as harmful. And with the existing lawlessness in the country at that time, Pedology was liquidated as science and tens of thousands of scientists and pedologists - practitioners were repressed as inimical elements, sent to Siberia or even killed.

Thus, the notorious resolution of CC A-UCP (b) (the Central Committee of All-Union Communist Party of Bolsheviks) "Of pedological twisting in the system of National Commissars injured the development of Pedagogy and school practice in our country. For several decades Pedagogy, psychology and school were deprived from using questionnaires, tests, and different methods, which would give idea about the level of children's development, physical and spiritual health, because all Soviet children were, so to say, equal. Equal but not identical. There has always been a problem abnormalities especially in our time, when even in mother's womb, consequences of Chernobyl Atomic Power Station Catastrophe had a negative influence over child's development, results of activity of other atomic electric power stations, environmental pollution by production residues and domestic waste. And it cannot be a secret any more that a great number of anomalous children are born every year. But because the repressive against Pedology and other science, there emerged authoritarian Pedology based on this school practice formed in our country. That's why no theoretically based methods for educating and upbringing of anomalous children were developed. And questions of measurement of the level of the physical development and Children's Health were forgotten.

In the terms of the totalitarian regime issues of physical training, children's and teenagers' health found its development in the pedagogical activity and scientific work of A. S. Makarenko, V. O. Suchomlyn'skyi and other outstanding teachers.

The innovatory activity of A. S. Makarenko marked strongly the guidance over the labour colony for juvenile delinquents, and then in the labour commune. One of his accomplishments was the development of the theory and practice of educating and upbringing of homeless children in the community and with the help of this community. In "the Pedagogical Poem" and "Flags on the Tower" he showed the meaning of phys-

ical training among children and young people, unity of intellectual, labour and moral upbringing. A. S. Makarenko considered the physical training of his pupils as a condition of preparing them for labour activity.

A. S. Makarenko worked out and implemented in the colony and the commune a comprehensive system of physical training, preserving and strengthening pupils' health which included such elements:

1. creation of necessary hygiene and sanitary conditions in school, in the industry and as well as in the everyday life. In the colony and in the commune there were appointed sanitary commissions with a doctor who explained to the members of the commission the hygiene and sanitary requirements. On the base of this the hygiene and sanitary conditions of the whole institution, pupils and teachers, rooms and surrounding territory were maintained.

The Sanitary Commission controlled the cleanness of the room, classrooms, bedrooms, canteen, kitchens, corridors, flats of the staff, yards, warehouses; observed the cleanness of the pupils' bodies, their basing, laundry changing, work of the bathhouse. Every day one of the Sanitary Commission Members (MSCoD) was on duty. In the morning he controlled how pupils bathed, made their beds, cleaned the tables, cleaned bed-rooms, check the conditions of suits, shoes, stockings (particularly of young pupils) before breakfast, dinner and supper – hand cleanness, before the beginning of the lessons the cleanness and airing the classrooms and before going to bed – airing bedrooms and washing of pupils' feet.[7,26-30]

2. Culture and regime of nutrition.

3. Following requirements of scientifically grounded life regime, its accuracy, consistency, obligatory status for everybody [7, 36-39;12,131].

In the practice of his educational work A. S. Makarenko solved the questions of proper ratio between mental and physical work. The analysis of his pedagogical heritage shows that pupils' physical work in agriculture and cattle breeding, in the farm of the colony lasted 6-7 Hours in summer and spring , 1-2 Hours in winter. And the ratio between physical and mental work was 1:1 (2,5), during exams 1:3 (3,5).

4. Complete self service [2,249-250].

5. The system of physical training; classes of physical training [11,144], military exercises [9,176-177], everyday physical exercises in any weather, gymnastics, acrobatics, football volleyball, hockey, tennis, riding, skiing and water sport, gorodki (similar to skittles), parachute jumping, tourism and so on. [12,187-188].

6. The organization of pupils' active leisure: work of drama, literature, vocal [9,262-272,271-272;11,180-184,266-268,275-277], imitative chess and draughts circles and a brass band. [11,206;7,64-66].

7. The use natural factors (sun, fresh air, water, warmth, cold) as hardening. Gymnastics and physical work in the fresh air, sunny and air bathes, pouring over bathing caused joyous mood, cheerfulness, enthusiasm, working capacity, that positively influence health strengthening.

8. The cheerful mood in the group, creating tomorrow's joy. [12,195-198,201].

I. P. Pavlov proved that emotions had important meaning in the person's life.

Especially it concerns children. Basing on this, A. S. Makarenko formed colonists' and communars' education in such a way that the real stimulus of their life was tomorrow's joy. The creation of the system of perspective lines in child's life (close, average, far perspective) makes its tomorrow's life better than today's [7,69-74]. It is also ensured by a cheerful mood in the community [7,75], constant good spirits, readiness for actions, sense of dignity and protection of each pupil in the group. A. S. Makarenko underlined that the tenderest boys and girls of 10-12 felt well protected [11,262; 7,77] if this protection was broken as it had happened with Wanda Stadnyts'ka, when the abusive note was sent to Wanda "We should ask Wanda what she had been doing before she got into colony, how she had earned money?" [11,258], the whole group protected her [11,259-263]. And with that the punishment used in the system of upbringing, did not cause physical suffering.

Besides education, labour education A. S. Makarenko also considered health improvement of his pupils as one of his tasks. The preparation of Summer encampments for leisure [11,319-324], trips of communar to the Crimea, Svyatogorsk, to the banks of the Dnieper. And starting from 1933 1,5 months holiday had been introduced with the aim of health improvement of communars, organization of leisure. [10,31-32, 2, 254].

9. Aesthetic design of rooms, production workshops, gyms, sport grounds and others, aesthetic relation to results of work and life.
10. A. S. Makarenko paid much attention to preparation of his pupils for creation of their future families. He wrote, that the sexual drive cannot be brought up correctly, if it would be considered separately from the development of an individual. Together with that, the sexual sphere cannot be considered as the basis of all human psychology and as the main sphere in upbringing of an individual, because bringing up the sexual feeling teachers do not bring up citizens [13, 404-405]. He paid attention to personal example of parents. The real love between the father and the mother, as he wrote, is their respect to each other, tenderness and endearment which happened between them from the first year of their life together, inspire respect to the serious relation between husband and wife. Spiritual aspects of love cannot appear just from "zoological" sexual drive. Meanwhile real relations between future husband and wife cannot form if a boy has never loved his parents, friends and comrades. [13, 405]. A serious and spiritual relation to the opposite sex, beauty of human feelings were brought up with the colonists [11,328-331; 8, 429-432]. But a considerable fault of A. S. Makarenko was that when Tchobit informed that he would commit suicide if Natal'ya would not go with him, the leader of the colony did not pay attention to this guy and did not prevent the suicide [9,357-359,363]. It can be considered as a criminal fault of the teacher. On the occasion of this the author of "Pedagogical Poem" writes that Tchobit's suicide was accepted by boys with restraint, because they treated him like a rook (backward peasant, a griddy person) only girls wept [9,363]. Only Maria Kindrativna made a conclusion: "Your colonists are bad! Your comrade is dead and they are laughing..." [9,364]

The abovementioned episode showed the value of human's life. What must be the value of life when for the sake of establishment of the Soviet Authority, construction of Socialism in Ukraine about 10 mill. people were killed. This situation and statements of some colonists helped A. S. Makarenko to make a conclusion: there was a break in development of the community, there arose a crisis. [9,364]

The outstanding teacher of our country V.O.Sukhomlyns'kyi placed great importance on the upbringing the healthy generation. In his pedagogical activity the questions of pupils' health, especially young pupils took an important place. Regarding the upbringing of healthy generation there can be pointed out the following areas of Pavlov Comprehensive School's activity:

1. Popularization of physiological-hygienic knowledge among parents. For the purpose of parents' participation in the competent approach to their children's health forming there was created a school for parents. There young couples with no children yet, parents of children under school age and parents of pupils of I-II; III-IV classes. The programme of this school included discussions of physical and psychological development of a child since the birth to 7 years, prevention of diseases of nervous system, regime of work and leisure, role of nature in the upbringing, dependence of a child's intellectual development on his health and so on. [29,444-445]

2. The creation of healthy natural micro-climate in the school.

The school was situated at the outskirts of the village. The building of the school was surrounded by walnut, cherry, apricot, chestnut trees, fir trees, which create specific forest micro-climate. Besides, some lesson in the primary school are held in the fresh air. All this contributes to pupils' health improvement. [25, 91-92; 194]

Near the school the pupils laid out a large fruit garden, built a hothouse and laid out research areas, where pupils from different classes did tasks according to their age.

3. As the results of pupils' education depend on physical development and health state, so the teachers started teaching future pupils' from introduction of their health. Basing on this an individual regime of work and leisure was determined for every child.

Child's physical development level, his health, results of school progress of pupils were subjects of every day's teacher's attention during the whole school period. [25, 193; 24, 126]. Teachers, doctors, members of paternal committee study the level of children's tiredness, their load of homework. Periodically questions of pupils' health were discussed at the pedagogical school council.

4. Scientifically grounded teaching.

Child's brain is the most sensitive and delicate organ [25, 193]. V. O. Sukhomlyns'kyi believed that parents should treat it careful and prudently. It can't be loaded with too complicated tasks turning the education into a race, because it can lead to worsening of pupils' health, especially in primary school.

5. The regime of work. Alternation of mental work and leisure [25,194-196; 28, 48]. Alternation of mental work and leisure contributes to health support, cheerful mood, success in education. That's why V. O.Sukhomlyns'kyi offered that

pupils got up at 6 o'clock a.m. and did home tasks after physical exercises [25; 133]. It takes twice less time than after classes. If classes were held in the first shift, so the second part of the day children spend in the fresh air [25; 134], where they have a rest, take part in active creative work.

6. Active leisure, sleeping in the fresh air.

Many years' observation of V. O. Sukhomlyns'kyi showed that 85% of backward pupils, as a rule, are children with bad health (diseases of heart vascular system, respiratory tracts, stomach, bowels and so on). Slow thinking of some children, unhealthy – pale complexion, absence of appetite – all these are the result of long children's stay in the room and overload with lessons [25,125,131;28,94].

The regime of work and leisure is the main condition for children's health [25,133]. To ensure that it is followed the teachers required pupils to go to bed in time and get up at 6 a.m. to take off the weariness completely.

Children are sleeping with an open ventilator window and in summer only in the yard [28,103]. In village phitocides of crop and meadow plants kill the causative agents of lung diseases [25,135]. And if a child breezes this air all summer as a rule he doesn't catch cold.

Autumn, spring, winter and summer holidays pupils spend in the fresh air in the open country: in the forest, in the step, in the kitchen garden, in the garden, go barefooted, in shorts and T-shirts, bathing. The latter contributes to the hardening of the organism [28, 94].

7. The important part in the regime of work and leisure belongs to physical training.

In the morning children do morning hygiene gymnastics (physical exercises). During the physical training lessons, physical exercise [25,103-104] and physical breaks the considerable attention is paid to exercises which contribute to having good posture [27,140-141].

One of the means of children's physical development is hiking. That's why in the "School of Joy" the first 3 or 4 weeks V.O.Sukhomlyns'kyi had 2-3 kilometers hikes and gradually trained future pupils to longer trips (4-5 and even 6 kilometer).

In summer the pupils of the first and second classes had one-two days trip to the fields, forest, to the banks of the Dnieper. The pupils of senior classes had longer trips [25,143, 29, 618-620].

8. Hardening.

When V. O. Sukhomlyns'kyi gathered his pupils in the open air school, he was surprised that all children were dressed as if it was some holiday. But village children used to go barefooted in such hot weather since old times and this contributed to hardening and prevented catching colds. Nowadays parents create for children favorable conditions; they make them wear too much clothes in warm weather in such a way they prevent them from hardening. The latter is a reason that children catch a cold more frequently in winter.

That's why means of organism hardening: walking barefooted in summer [28,110-111], rubbing with snow in winter are propagandized among pupils, especially among young pupils and parents. This contributes to health hardening, increases its resistance to colds.

Senior pupils work in the open air during 10-12 days by moderate frost in winter [28, 106; 25, 134].

9. Promotion of physical culture and physical self– development.

The pedagogical staff of Pavlys'ka comprehensive school developed a series of guidelines for pupils popularizing physical self–development and health improvement [25, 137].

10. Physical work is a means of child's physical development, his health improvement. And it is so varied that some labour processes can be equaled to gymnastics. That's why taking into consideration age and individual children's peculiarities, their abilities and inclination, habit for certain physical work should be brought up in every person [26,195; 25, 138].

11. Complex nutrition.

The observations of children's physical development and their health showed that the main role in this is played by the combination of mental load with physical work, active leisure and complex nutrition [26, 193; 28,50-51,94,104-105; 25,136-137] .

12. Pupils' emotional sphere.

V. O. Suchomlyn's'kyi considered music as a means of its development. The beauty of music can change life through feelings, improve pupils' health.

13. Upbringing feelings: kindness, thoughtful attitude to nature, person (forming moral readiness for love, marriage, children's birth and upbringing, maternity and paternity) [26, 192], mutual assistance, empathy for other's happiness and grief, fulfillment of the obligations in good faith, which excludes malicious joy and other negative traits.

That's why the means of children's and teenagers' health improvement are:

- Promotion of physiological and hygiene knowledge among parents, preparing them for thoughtful forming of their children's health;
- creation of healthy natural microclimate of the school as well as sanitary and hygiene conditions in school and in the mode of life;
- study of children's physical development, health condition at the beginning and during the school year, level of their tiredness and determination of individual regime of intensity of mental work and leisure;
- scientifically grounded sequence of lessons, intensity of pupil's load, careful usage of intensified education;
- alternation of mental activity and leisure;
- active rest, sleeping in the open air, which contributes to the complete renewal of the pupil's physical and intellectual capacities;
- physical culture, hardening;
- physical work in the open air;
- complex nutrition;
- emotional sphere and culture of pupils' feelings;
- cheerful mood in the group, creation tomorrow's joy.

Their Optimal combination contributes to upbringing of a physically healthy generation.

Conclusions

So in Pedagogy, which was studied in the course of pedagogical history by students of pedagogical schools, high schools and universities of the USSR (now these are pedagogical colleges, pedagogical and state universities), the classics of Pedagogy of our country theoretically proved and tested in schools and other educational establishments of Ukraine a system of views on pupils' health keeping and its improvement. But the state bureaucratic school of the USSR, as a part of the totalitarian and colonial regime, carried out the main social order – forming the cogs in the machine. That's why the main task was not health but forming people's communist consciousness and loyalty to the socialist society. This approach to the problem of upbringing the rising generation and pupils' health remained until 1984, when the question about children's health was raised in the documents of the CPSU "About the reform in the comprehensive and professional schools" [22,195]. But this document was prepared in terms of totalitarian regime with the problem of health as well as other problems of school reform, remained just usual mottos. As it is well-known, the socialist system which underlined its peculiarity, supremacy in the world, its isolation from the whole world, and totalitarian regime hampered the development of the society including the development of views on nation's health and their implementation.

A new stimulus towards the review of the pedagogical heritage of our own and foreign teachers concerning their involvement in the process of developing the theory and practice of preserving, strengthening, forming and recreation of health of children, teenagers and pupils in comprehensive schools in Ukraine, emerged after the breakup of the USSR.

In general the history of the development of ideas of health forming and preparation for keeping pupils' healthy way of life in educational establishments of Ukraine can be divided into 4 periods.

The first period began when the families, teachers and schools appeared, from the prehistoric times to the Capitalism development in Europe, and the second period – capitalistic – which started in the 20th. In the result of the October revolution this stage ended.

The third one is called the Soviet Period of Development

Its marked by an idea of hygiene upbringing, developed by I. Mil'man among doctors at the beginning of the 20th century [15]. In the 1920s he published educational programs and textbooks for forming pupils' health on the basis of individual social hygiene.

A. S. Makarenko made much more achievements in the practice of upbringing juvenile delinquents. Into the organization of pupils everyday life A. S. Makarenko introduced the ideas of forming their health and preparation for healthy life-style. However advanced democratic ideas and their practical implementation at that time contradicted the gendarme colonial system of the totalitarian regime, A. S. Makarenko was dismissed which led to ignoring children's and teenagers' health questions.

The ideas of pupils' preparation for hygienic upbringing were supported in the post-war period, especially at the beginning of the 1950s. The significant contributor to

the implementation of these ideas was V. O. Suchomlyn's'kyi. The 1970-1980s witnessed the increase in the number of research concerning questions of hygienic education and upbringing, following requirements of hygiene in the organization of the educational upbringing process. But the Soviet and in particular Ukrainian Pedagogy didn't develop any further at all. Pupils' health problem was not considered pressing, as it was mentioned above, the socialist system hampered the development of views on nation's health and their implementation in the system of school work.

For the first time the question about nation's health including children's and teenagers' health arose after the catastrophe in Chernobyl Atomic Power Station. But the communist government kept silent about the importance of nation's health problem.

After the breakup of the USSR Ukraine inherited destroyed nature, ecologically polluted territory and people's conscience. Under such conditions it was necessary for life to seek ways and means of saving and strengthening health of the rising generation, its preparation for healthy way of life including the use of the national heredity and outstanding teachers of our country.

The new fourth period in our opinion started in 1991 in independent Ukraine.

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SOVĚTSKÉ OBDOBÍ VÝVOJE TEORIE A PRAXE V OBLASTI FORMOVÁNÍ ZDRAVÍ DĚTÍ A MLÁDEŽE

Abstrakt: Tento příspěvek se zaměřuje na první kroky sovětské vlády v souvislosti se vznikem Ústřední pedagogické vysoké školy v Moskvě (1921), která se stala proslulým centrem vědy o dítěti s vazbou na okresy a oblasti a zaměřením rovněž na fyzický vývoj (tělesné cvičení) dítěte. Avšak v podmínkách mocenského boje J. Stalina a ustavení totalitního režimu se pedagogie, která zkoumala životopisy rodičů dítěte (přičemž vůdce všech národů měl zločineckou minulost), dostala do nemilosti a byla „zrušena“ jakožto škodlivá usnesením výboru CC A-UCP (Ústředního výboru všesvazové komunistické strany bolševiků), nazvaným „O pedagogickém zkreslování skutečnosti v systému lidových komisařů“, pedagogové byli vystaveni represí a někteří byli zastřeleni. V podmínkách totalitního režimu se pak oblast fyzického vývoje (tělesného cvičení) zdraví dětí a dospívajících vyvíjela v rámci pedagogické činnosti A. S. Makarenka a V. O. Suchomlinského. Ta byla sice na jedné straně v mnohém přínosná, na druhé straně však totalitní režim a koloniální systém bránil zavedení těchto cenných pedagogických myšlenek do pracovní praxe ve školách. Po rozpadu Sovětského svazu se vzhledem ke zničené přírodě, rozsáhlým ekologicky znečištěným oblastem a přetrvávajícím důsledkům ve vědomí lidí ukázala nutnost hledat cesty a prostředky, jak ochránit a posílit novou vyrůstající generaci a připravit pro ni možnosti zdravého způsobu života, včetně využití dědictví proslulých domácích pedagogů.

Klíčová slova: pedagogie, „zvláštní“ děti, zdraví, zdravý způsob života

HEALTH EDUCATION IN SCHOOLS IN AUSTRIA - EMBODIMENT IN THE CURRICULA AND CURRENT INITIATIVES

Renate SEEBAUER

Abstract: *The following article outlines – based on recent studies on the health status of Austrian children and young people – some results from the field of nicotine and alcohol consumption as well as obesity. Recent studies also point to the relatively new problem of bullying in Austrian schools. First initiatives in health education – dating back to the 1980s – primarily aimed at nutrition consciousness and healthy exercises; nowadays more campaigns aim at consumption (abuse) of tobacco and alcohol and more recently on the phenomenon of „bullying”. The so-called life and health skills are increasingly reflected in projects and campaigns.*

Keywords: *health education, teaching principle, current studies on the health of children and adolescents, consumption of nicotine and alcohol, obesity, bullying, projects and campaigns, life and health skills*

1 „Children’s and adolescents’ health on alert ...”

...could be read in the Austrian daily newspaper „Der Standard” on 29 January 2010. „In a ranking presented by the OECD on the health status of children and adolescents Austria is among 30 states only at number 27; the UN children’s agency UNICEF ranked Austria 14th among 21 states. ...As far as smoking is concerned young Austrians (27 percent of the 15-year-olds smoke cigarettes regularly) are top – just as in alcohol consumption: Nearly 40 percent were drunk at least twice in life. According to OECD data the percentage of obese boys has doubled within four years, which sets up a record. The suicide rates among young people are higher than average” (Der Standard, 29 Jan. 2010).

One third of the 15-year-old girls and about half of the 15-year-old boys have already experienced drunkenness several times; seven per cent of the eleven-year-olds drink alcohol once a week (according to the Anton Proksch Institute, treatment center for alcohol, drugs and drug addiction). As to smoking the Austrians are early adopters as well: the proportion of regular smokers among the 15-year-olds is more than one third above the European average (27 %).

Obesity is increasingly becoming a problem: too much fat, sugar ... and too little exercise. Several studies carried out in the Austrian federal provinces show similar results: According to an HBSC study (Linz 2007) six percent of the Upper Austrian 11-year-olds admit to have consumed so much alcohol at least once that they were drunk. For the 13-year-olds the figure is already at 15 percent and the for 15-year-olds at 58 percent. Among students of secondary modern schools, of pre-vocational and vocational schools alcohol consumption is significantly higher than among students of academic upper secondary schools. Regarding the smoking prevalence among 15-year-olds the Upper Austrians are around the national average rate: 23 percent smoke daily, another 10 percent at least once a week and 14 percent occasionally. Just over half of the 15-year-olds (53 percent) do not smoke at all (see Child and Youth Health in Upper Austria 2007, p. XIff.).

A study on the “Health of the Carinthian Children and Adolescents” – published in 2009 – showed that in the federal province of Carinthia in the age group of the 13- to 15-year-olds more than 20 percent are smokers; in the age group of the 16- to 18-year-olds the percentage suddenly increased to 60 percent. On the other hand about 50 % of the 10- to 22-year-old Carinthian children and adolescents never consume alcoholic beverages. The group of those who repeatedly drink alcohol weekly or daily increases from the age 16 to 22 of around 6 percent to 13 percent. Significantly more boys than girls (9 per cent resp. 2 per cent) find themselves in this group.

Another problem is obesity: in Carinthia 17 % of the ten- to 15-year-old boys and 19 % of the girls are overweight and 5 % resp. 6 % suffer from obesity (see Health of the Carinthian children and adolescents, 2009, p. 19ff.). New aspects, which occur more and more often in recent studies are “bullying and harassment”. Direct consequences of such a constant threat of violence (physical and/or mental) lead to stress and concentration problems, to increased anxiety and irritability, to psychosomatic problems, deterioration in the pupils’ work – up to school avoidance and school phobia... The Carinthian study reported 30 percent of the pupils and students between 10 and 15 years who were involved as victims, perpetrators or both in bullying in the last six months, 10 percent of them were victims (see the health of children and Carinthian adolescents, 2009, p. 23).

Therefore prevention and health education in the broadest sense is getting more and more important in Austrian schools. Measures for health education have been taken for more than a quarter of a century in Austrian schools. – At the beginning “healthy diet” and “healthy exercises” were in the center of the efforts, today there’s a change in trend towards nicotine and alcohol prevention; bullying has recently become an issue.

2 From the making of the concept of „Health Promoting Schools“ to the Decree

In the late 1980s the concept of the „Health Promoting School” developed – associated with a reorientation of the health policy of the World Health Organisation – the „Ottawa Charter” of 1986.

Starting point was the Ottawa Charter for health promotion, which was adopted in 1986.

The program: “Health Promoting School” was tested in pilot schools in interna-

tional networks of the World Health Organisation (WHO), of the Council of Europe and in networks of the European Union (EU) in the years 1993-96.

The experience gained led to the adoption of a decree, which describes the tasks, objectives and principles of health promotion in schools as well as their implementation (GZ 27.909/15-V/3/96 of 4 March 1994, Circular No. 7/1997).

This decree defines the following basic objectives:

- Shaping the school as a health promoting living space, including all persons involved in school life;
- Promotion of personal skills and capacities of the students in terms of health-conscious, independent acting and knowledge;
- Networking between schools and the regional environment;
- Promotion of communicative and cooperative skills of teachers, parents and pupils as well as improvement of communication structures between teachers, students and parents;
- Documentation and dissemination of innovative projects and measures (see details at: Seebauer/Grimus, 2003, p. 234f.).

3 Health education as a principle of education – health education as a so-called „educational matter of concern”

As an educational principle health education has been embodied in the curricula of compulsory schools, vocational schools, business and commercial schools, in upper secondary schools with a focus on economics as well as in the curricula of schools for kindergarden teachers... The educational principle is not to cause an increase of subjects in the curriculum, but will help contribute to a better coordination and carefully planned selection of the material laid down in the curriculum. Additional focuses may be laid down within the framework of autonomous curricular provisions – in the form of optional subjects and electives.

As is known from international studies

- the self-confidence of students also depends on whether they feel comfortable in the school or not;
- well-being and self-confidence make a positive impact on the physical and the mental health of students (e.g. back pain and headache, morning fatigue and nervousness occur less frequently);
- health behaviour is influenced by the school, so there is a clear link between the school climate and the proportion of young people smoking at the school; there seems to be an interaction between the consumption of alcohol and the school climate.

Similarly, health and achievement run parallel: Healthier students are more successful at school. Successful students lead a healthier life. Even with teachers targeted interventions lead to improved coping strategies in terms of stress and problems and to a long-term satisfying and less stressful work situation. Against this background, nume-

rous projects and initiatives have been launched, some of which are briefly outlined in the following section.

4 Current projects and activities in austrian schools targetting at health promotion

Subsequently a number of Austria-wide activities and campaigns will be described, some of them focus on a specific topic (e.g. smoking); but in most cases, however, such activities follow a broad definition of health and try to involve more areas of life. In this context it should be referred to the “GIVE projects and materials” in particular – an initiative of of the Ministry of Education and the Health Ministry as well as the Austrian Youth Red Cross, which provide teachers with current information, material and suggestions for teaching.

Issues such as “communication and interpersonal skills” – as a prerequisite for successful relationships with other people, for a constructive approach to conflicts as well as for cooperation and teamwork get solid grounding in the same way as “self-esteem and dealing with feelings” – development of self-confidence, ability to deal with feelings, coping with stress ... (see <http://www.give.or.at/>). Communication and interpersonal skills are considered part of the health and life skills defined by the World Health Organisation (WHO) that are effective in many areas of life – e.g. communication, empathy, conflict management, cooperation and teamwork, personal commitment ...

- *The “European Network of Health Promoting Schools”*. The WHO, the Council of Europe and the EU have launched the joint project “European Network of Health Promoting Schools” even in 1992. Austria has successfully participated in this project until 2006. The international project will support activities and developments at the national level with the aim of making school a health-promoting workplace and learning environment. The project is/was based on a broader definition of health with a focus on “developing personal skills of individuals in the school and the school community in terms of health-conscious, independent acting, defining clear objectives and establishing good relationships with teachers and students, awareness of a health concept, which comprises the physical, mental and social well-being ... (see the details in Seebauer/Grimus, 2003, p. 236 f.).
- The computer program “*feelok*” is a well-founded internet program on adolescent health for 12- to 18-year-olds, developed by the University of Zurich, together with young people and professionals. The website (<http://www.feelok.at/>) offers interesting information and tips on health topics such as dealing with stress, smoking, cannabis use as well as love and sexuality.
- The project “*The smoke-free school. Democratic anti-smoking campaign*” for pupils from the fifth year of schooling ran from 10/01/2004 to 05/31/2005 (cf. <http://lbimngs-archiv.lbg.ac.at/projekte/rfs.html>). It was initiated by the fact that smoking is the most important single cause of disease and premature deaths – preventable by changing behavioural patterns.

- The campaign “*Be Smart! Don’t start – Smoke Free Class Competition*” is an initiative of the Austrian Cancer Aid, aiming at becoming a non-smoker (see <http://www.krebshilfe.net/information/rauchen/rauchen.shtml/pages/wettbewerb/index.shtml>).
- The fact sheet “*health of girls and young women*” addresses the field of “gender and health” – based on the fact that the health of women and men is different in the respective stages of life. In terms of gender mainstreaming (see SchUG [Act on organisation of schools] Nr.13/2002) it is therefore necessary to discuss health and its preconditions separately, even in terms of young people and to make health-promoting measures gender-sensitive. Two fact sheets (Nos. 2 and 3) address young men and women separately.
- The “*EU Food Safety Campaign*” provides a bridge to the consumer and to consumer education in schools. Since Austria’s accession to the European Union Austrian schools participate in the competition – annually put out to tender by the European Commission – called “Young consumers in Europe”, which address different topics. The aim of the competition to design and organize activities in which young people learn about the labeling of products. Already in the spring of 1999, 50 000 brochures “Look on the label – safety through information” were distributed. The focus of the action was on upper secondary schools. Issues such as identification, description of ingredients, origin and quality labels of goods were placed there. Furthermore, in the autumn of 1999 32.000 CD-ROMs were sent to students from 12 to 16 years, which presented the content on food safety in a playful way. In a third phase, another 40.000 school packages were distributed, building on previous experiences. The school package on “Food and Nutrition” includes the newly-designed CD-ROM “Check Your Snack” – intended for students, and an information booklet and worksheets targeting at teachers. This campaign is significant in so far as information on food and nutrition should be taught in school, because patterns once embossed can only be changed with great difficulties later.
- The campaign “*low-fat milk helps in the fight against kilos*”. For the Ministry of Education the support of the school milk (for decades already), is not an isolated measure, but part of the overall concept of health promotion in terms of healthy lifestyles. School doctors and practitioners increasingly have to face the phenomenon that the number of overweight children – amongst them also severely obese children – increases, which results in a number of secondary diseases of obesity (high blood pressure, arteriosclerosis, with all the complications and – according to the latest studies – type II diabetes) already in children and adolescents. Ten to 20 percent of Austrian children are overweight. In most cases, the total energy intake is too high – largely due to increased fat intake. Moreover, in most cases, they don’t get enough exercise. Therefore, school doctors and practitioners recommend low-fat milk and reduced fat dairy products in order to prevent young people against these catastrophic diseases.
- *Help instead of punishment – students without drugs*. Prevention from drugs is part of health promotion. Addiction is not considered a “vice”, but as a symptom of a disease whose origin is to be prevented.

Drug prevention

- should start as early as possible – before the existence of a real threat;
- is a continuous process, not a single action;
- creates conditions for leading a life that makes drugs dispensable;
- provides children and young people with personal and social skills, promotes self-confidence, responsibility, creativity and communication skills and shows a constructive approach to problems and conflicts;
- enables young people to say “no” and to resist social pressure;
- informs about alternatives to substances of abuse, and points to alternative possibilities of pleasure, stimulation and relaxation.
- The project “*Step by Step – Secondary Drug Prevention in Schools*” ... is aimed at young people who experiment with addictive behaviour or – to some extent – are already addicts. Affected students will be supported in addressing their problems and there should be the possibility to enable them to get positive secondary school qualifications. Step by Step offers:
 - training opportunities for school teams for in-depth discussions of the subject drug prevention, early detection, behavioural problems, communication skills,...
 - a CD-ROM with an extensive course of training and up-to-date information about counseling services, legislation and technical terms ...
 - a manual with additional suggestions (see also: <http://www.praevention.at/>).
- *Radiation Protection in Schools*. As part of the civil defence an extensive program of measures was developed by an interministerial working group (measures with possible nuclear accidents at nuclear power plants; required replacement of potassium iodide) (see the corresponding website of the Ministry of Health: <http://www.bmgfj.gv.at/cms/site/thema.html?channel=CH0781>, and the Civil Defense Association: <http://www.zivilschutzverband.at/>).
- *Together against violence*. The action is based on the fact that a good school climate can only be created jointly. A peaceful coexistence requires clear rules, even in the school habitat. About 40 percent of schools have reached agreements between parents, teachers and students. To encourage all schools in Austria to reach such agreements, a guideline for the preparation of joint agreements has been created.

In critical situations, school psychologists play an important role in preventing crises. For this reason, the responsible Ministry aims to increase the number of school psychologists by 20 percent from 150 to 180.

An important approach to prevent violence and raise awareness of the issue of violence is doing something with art. In the current school year 2010/11 is has been planned to run “theatre projects” on violence in each of the federal states in cooperation between theatres and schools.

Violence prevention and conflict management are of central interest at present – particularly in further teacher education (see: <http://www.gemeinsam-gegen-gewalt.at/die-weisse-feder/>).

The actions and campaigns outlined here are only a selection of projects particularly initiated on a federal level. Hence many other activities are organised at the level

of the federal provinces. In the context of autonomous curricula, resp. timetables schools may by themselves set appropriate priorities.

Other topics and tasks coming up in the very near future are: „Child Poverty and Health” as well as „Migration and Health” – maybe a suggestion for an interesting thesis or dissertation.

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VÝCHOVA KE ZDRAVÍ V RAKOUSKÝCH ŠKOLÁCH – ZAČLENĚNÍ DO UČEBNÍCH PLÁNŮ A SOUČASNÝCH INICIATIV

Abstrakt: Tento příspěvek uvádí – na základě nedávných výzkumů zdravotního stavu rakouských dětí a mládeže – některé výsledky z oblasti konzumace nikotinu

a alkoholu i obezity. Nedávné studie také poukazují na poměrně nový problém šikany v rakouských školách. První iniciativy v oblasti výchovy ke zdraví, které vznikly v osmdesátých letech minulého století, se primárně zaměřily na povědomí o výživě a zdravém cvičení; dnes se více kampaní soustřeďuje na konzumaci (požívání) tabáku a alkoholu a nověji také na jev „šikanování“. Takzvané životní a zdravotní dovednosti jsou stále častěji začleňovány do projektů a kampaní.

Klíčová slova: výchova ke zdraví, princip výuky, současné studie o zdraví dětí a mladistvých, požívání nikotinu a alkoholu, obezita, šikana, projekty a kampaně, životní a zdravotní návyky

THE INFLUENCE OF VALEOLOGICAL EDUCATION ON FORMATION OF SPIRITUAL HEALTH

Maria GONCHARENKO, Tetiana KUIDINA

Abstract: *Today domestic valeological, pedagogical, psychological sciences more pay attention to education at young generation of high spiritually-moral qualities. The scientific discussion was widely developed round problems concerning development ways of formations, creations of new (innovative) technologies professional, social and personal youth developments in recent years. One of questions which the valeology try to decide are problems of methodological and pedagogical working out of innovative spiritually-ethical education. In a basis valeological education must be knowledge of a new paradigm the world around and corresponding to it structural organization of the person, that help to promote formation of new world outlook.*

Keywords: *spiritual values, valued orientations, education, spiritually-moral potential*

Different problems of spiritually-moral education of studying youth of Ukraine have drawn to themselves steadfast the attention of researchers from various areas of sciences last years . Different specialists as psychologists, teachers, culture experts, philosophers, biologists, physicists, valeologists work in this direction, fruitfully . Spiritually-moral development of studying youth basically is carried out in the course of education and training, therefore on the orientation they should be imbue by cultural and is moral-aesthetically sated. It is necessary to make the creative environment providing development of an inner world, spiritual feelings, spiritual needs of the person, its valuable orientations, intellectual, religious, morally-aesthetic experiences. Spirituality is formed by harmonization of means of moral, aesthetic, intellectual influence. [1,3]

Now scientific discussion was widely evolved around problems concerning ways of a elaboration of education, creation of innovative technologies of professional and personal development of youth. The decision of objectives on methodological and pedagogical working out of innovative spiritually-ethical education is one of questions in which the valeology is engaged. It gives profound knowledge of consciousness structure, the structure of the person and a hierarchical role of spirituality in mechanisms of formation of health, develops criteria of an estimation of spiritual, moral and social health which are defined by the relation of the person to Space, universal, national and public values. [2].

Carrying out of the analysis of influence валеологических knowledge on formation of spiritual health at students was the purpose of the given work. An estimation of system of values spent by O.B.Fantalovj's [6] technique, definition of the purport of life orientations did by means of D.A.Leontev's test. For the analysis of the received data used statistical methods of research. The carried out correlation analysis has allowed to receive the description of personal values, their interaction, completeness of their substantial and structural characteristics.

Results of research

Researches were spent among students of the V.N.Karazin Kharkov national university. Valuable orientation as original display of outlook of the person and definition of its spiritual orientation, studied by means of ranging of "value-availability" of such vital spheres: health, communication, the high status, a family, public activity, the knowledge, the help and charity, material benefits, higher education, belief in the God (as the higher Reason of love and justice), rest, self-realization, the world fine, the love, a recognition, is interesting work, freedom.

(Fig. 1) average values of "values" for students-valeologov has shown comparison of the received results, that and students of biological faculty have full coincidence in spheres: the high status, love, the world fine, the help and charity, for students-valeologov more significant are spheres: knowledge and belief in the God.

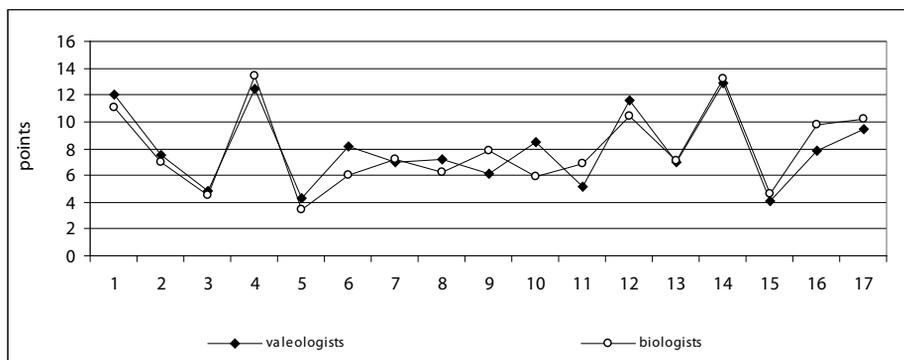


Fig. 1. Average values of «values» for students-valeologists and students of biological faculty.

Note: Universal values: 1 - health; 2 - communication; 3 - the high status; 4 - a family; 5 - public activity; 6 - knowledge; 7 help and charity; 8 - material benefits; 9 - higher education; 10 - belief in the God; 11 - rest; 12 - self-realization; 13 - the world fine; 14 - love; 15 recognition; 16 - interesting work; 17 - freedom.

Formation life orientations this knowledge and internal material and cultural wealth of a society, the nation, a civilisation, comprehension of leading value of values in own life, a family and society life as cultural - ethical reference points, statement of the purposes of self-development, self-improvement, self-realization, self-determination, self-realization. Studying vital orientations has shown, that students of both faculties have the positive mood, assured of the future, responsible for the life and the acts,

purposeful, perceive process of the life, as comprehended, interesting and emotionally sated (fig. 2). Having analyzed insignificant distinctions of average indexes of results of testing, for deeper analysis have carried out the correlation analysis received given (personal values) and have revealed various groups of authentically connected characteristics.

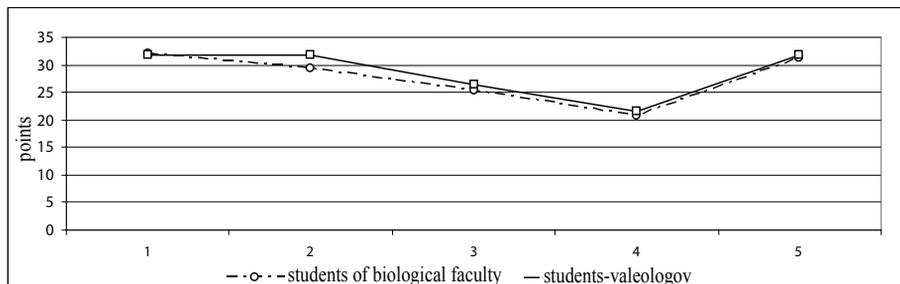


Fig. 2. Indicators of scales of Leontev's test (PLO), received at testing of students-valeologov of philosophical faculty and students of biological faculty.

Note: 1-purposes, 2-process, 3-result, a 4-locus of the control "I", a 5-locus of life control.

In spite of the fact that level of an indicator of life's orientation (LO) has the minimum divergence for students-biologists (103 s.u) and students-valeologists (104 s.u.) and in dynamic structure PLO is not present differences (rice 2), nevertheless, the correlation analysis has shown significant distinctions in value-semantic structures at these two groups of students, their various orientation and a saturation. Saturation of the considered block, this quantity of personal values which correlate with leading value.

In drawing 3. Correlation communications in system of personal values at students are presented.

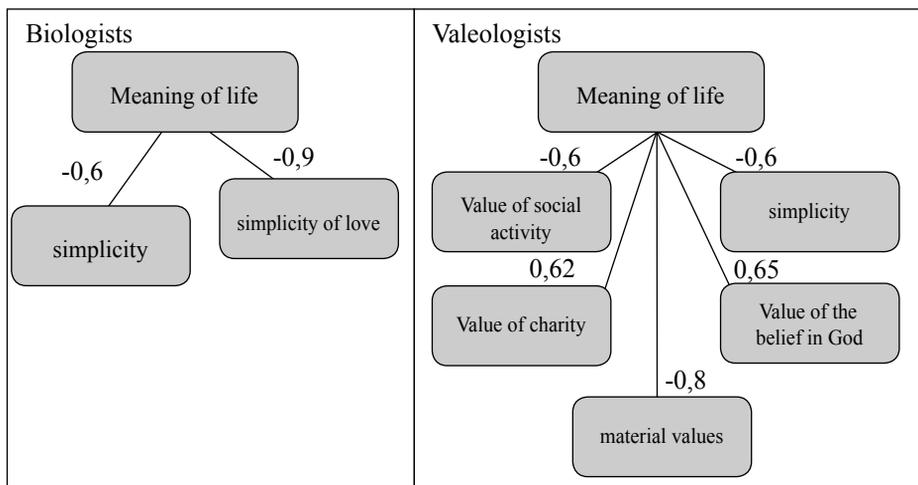


Fig. 3. Correlation communications of system of personal values with leading value LO at students.

With growth of level of comprehension of a life (CoL) at students-biologists «availability of communication» (-0,6) and «availability of love» (-0,9) falls, that testifies about revaluations of quality of communication. The sight and at «availability of love» if the early youth can be characterized the first love to older years orientation to a private life starts to ripen varies, there is a revaluation of relations with the favorite person.

Thus, valeologists (fig. 3) were correlated by analysis has shown other dependences characterizing raised aspirations. With growth of level of intelligence of a life (LO) value of charity (0,62) and value of belief in the God as the higher Reason of love and justice (0,65), falls the importance of value of social activity (-0,6), values of material benefits (-0,8) grows. It is necessary to notice, that valeologic knowledge gives the chance to students to look at a problem of preservation of health from other party, there is a revaluation of availability of health (-0,6).

Considering significant values as vital reference points, it is possible to allocate four accepted values-purposes: health, self-realization, a family, love. The percent of a choice of these values prevails over others.

Value “health” at students-biologists (fig. 4.) with value «social activity» (0,58) positively correlates, that associates with physical and social health. The following positive dependence, is availability «the belief in God» (0,62), and have negative correlation with an indicator «the Locus of the control of a life» (-0,7) which shows, in what measure the person can operate the life, how much freely it can make of the decision and embody them during a life.

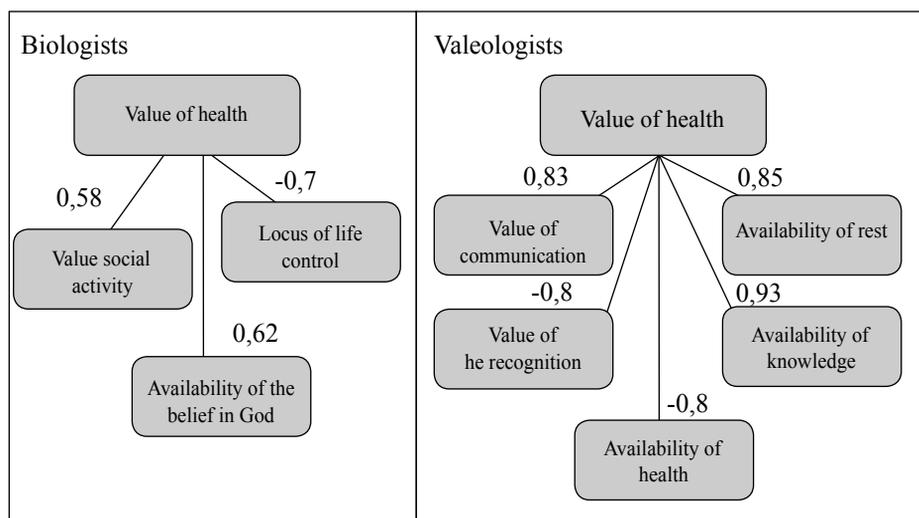


Fig. 4. Correlation communications of system of personal values with leading value “health” at students.

Students of the given group do not bear responsibility for formation and maintenance of the health. Value of health for this group carries a physical and social orientation.

At students-valeologists value “health” has following filling: value of “communication” (0,83), value of “recognition” (-0,8), availability of “rest” (0,85), availability of “knowledge” (0,93), availability of “health” (-0,8). The valeology, gives knowledge to students about importance not only physical and mental, together with spiritual health. Negative correlation «value and availability» health at students-valeologists speaks holistic the approach to the person, understanding of that correction of a state of health, it is necessary to begin with spiritual level, in parallel influencing on mental and physical level.

The following significant value, is “self-realization”. Correlation dependences for students - biologists are presented in drawing 5, they are characterized by the minimum saturation and a strongly pronounced one-orientation.

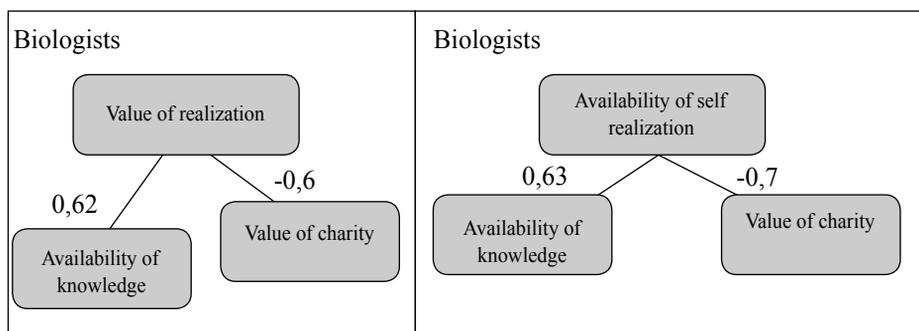


Fig. 5. Correlation communications of system of personal values with leading value „self-realization“ at students-biologists.

Both value and availability of self-realization correlates positively with availability of “knowledge” (0,62 and 0,63) and are negatively dependent with “charity” (-0,6 and -0,7). Students of this group have an intellectual orientation of development.

At students-valeologists value “self-realization” (fig. 6) is characterized by a saturation and interdisciplinarity. Positive correlation dependence is observed in spheres: value of «recognition» (0,84), availability of «communication» (0,8), availability of «family» (0,77), value of «public activity» (0,88) and negative correlation with availability of «rest» (-0,85).

Self-realization passes successfully when in a private life well-being (importance of availability of “family”) is observed. The importance of value of “public activity» and value of “recognition” for self-realization testifies to necessity for students of external support, possibility to receive an estimation individual (professional, social, spiritual) growth.

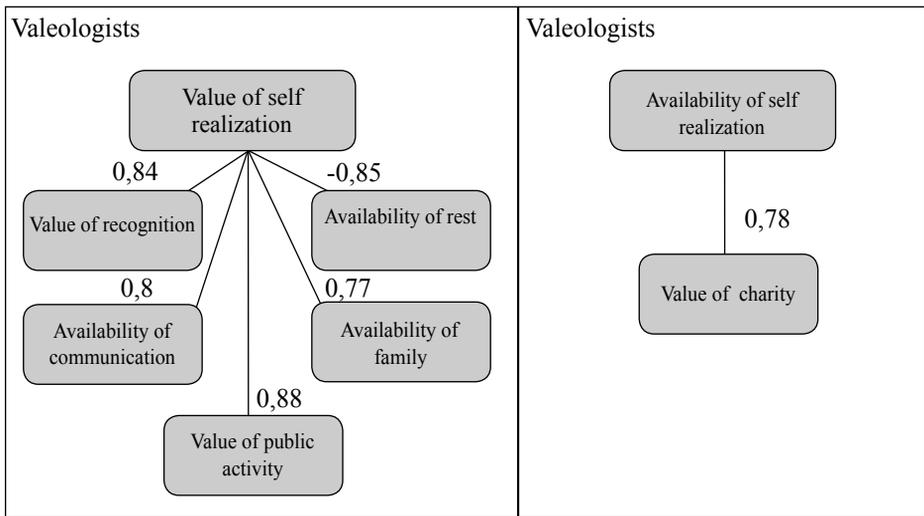


Fig. 6. Correlation communications of system of personal values with leading value “self-realization” at students-valeologists.

Value of “public activity» and availability of “communication” also are important for self-realization of students, they realize the interrelation and participation to a common cause, values of an educational institution, faculty, group, i.e. a society - which part they are. Thus the phenomenon “we-consciousnesses” when there is an integrated feeling of unity, coordination, feelings “we” in collective, the general vision of the purpose which turns to the shared mission including public and individual values is formed and satirized. Availability of self-realization to students-valeologists associates with value of charity (fig. 6).

Valeologic education promotes mastering spiritually - moral values and is process of acquisition by young men of spiritual experience, development of valuable orientations, spiritual needs and feelings which play the important role in formation of spiritual health. An important point I in valeologic education and educational process am use of forms and methods of education and education of spiritually-moral direction; creation личностно the directed pedagogical situations and positive emotional atmosphere during educational process; youth attraction to research activity on formation of spiritual health [3,5].

Conclusions

Results of the lead work have allowed to define degree of realization of vital senses and have shown, that the majority of students have target orientation, orientation to an emotional saturation and productivity of a life, orientation to a freedom in choosing, have strategy of a social life. Researches of dynamic structure life meaning orientations through correlation with values of the person has allowed to open deep senses and to find out qualitative differences in value-semantic structures in students-biologists and students-valeologists.

At students - biologists self-realization is directed on social health, on intellectual development, with low level of knowledge of value of spiritual self-improvement. The correlation analysis has found out dependences which characterize raised aspirations in students-valeologists. Valuable components are characterized by a saturation and разнонаправленностью. They are presented by groups of values, which has orientation on aspiration of the person to spiritual growth.

This work have shown, that valeologic knowledge, give understanding to students of importance not only physical and mental, together with spiritual health. The received results confirm necessity of introduction valeologic educations at all stages of education in all teaching and educational establishments that will give the chance for formation of a humanistic society with new outlook.

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VLIV VALEOLOGICKÉ VÝCHOVY NA UTVÁŘENÍ DUCHOVNÍHO ZDRAVÍ

Abstrakt: Moderní domácí valedologické, pedagogické a psychologické vědy více věnují pozornost výchově duchovních a morálních vlastností u mladé generace. Vědecká diskuse se v posledních letech ve velké míře zaměřuje na problémy, týkající se vývoje způsobů utváření a vytváření nových (inovativních) technologií profesionálního, společenského, sociálního a osobnostního rozvoje mládeže. Jednou z otázek, které se valedologie pokouší zodpovědět, jsou problémy metodologického a pedagogického vy-

pracování inovativní duchovní a etické výchovy. Základem valeologické výchovy musí být znalosti o novém paradigmatu světa kolem nás a musí ji odpovídat „organizační struktura“ osoby, která pomáhá podporovat utváření nového pohledu na svět.

Klíčová slova: duchovní hodnoty, hodnotová orientace, výchova, duchovní a morální potenciál

HEALTH EDUCATION AND STRATEGY OF MENTAL WELL-BEING IN EDUCATION PROCESS

Milada KREJČÍ

Abstract: *The paper is aimed on mental health development of children and youth and on implementation of mental hygiene in schools of the Czech Republic. The theoretic part focuses on actual health knowledge about the signification of mental health as a complex and influences of stress on human health and the coping strategies. The exploration contains results of interventional strategies verified in about hundred schools in Czech Republic in pupils aged 13 – 15 years old. Diagnostic methods contained interventional programs (12 week duration), questioning, observation. Results present high level of benefits of intervention in relatively short influence of educators. Significant changes were found in pupils stress management ability, in self - esteem, and values. Pupils expanded their knowledge and skills in interpersonal relations and they got to know new options of physical activities. The paper is also aimed on definition of adequate movement regime in context with mental health.*

Keywords: *health education, mental hygiene, adolescence, breathing exercises, relaxation, adequate movement regime*

Introduction

Participants of an EU high-level conference “*Together for Mental Health and Wellbeing*”, which held in Brussels in 2008 (http://ec.europa.eu/health/ph_determinants/life_style/) acknowledge the importance and relevance of mental health and well-being for the European Union, its Member States and citizens. Mental health was recognized like a human right. It was declared that mental health enables citizens to enjoy well-being, quality of life and health. Mental health promotes learning, working and participation in society. The level of mental health and well-being in the population is a key resource for the success of the EU as a knowledge-based society and economy. However mental disorders are on the rise in the EU. Today, almost 50 million citizens (about 11 % of the population) are estimated to experience mental disorders, with women and men developing and exhibiting diff-

erent symptoms. Depression is already the most prevalent health problem in many EU-Member States. Suicide remains a major cause of death. In the EU, there are about 58,000 suicides per year of which 75 % are committed by men. Eight Member States are amongst the fifteen countries with the highest male suicide rates in the world. The mental health and well-being of citizens and groups, including all age groups, different genders, ethnic origins and socio-economic groups, needs to be promoted based on targeted interventions that take into account and are sensitive to the diversity of the European population. There is a need to improve the knowledge base on mental health by collecting data on the state of mental health in the population and by commissioning research into the epidemiology, causes, determinants and implications of mental health and the possibilities for interventions. Among the priority area are included Prevention of Depression and Suicide Depression is one of the most common and serious mental disorders and Mental Health in Youth and Education. The foundation of life-long mental health is laid in the early years. Up to 50 % of mental disorders have their onset during adolescence. Mental health problems can be identified in between 10 % and 20 % of young people. It is necessary to start with education and training to involve in the health education of youth mental health and well-being strategies and to promote the integration of socio-emotional learning into the curricular and extracurricular activities of pre-schools and schools. Also is important to promote the participation of young people in sport and employment. Technical development in transport, in building industry, in agriculture, in level of housing, in the speed of information and in computer technology in last decades guide to fact that the human life changed dramatically. We speak about “Consumption life style” which is typical of overconsumption of different things and often of wasteful use of them, of the environment indolence, of the food-stuffs overconsumption (frequently unhealthy foodstuff) and of drugs (alcohol, tobacco, substance abuse, narcotics).

During 2007 - 2008 we realized in cooperation with Japan Kochi university a research study in infants aged 3 - 6 years old 697 (360 girls, 337 boys) Japanese infants and 627 (305 girls, 322 boys) Czech infants which were investigated by inquire method for parents, which answered the standardized questionnaire. The study was focused on life style habits and on the analysis of the circadian rhythm and sleep schedule. Results demonstrated that Czech children were more morning-typed than Japanese children, while Czech parents were more evening-typed than Japanese parents (Mann-Whitney U-test, $z=-12.33$, $P=5.97 \times 10^{-10}$). Czech children were depressed more frequently than Japanese ones who were more frequently angry than the Czech children. Infants who were depressed or angry often were significantly more evening-typed than those who feel depressive and angry less frequently in both countries (Mann Whitney U-test, Czech: χ^2 -value=13.02, $df=3$, $P=0.0045$; Japan: χ^2 -value=12.87, $df=3$, $P=0.0049$). Results have shown that de-synchronization of the circadian clock system is accompanied by emotional instability and depressed mood (WADA, KREJCI et al., 2009). Intervention programs to promote the sleep and mental health in different age groups of children and youth in sense to shift to morning – type would be very useful in school education process. This study is only an exemplar of problems with mental health in childhood.

Every change in social milieu has a psycho – somatic response in the organism with a health impact. The change of situation is in first evaluated through the “psychic filter” with follow health impact (e.g. impact in body or it manifests as a mental-social effect) It depends of that, if situation is perceived as a stressful, endangering (e.g. evoking unsafely, destruction of psychosomatic integrity or too much stimuli together) or if can be accepted, positively evaluated or solved thanks the will. Through the “psychic filter” gone and are evaluated also signals coming from inside, from organism (e.g. burst of pain, palpitation). Just on completely subjective evaluation depends, if the response will be at last positive or negative from the view of health impact. If the situation is understood as endangering, symphateticus is mobilized together with noradrenalin and adrenalin mobilization. If people have not possibility to move at this moment, what is typical for nowadays sedentary life style and social interactions (in job, in car, by TV watching etc.), it starts biological reaction with all negative impacts on cardiovascular system and on inner organs. If the subjective stress repeats often or permanently, another hormone response in organism is mobilized, especially from the adrenal cortex (glucocorticoids, mineralocorticoids) and from other glands. This fact has very negative impact in immune system, allergic reactions and different diseases development. The defense and also the prevention is in physical activity. Its intensive impact on peripheral part, it means on somatic system thanks the adequate movement regime is affected psychic condition and physical condition so much that can be absolved stress without any health risk. The base of health support is self-esteem. Predisposition of that is a self-understanding. Predisposition for the self-understanding is ability to relax. The conciseness becomes more objective and wide in the process of self-understanding. Self-understanding makes people more open to personal experiences and has a positive influence on the level of social contacts (MÍČEK, 1988). To understand self, to be able to express self, they are key skills for competence. In this connection a social pressing comes forth, which influences much the individual (FIALOVÁ, 2008). Introspection and self-understanding plays an important role, because if we more and better understand our self, better and more we can adapt in environment (ROGERS, 1998).

Intervention strategies in mental health promotion

The Continuum of Self transformation in the sense of Health support and Health development proceeds in coherent cycles (we recommend 3month’s cycles, e.g. 12 weeks), when in the first cycle a basic education is realized and after in other cycle(s) is deepened education in sense of independence of the clients on educators. The aim is the complete individual autonomy, when the client is able to:

- use relaxation and breathing techniques for tiredness compensation and stress management
- plan and realize an adequate movement regime
- know the benefits of health nourishment and to solve drinking regime and overweight management

- be resistant to false advertising
- know overweight and obesity health risks including health risks of hypo kinesis
- analyze health risks joint to the occupation and to compensate it with adequate salutors

Teaching of educators in health education area should be very authentic, with high level of empathy and acceptance. On the base of presented recourses and on the base of our research results in the projects GAČR 406/05/1685, GA ČR 406-08-0352 the continuum of Self transformation was defined. The continuum is ordered in the circle, see Figure 1.

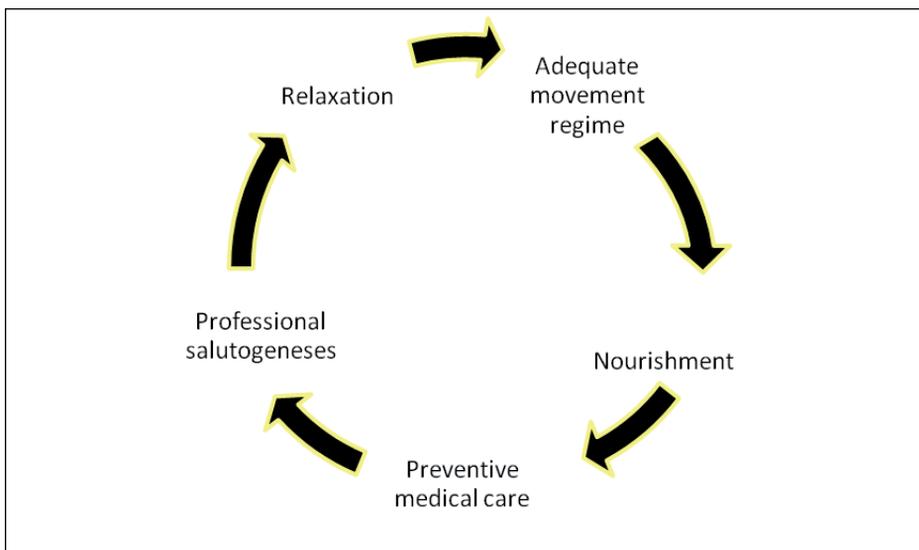


Figure 1: Continuum of Self transformation in the sense of Health support and Health development

Under critical analyze of the model of the Continuum and higher mentioned consequences of relaxation and self-valuation, self-esteem, we found out that to start by *Relaxation* is benefited from the view of active life style and health support. As it was mentioned up, psychic state is key point in area of individual health support and health development. In psyche it decides about the whole health change, does not matter in which dimension of organism. To influence effectively the psyche is most easy just during relaxation and breathing process. It is possible to use many techniques, which all have benefits in self-regulation and self-control development. Relaxation in psychic state can be easy transfer in motor area, if the principle of adequate movement activity is respected. Also in the process of motor learning and motor engram creation, the relaxation plays very positive role. In the state of relaxation and well-being people learn better and easier to motor skills. The Czech system of education this important phenomenon

missed till the end of 20th century. In present Czech school education system including Health education (area Human and Health in base schools and secondary schools) is opened possibility to master relaxation and breathing techniques (e.g. to master the self-control), which is very valued for active life. Mastering of the relaxation leads to homeostasis optimization and positive influences in circadian rhythms, including sleep habits. In this way one can feel the connection between psyche and physiological response and peripheries of the motor area.

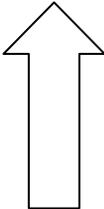
Stress	Changes	Relaxation
	Myotonus Breathing rate Cardial rate Blood pressure Metabolism EEG	

Figure 2: Physiological changes during stress and relaxation

The next element of the Continuum is the *Nourishment*. Food should be always fresh prepared with important portion of raw food (e. g. fruit, nuts, vegetable, milk, muesli etc). Just in fresh and in raw food are enzymes, which are accelerants of biochemical reactions in human organism (bones construction, muscles, haematogenesis). Ready-to-cook foods, heated food, old food, food with chemic additives influence negatively on organism and health, provoke tiredness. Other often mistake in nowadays is a poor breakfast and too opulent dinners. Also hurry during eating time, non concentration (calling, reading, TV) they are unfit to good digestion. Angry or agonized people cannot eat properly and if eat something, have digestive problems. Fears, angry, depression create “poison” even from the health food.

Preventive medical care and *Professional salutogeneses* are the rest parts of the Continuum of Self transformation in the sense of Health support and Health development. Preventive medical care in Czech Republic is based on European tradition of healing and presents self very high of treatment. So it is very wise and advisable to prosper from the possibilities of prevention check-up and care according the individual needs. It is necessary to remark that WHO declares that preventive medical care can positively influence the human health only from 15 -20 %. The biggest part can be positively influenced during the active life style including the adequate movement regime. From the view of the Professional salutogeneses for everybody is very important to analyze working milieu, working regime and according that consider carefully risk factors in context of individual health and health of others. On the base of this analyze is possible to implement in life style the salutors, which compensate health risk of the profession – for example voice calmness in teacher’s profession, stretching in programming engineer, etc.

Adequate movement regime can improve and maintain mental health, on the base of optimal mode, intensity, frequency and duration of exercise. General movement insufficiency can be observed in adults as in child age as well in nowadays.

It results in special psychic symptoms (so called “hypo kinetic syndrome”), which are demonstrated like impulsivity, irritation, non concentration, lack of self-control, discomposure and aggressiveness. Experience of adventure, in the past realized in different child games and playing, in nowadays is replaced by a virtual experience with minimizing of movement activity. Just the movement insufficiency (hypo kinesis) is the reason of disponibility to movement activity generally, because the motor learning is inhibited from childhood.

Physical movement and exercises are promoted as a means to enhance various aspects of mental health, including emotional disorders and cognitive processes. However, there is far less research on the mental benefits in the context with adequate movement regime. Our previous researches in the projects GAČR 406/05/1685, GA ČR 406-08-0352 and the project ESF Aim 3 -16 PACZion has consistently found that physical exercise improves psychological improvements, including intentional socialization effects.

Different movement activities, adequate to the individual skills, inclinations and interests are suitable implemented in daily life and create the adequate movement regime. Its basic characteristics and principles are defined (in the line according the importance and the consequence) in the next points:

- **Coping** - in the sense of individual managing and mastering of movement. What for one is easy, for the second is difficult. The main role play: condition, age, health situation, impairments, etc. Coping is the base of progress in motor learning.
- **Spontaneity** – in the sense of freedom, facility, pleasure during the movement activity, eventually to experience in the „flow“ effect. The spontaneity is the preposition for the saturation benefit.
- **Saturation** – in the sense of satisfaction, self-realization, self-determination during the movement activity and after it. The person has tendency to return to the movement activity again and again.
- **Repeatability** – in the sense of wish to return to the movement activity and to develop the performance as possible. Only in this step is real to begin with regular training with variable training load. The person accepts discomfort and even a pain.
- **Training** – in the sense of the variable dosage of the intensity according to the health situation, age, condition, body structure, sex, etc. During the training process can be developed a positive dependency on the movement activity. An obstacle can be availability of the movement activity every day.
- **Availability** – in the sense of regular, daily application of movement activity. It depends of nature conditions, time factors, solvency, laws, etc. Here usually begins combination of daily activity with season, temporal move-

ment activities (for example yoga + alpine skiing + biking). Adequate movement regime is created.

- **Safeness** – in the sense of the accident prevention, rescue during the movement activity realization. To keep principles of safeness. Only safe movement activity is adequate to the person. Again an important role plays: health situation, age, condition, body structure, sex, availability of equipment, etc.

On the base of adequate movement regime is possible to develop individual motoric skills. All, what is learned should be used in normal daily life and active life style according individual specifics and needs as for example to swim, be good in biking, to relax, to experience well-being during movement activity. It is very good if adequate movement regime concludes outdoor activities. Adequate movement activity connected with outdoor and has unsubstitute healing effect in physical, mental, social and spiritual level of health.

In adequate movement regime is not necessary to be compared in performance with others. Everybody is special and somebody prefers non-competitive movement activity. Therefore very good results bring non-competitive activities as to absolve a bike trip, to descent the river, walking tour with a dog, paragliding, snowboarding etc, when we do not compare our skills and force with others, but more to excel, to realize self. If the adequate movement regime is practiced with friends, family members or partner, is upgraded in unforgotten experiences fixed friendships and relations with transfer in next generation.

Research study procedure, methods

118 teachers (92 females and 26 males) from junior high schools from different areas of Czech Republic were educated for realization of “Mental health support strategy intervention program” at school education process. 2367 pupils of the junior high schools participated in intervention. From the number 2367 pupils, 385 randomly selected pupils (186 males, 199 females) participated in testing. Before and after the intervention program selected pupils were tested. Data were analyzed by SPSS non parametric Cruscal Wallis Test. Statistical analyze was provided by Akane Kobayashi z Kochi University during her stay in University of South Bohemia in Ceske Budejovice.

Methods:

- Intervention program,
- Intentional observation,
- Free notices of participants
- Test of circadian typology (Czech version - HARADA ET AL., 2007)

- Test „POMS“ Profile of mood states (version MAN, STUHLÍKOVÁ, HAG-TVET, 2005)
- Biofeedback Schulfried
- School environment analyze
- Weekly reports about daily regime of participants

Table 1A, B: Characteristic of tested sample – e.g. number, sex, age

A

	11years	12years	13years	14years	15years	16years	sum
males	9	45	44	37	45	6	186
females	15	51	44	44	42	3	199
sum	24	96	88	91	87	9	385

B

		min	max	average	standard deviation
age	385	11	16	13,35844	1,303575876

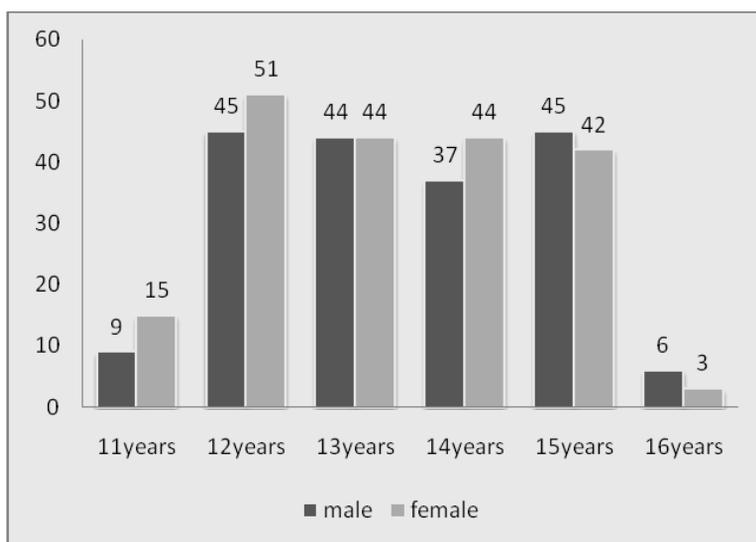


Figure 3: Characteristic of tested sample – e.g. number, sex, age

The first phase of intervention program includes positive changes in self-control and in self-esteem through the integral yoga training (3 month) and the second phase continues in coherent mastering of adequate movement activities leading into individual adequate movement regime (2 weekends, one week course). The training was realized

in 2 weekend's courses in outdoor in interval of 1 month and after culminates in one week course again in outdoor.

Description of integral yoga techniques used in intervention program

- Training of relaxation, yoga exercises
- Training of abdominal breath, full yoga breath and alternate breath (through left and right nostril)
- Training of concentration, visualization and Self Inquiry Analyze
- Lectures about sleep habits, circadian typology, stress management, ethics

The integral yoga training was realized in the group of participants in a 3 month cycle. Always once in week the yoga training proceeds. Participants learn here, what they should do at home regularly every day. Every 2 weeks the training set of exercises is changed according to keep up the motivation level of participants. Optimal duration of the training is 45 minutes for the lecture and discussion + 90 minutes for practicing of yoga techniques. Yoga techniques consist from yoga sets, yoga positions and exercises (from easy exercises – so called Sarvahittasanas – to the more difficult exercises developing strangeness and balance), from breathing exercises, relaxation mastering, concentration development techniques and from self-analyses („Self-inquiry meditation“). In the group of participants is applied an individual approach (tutoring, consultations). The lectures and discussions are oriented on topics as ethic life, active life style, stress management, nourishment, drinking regime, diurnal rhythms. Optimal number of participants in one training group is 15 participants.

Yoga exercises are provided in static or in dynamic forms. In all cases they have harmonies effects on nervous and motor system and on system of glens. If muscles are in permanent contractions, the blood circulation is blocked, and this fact corresponds with psychic lability (BERGER, PARGMAN & WEINBERG, 2002, MAHEŠVARANANDA, 2006, PIŠOT et al., 2008). Yoga these blocks and spasms „dissolves“ and in this way influences positively on the actual psychic state. Equal the aerobic exercises, e.g. walking, running decrease tensions in the body and lead to optimization of blood and lymphatic circulation (BUNC, 2007).

Yoga exercises support the metabolic processes and utilization of whole breathing capacity. Breathing exercises have revitalization effect and harmonize psychic states. Thinking process and breathing process are in the close relationship. If the man is irritate, his breath becomes irregular, slight, loud and limited in up chest. If the man is calm and relaxed, the breathing process is deep, slow, regular, with usage of whole breathing capacity (diaphragm breath). This principle is possible to use in such way, that during the change of breathing it is possible to calm emotions and harmonize psyche. Especially the full yoga breath and “Nadi shodhan“ (breathing through left and right nostril) present special techniques to calm and balance nervous system.

Results and discussion

Table 2: Significance of changes in Factors of test POMS (before – after intervention)

	question number	average1	average2	average1 SUM	average2 SUM	shift	significant
Angry	2	1	0,493506	5,623626894	2,96388757	-2,6597393	<0.001
	11	1,096354	0,569191				
	19	1,067532	0,5625				
	21	0,994805	0,462338				
	25	0,716883	0,395833				
	31	0,748052	0,480519				
Fatigue	29	1,597403	1,012987	8,028571429	5,293513258	-2,7350582	<0.001
	18	1,8	1,14026				
	37	1,101299	0,836364				
	26	1,438961	1,002604				
	3	0,87013	0,524675				
	17	1,220779	0,776623				
Vitality	32	1,893506	2,18961	11,12973676	11,79579934	0,66606258	<0.001
	9	2,122078	2,408854				
	5	2,28125	2,511688				
	24	2,306494	2,532468				
	35	1,385417	1,166234				
	13	1,140992	0,986945				
Depression	4	0,986979	0,548052	5,551381866	3,267738937	-2,2836429	<0.001
	12	0,64752	0,389034				
	33	0,771429	0,47013				
	23	0,87013	0,483117				
	14	0,680519	0,481675				
	20	0,685714	0,467532				
Confusion	15	0,909091	0,428198	3,640028558	2,219595632	-1,4204329	<0.001
	36	1,101299	0,65974				
	34	0,846753	0,509138				
	10	0,803665	0,526042				
Tension	6	0,888312	0,524675	3,368831169	1,770265152	-1,598566	<0.001
	22	1,212987	0,592208				
	16	1,054545	0,552083				
	1	1,101299	0,625974				

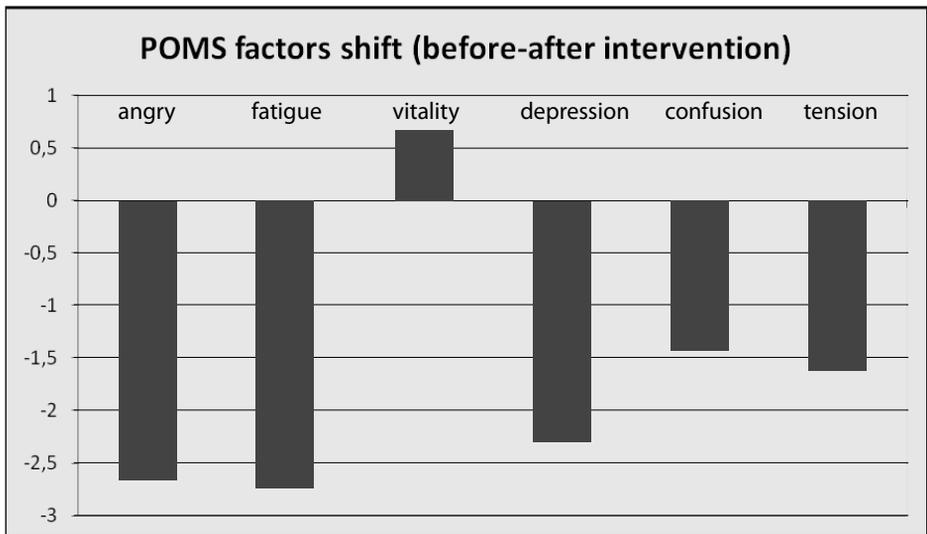


Figure 4: POMS factors shift (before-after intervention) in tested adolescents

In our previous interventions and researches with yoga techniques applications oriented on mental training of sportsmen, on concentration development, re-socialization effects, etc. (KREJČÍ et al., 1992 – 2003), we found improvement of emotional states. Using the self perception method POMS we certified significance changes in factors “angry”, “fatigue”, “vitality”, “depression”, “confusion”, “tension” – see Table 1 and Figure 1 in tested groups of adolescents. Especially expressive changes (decreasing) were found in factors “fatigue”, “angry” and “depression”. The shift from state “unhappy”, “nervous”, “enraged” to optimization of psychic states of pupils is evident. We can refuse null hypothesis and constant that after the application of program positive changes in emotional and social indicators were reached. In abroad research works, yoga was applied as a successful method of overweight reduction (e.g. RAJU et al., 1998, KHARE & KAWATHEKAR 2002, PAWLOW, O’NEIL, MALCOLM, 2003). In Czech environment such research missed and in the years of 2005 - 2007 was realized in our Institute as a granted research project GAČR 406/05/2431 “Positive effects of self-control and self-esteem development on overweight reduction through the yoga training“ (KREJČÍ, 2008). Our and abroad research results identical demonstrate benefits of yoga techniques in overweight reduction. Even the short term applications can bring positive results. Measures of lipoproteins and cholesterol in blood found out significant metabolic changes after 9 days long yoga training in consequence of relaxation of tensions and stress (PRA-SAD, SUNITA et al. 2006). Our results verify such conclusions.

Relaxation and concentration techniques reduce stress and mental tensions, help to self-esteem development and satisfaction, evoke happiness and well-being. Relaxation and concentration techniques open the way to self analyzes („Self-inquiry meditation“). Physical exercises manifested in body in the condition and muscle force, similarly the concentration strengths mental health (memory, fast reaction, etc.) and self-control.

Meditation develops freedom and inner peace, supports intuition and empathy. Meditation is a key technique to self-control and self-esteem development, what is very in individuals with overweight. Meditation helps to experience of a presence moment. In the state of the inner concentration step by step the emotional blocks, phobias, anxiety are removed. Participant is able to recognize own possibility and aims to self-realization.

Only the right motor stereotypes create the base of comfort feelings in physical activities. Only right learned motor stereotypes lead to spontaneity in movement activity, what is fine for a catharsis effect, e.g. movement relaxation and stress compensation. Unfortunately stress is a part of temporal life style. Needs of long concentration, on orientation in couples of information, on prompt and quick reactions are in nowadays a base of optimal performance in work and personal life. As it was discussed up in the characteristics of adequate movement regime, if movement activity is relaxed, it leads automatically to mental relaxation. And in opposite, mental well-being positively influences healing process and body regeneration. Adequate movement regime supports not only overweight reduction, but also supports health and active life style in daily life. After realization of integral yoga training participants are able to use compensation and relaxation techniques to removing of tiredness and stress and to start with training in adequate movement activities. After the courses comes the emancipation, independence period (e.g. to realize individually) 2 months, when participant can consult with educator individual program, but more and more is independent. Participant continues in individual program of adequate movement regime alone or with a friend from the course. If he need, after 2 months period, he can again absolve 3months cycle of integral yoga training and at the same time continue in elected adequate movement activities with the variable dosage of the intensity. About 80 % of participants elect the possibility to absolve again the integral yoga training. Only after that, they feel so able and independent to continue in adequate movement regime individually.

To declare better influence of quality of adequate movement regime on health in adults we present here also selected results from a research study aimed on adequate movement regime in middle age adults. In the research study 811 respondents (405 males, 406 females) in medium age of – 30.9 years in males, 30.02 years in females participated. From the view of education level 226 were alumni of universities, 555 graduated of secondary schools a 30 absolved working schools. Questionnaire of Adequate Movement Regime, included 10 questions (KREJČÍ, 2010), was applied. Statistic analyze was provided by t-test - Fisher test. According the statistical analyze the significant difference was found out in activity „Walking, walking with dog” from the view of categories “Last year” and “Last week” ($p < 0.00001$). In categories of “Last 3 months” and “Last year” was no significant difference found ($p = 0.0793$). It seems that the walking is very important and often used activity in both genders of participants in category “Last week”. In retrospection of activities in categories “Last 3 months” and “Last year” the walking lost its importance at all. Sure it does not mean that respondents do not provide walking as a daily activity. But they do not want to interpret “Walking” as an important movement activity in periods of “Last 3 months” and “Last year”. In opposite they interpreted here sports like alpine skiing, swimming, fitness.

According to results of Fisher test it was found out significant difference in no adequate suitability between factor “Time” and “Finance” $p=0.0018$ and between factors “Time” and “Distance” $p=0.0013$. In adequate suitability it was between factors “Finance” and “Distance” $p=0.0031$ and between factors “Time” and “Distance” $p=0.0013$. Results confirmed, that the biggest problem for respondents is “Time” factor, e.g. to find time for physical activities. Factors “Finance” and “Distance” do not play an important role. Results indicate good level of ability to organize movement activities in adequate regime of respondents, see Table 3.

Table 3: Suitableness of movement activities (N=811, 405males, 406 females)

Suitableness	Time	Finance	Distance
Very adequate	459	576	671
Adequate	174	168	102
Non adequate	165	54	25

Other results declare an interesting fact that most popular physical activities, to which respondents like to return, are not master on the proper level of motor learning. Respondents evaluate self mostly by mark 3, see Figure 5. It is striking especially in alpine skiing, which was evaluated in both genders of respondents as the most popular physical activity, see Figure 6.

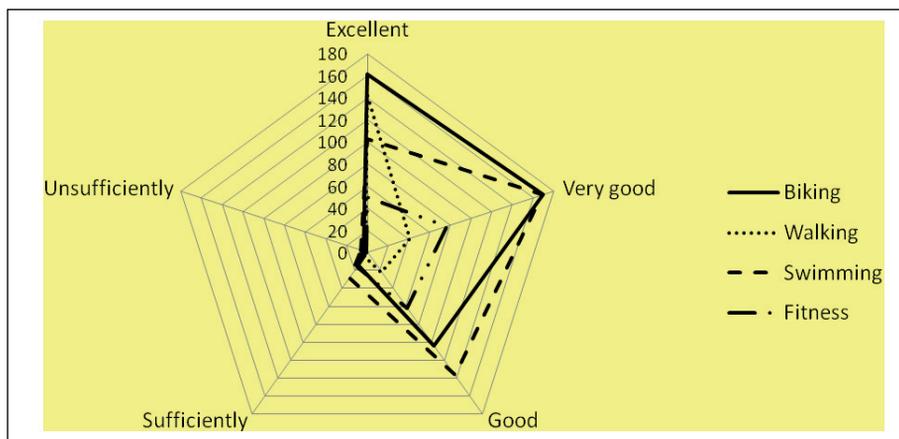


Figure 5: Most popular physical activities from the view of declared level of mastering 1=excellent, 2=very good, 3=good, 4=sufficiently, 5=insufficiently. (N=811, 405 405males, 406 females)

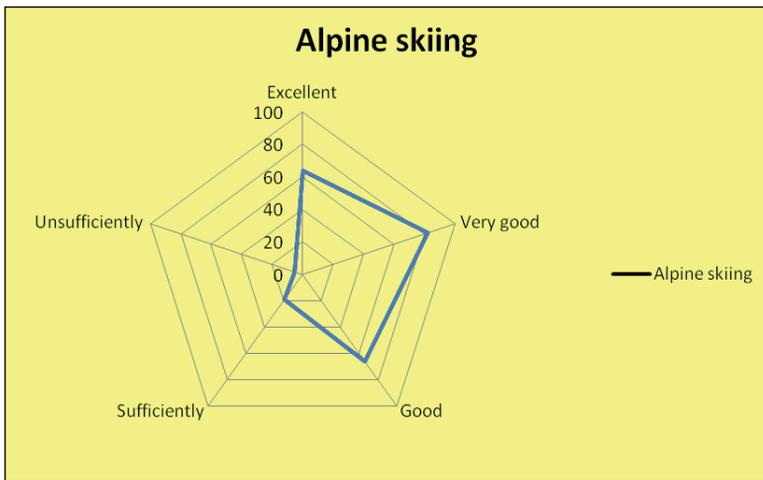


Figure 6: Alpine skiing from the view of declared level of mastering 1=excellent, 2=very good, 3=good, 4=sufficiently, 5=insufficiently. (N=811, 405 405males, 406 females)

The last result, which we present, which one was again same in both genders of respondents, is the day time preference for physical activities. In both genders dominate preference of the afternoon and evening time, see Figure 9. This result is surprising and shows more low knowledge about health benefits of morning exercises as lack of time in the morning. Benefits of morning practicing are accented especially in overweight reducing period. In addition morning movement activities are effective from the view of mental hygiene, for the well-being and feelings of harmony for the whole day. Also the investigation in the area of circadian typology and rhythms verified the positive health impact of morning physical activities (HARADA ET AL., 2007).

Regarding to the nowadays hurry life style often biorhythms are disturbed. No adequate movement regime results in a sport “burn out” effect, cardiovascular overload and tiredness symptoms. But just the tiredness symptoms present clear signals to rest. Tired man is irritable, produces conflicts and can be aggressive, If a special regime is pushed him in his time table and he cannot free decide about his rest “psychic philter” signalizes stress, threat, the irritation increases and the man has a tendency to stop all activities and never return to it. This is contra productive to the health benefits of physical activities and to the health education to active life style.

Pupils of grammar schools feel more often overload then pupils of junior high schools, especially in the number of lessons, difficultness of forms and content of curriculum and homework. Time spent at school of all tested pupils represents daily 9- 10 hours in 14 – 15 years old. Participants feel problems in mental health, but are shying to talk about that. Also they do not like to speak with parents about problems in mental health. Main problem, which they define, is an absence of leisure time and time for relaxation. Adolescents were unsatisfied with absence of time for friends, family members as well. They would like to have more time for walking, resting and sleep. On the base of our results and observation we can declare that pupils liked the education in mental

techniques and in yoga techniques. They were active and it was not necessary to apply a special motivation support. They liked all program of mental health support, felt less tired, more in harmony and vitality, what significantly is shown in results of POMS method. Teachers which guided the program expressed also satisfaction how all participants were very initiative in learning.

On the base of weekly timetables of participants we discover disorders in circadian rhythms (especially late getting in bed, interrupted sleep, lack of sleep) and not adequate movement regime. In opposite they spent too long time daily on the computer playing and internet communication.

Conclusions and recommendations

On the base of found results we recommend to implement mental health support and training of mental hygiene techniques in school education in context with presented program and paradigm of Continuum of Self transformation in the sense of Health support and Health development. Special attention in education process should be gave to optimizing and explanation to sleep habits and circadian rhythm. With mental health support use adequate movement regime and promote movement skills and self – esteem and self – confidence during individual providing of physical activities.

Health support in adequate movement regime presents an important part of active life style analyzing. Adequate movement regime creates a part of a paradigm - “Continuum of Self transformation in the sense of Health support and Health development” and therefore can influence on the level of individual active life style since childhood till senior age. Health education is based on prediction that man is a subject who is developing, e.g. the change of Self is possible in any age period. The Self is not completed and finished, in the sense that we could operate with the Self in a calculable way. In this fact amazing potential of educator’s work is hidden here for kinesiology specialists and competence physical education experts. On the base of the up discussed research results is possible to declare that integral yoga training can present for individuals with overweight a suitable initial physical activity, which founds an area for the others physical activities (adequate to individual specifics) and for the full individual and independence adequate movement regime. In addition during the integral yoga training people must not fear of ironizing, unsuccessful, they must not suffer of anxiety and to have any social barriers in connection to physical activity. The aim of this publication was to define the active life style in connection to the adequate movement regime. The adequate movement regime is declared with characteristic steps on pages. Adequate movement regime can be upgraded in outdoor environment, eventually in non competitive way of its realization, when it is not necessary a nonstop comparison with others. Adequate movement regime has a fundamental influence on the support and development of individual health, including the problematic of circadian rhythms, development of motor learning, tiredness compensation and stress management.

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VÝCHOVA KE ZDRAVÍ A STRATEGIE VÝUKY DUŠEVNÍ HYGIENY VE ŠKOLE

Abstrakt: Příspěvek se zabývá otázkou rozvoje duševního zdraví dětí a mládeže a zařazením výuky duševní hygieny ve školách v České republice. Teoretická část shrnuje dosavadní poznatky o významu duševního zdraví jako celku a zabývá se vlivy stresu na zdraví člověka a dále algoritmy optimalizace stavu ve školním prostředí. Výzkumná část prezentuje výsledky intervenčních strategií ověřovaných na desítkách základních škol v České republice u žáků od 12 – 15 let. Metodika výzkumu byla založena na aplikaci intervenčních programů (12 týdenních), dotazování (POMS), pozorování, projekci. Výsledky ukazují vysokou účinnost intervence při poměrně krátkodobém působení edukátora. K výrazným změnám došlo u žáků v oblasti zvládnání úzkosti, v sebehodnocení a hodnotové orientaci. Žáci si také rozšířili vědomosti a dovednosti v mezilidských vztazích a získali přehled o nových možnostech pohybových aktivit. Práce se zabývá definováním pojmu adekvátní pohybový režim ve vztahu k mentálnímu zdraví člověka.

Klíčová slova: výchova ke zdraví, duševní hygiena, pubescence, dechová cvičení, relaxace, adekvátní pohybový režim

TWO NOTES ON THE RELATIONSHIP OF EDUCATION AND HEALTH

Josef ŠMAJS

Abstract: *Man health is usually defined as a status of physical, psychological and social felicity. With a such wide approach to the health the connection between the health and education can be easily demonstrated in the historical and present view. In the first note the author reminds some of biological pieces of knowledge which helped to disclose the causes of infect illnesses, their expansion and prevention. The second note deals with necessary changes in present school and civic education. The rehabilitation of the nature value and also the recognition of against nature characters of present culture are basic for understanding structural and functional connection between man and earth, with life and lifeless systems.*

Keywords: *health, education, school and civic education, nature, culture*

Human health is usually defined as a state of total physical, mental and social well-being. In this broad concept, health is not primarily about the disease, doctors and hospitals; and because of this, the link between health and education can be shown in two ways: *historically and topically*.

Before discussing it in more detail, I will say that in my view, for a very long time health was a rather *biological category*. Only in the last few centuries it has become a *socio-cultural category*. It can be said about the majority of living systems, which successfully reproduced within the evolution of the biosphere, that they were healthy throughout their existence. Until recently the entire biosphere was healthy, even though three billion years it was the biosphere only at a bacterial level. By the expansion of biotic diversity, which occurred approximately six hundred million years ago and during which all main forms of earthly life were created in a relatively short time, the problem of health extended also to multicellular organisms.

The above statement is not inconsistent with the fact that biological species in the evolution of the Earth were constantly formed and became extinct, and that the proportion of those which have been preserved to those who have died is estimated at 1:1000. The extinction of species is linked with their somatic health only indirectly. Perhaps in the same way as functional disorders of a running old car are linked with the reasons for its decommissioning. Extinction, like the decommissioning, is a matter of inadequate relationship of the system's structural information and external conditions. Entire forms

of life have died for this reason (e.g. Paleozoic arthropods Trilobites). But biological species today are dying out more than a hundred times faster than they would have died out naturally. Evolutionary biologist Jaroslav Flégr suggestively writes that species are as if frozen, and “...mostly are just sadly waiting for the changes in their environment to accumulate to such an extent that they will have no other choice but to die out in a mannered way.”¹ I am not mentioning this extreme view as evidence of an unhealthy biosphere. On the contrary, I argue that the adjective “unhealthy” should now fit rather to describe the current anti-nature culture.

1. Brief historical note

Fluctuating quantity and harmfulness of pathogenic organisms and parasites to humans in the environment have been always connected primarily with the density of human settlement and natural migration of the population. Wars, migration of entire ethnic groups, long trips of travellers and growing population played in favour of spreading infectious diseases.

Before the great discoveries of a brilliant chemist Louis Pasteur, doctors, however, did not know reliably an originator of infectious diseases or the mechanism of their transmission and spreading. Many of us have read about the public demonstration with broth, i.e. soup deliberately cooked in a closed retort and left in an open pot. Obviously micro organisms falling from the air by their multiplication in the soup made it sour in the pot. And that was a proof that living systems can be very small and that there was no autogenesis because a living form of life can arise only from a living form of life.

The group of diseases that spread due to the ignorance of the cause and manner of transmission includes, for example, a well-known case of *puerperal fever* in Vienna maternity hospital. It also includes smallpox introduced in the American continent by European conquerors, which, along with other infectious diseases, wiped out up to 95 % of Indian population. Similarly, at the time of the Crusades, leprosy from the Arab world was introduced in Europe. Another example might be the spreading of malaria and flu in the territory of the Nukak tribe in 1988 in Colombia. Since that time half of the tribe died of these two diseases.

But human health is not endangered only by diseases caused by pathogenic organisms. Human health in a specific population is also affected by eating habits, hygiene, environmental conditions, by the physical strain² of the organism and by the knowledge of living systems, including badly understood relationship between the innate and acquired. Before little-known discoveries of Abbot Gregor Mendel in Brno, whose experimental garden laid only a few hundred metres from our meeting room, even the greatest European scientists including Charles Darwin *did not know that living systems do not transmit characteristics to their offspring*, but some hidden discrete factors of heredity, in today’s terminology described as: *inside information*. This genetic information, as we now know, may also include the susceptibility to and disposition of certain diseases: for example, Huntington’s chorea.

It is therefore important for us to know already from school, that organisms are

1 Flégr, J. *Zamrzlá evoluce*. Praha Academia 2006, p. 19.

2 Compare e.g. newspaper article Šmajš, J. *Bude lidská práce na lékařský předpis?* In. Právo 22. 10. 2010.

complex open systems with inside information, that they relate to the whole of life, with their own history as well as with the whole and with the character of the culture. For parents and teachers, it is useful to know how it is with the mentioned relationship related to innate and learned. As he himself admits, also ethologist Konrad Lorenz struggled with this issue. Finally he found a correct and elegant solution right in the sphere of information. If the information, controlling a particular activity of the organism, comes from its phylogenesis, it characterizes the *innate behaviour*. If it originates from its ontogenesis, this *behaviour* is *learned*.³

The difficulty for us laymen, however, also lies in the fact that the accuracy of the knowledge about living systems keeps enhancing. Lynn Margulis in the book *Symbiotická evoluce* (The Symbiotic Evolution)⁴ published in the Czech language pointed to a little-known phenomenon of symbiosis, which has modified living systems probably since the beginning of their creation and which should correct our simplified concept of evolution only as the emergence of new species and the struggle for the survival of the fitter ones. Also Carl Zimmer in the Czech edition of the book *Vládce parazit* (*Lord Parasite*) attempted to show the often overlooked role of parasites in the evolution. A free quote of his basic thesis: A healthy ecosystem and healthy organisms are full of parasites.⁵ There is an article by D. Čejková and D. Šmajš, *Projekt lidského mikrobiomu* (Human Microbiome Project)⁶, which is in a similar spirit and which notes that the human organism is made up of the billions of other organisms with their own genetic information, living in symbiosis with the human body.

2. Somewhat longer current note

First I would like to recall one general socio-cultural trend. The gap evidently increasingly widens between a rapid scientific and technological progress, including its impact on the lives of people and a slow ability of average population to intellectually absorb and understand what is happening now with the world. In ordinary human consciousness an ideological emptiness appears, accompanied by infantilisation, ignorance and uncertainty. The commercial success of the book *Teorie nevzdělanosti* (*Theory of Ignorance*) of philosopher Paul Liessmann⁷ is not only due to its fresh language and general readability of the text. It is due to its truthfulness. Our higher education (including primary and secondary), is in crisis. It has succumbed to the capitalization of spirit. I will better express it by Liessmann's formula saying that *a student counts credits, teacher publications, school money*. In addition, our teacher at a university must laboriously enter into the information system every clerical stupidity which he or she does not need for anything. Technology oppression, which once forced the workers to break machines, in the stage of the *society of knowledge* in a rather subtle form also falls on creative people. In accord with Liessmann I would like to add that where administration

3 However, K. Lorenz emphasizes that every learning process assumes a genetic programme; there is no "purpose-oriented learning process which would not have a phylogenetically programmed mechanism as its basis, containing a large quantity of inborn information." Lorenz, K. *Základy etologie*. Praha: academia 1993 p. 185.

4 Margulisová, L. *Symbiotická planeta. Nový pohled na evoluci*. Praha, Academia 2004.

5 Zimmer, C. *Vládce parazit*. Praha: Paseka 2005.

6 Čejková, D. Šmajš, D. *Projekt lidského mikrobiomu*. In: Universitas 43, no. 2/2010, p. 23-28.

7 Liessmann, K. P. *Teorie nevzdělanosti. Omyly společnosti vědění*. Praha: Academia 2008.

and counting are involved, there thinking is missing. And where thinking is missing, there dysfunction, problems and mental disorders arise, which eventually somatize and have an adverse impact on human health.

One of sovereign tasks of education is to teach school pupils and students to think, to arouse their liking of problems which may arise not only during their lifetime, but also in their trying to resolve the present conflict of culture and nature. And now it is probably also the best guide to health, to the care for body and soul and to the good life.

Although the educational system should also include the knowledge from the sphere of the care of health, nature and everything natural, we should know that the mental and physical health can be mainly affected indirectly. *Education* does not only act as a formative *factor of human personality, but also as a factor shaping the cultural system*. A strong anti-nature cultural system (with the lack of the open nature, with unhealthy food and water, etc.) may completely eliminate personal efforts of individuals. So the problem lies in the fact that the creation of a human and the formation of culture are two different processes that may conflict, that are little explored, and that may seem mysterious for the public and schools.

Many teachers today still do not understand that the education system, which helps shape people as well as culture, unfortunately helps deepen the current *global environmental crisis* as well. Even teachers cannot therefore agree on how today's education content should be changed and focused in another direction. With the risk of misunderstanding I have been arguing for a long period time that education, like law or politics, should be anticipative; it should anticipate the future. I contend that it is time to *move from today's spiritual, abiotic and anti-nature orientation to the biotic and pro-nature orientation*. From the hidden domination of the abstractions of mathematics and physics, which represents a way of thinking encouraging pupils and students to transform the nature, we should be moving on to the *knowledge, understanding and worship of the Earth* and to humility before all natural structures. The majority of partial information, which is little tolerant, technologically exploitable and difficult to sort and intellectually integrate, should be replaced by a sophisticated method of its reduction and by a personality cultivating synthesis.

Culture (civilization)⁸ is still rapidly destroying the conditions that shaped the man once, and with which he, as a kind, remained coherent. But only this fatal threat to human health enables us to understand that even spiritual culture, including the education system that is the imaginary genome of a cultural system, is not so true, noble, and human protecting. It helps develop a culture system including its economics and technosphere, but at the cost of its senseless struggle with nature and at the expense of the destruction of nature.

Refined fighting of culture with nature, which today decides on human survival, cannot be any longer disguised by affluence, or ethnic, religious or political conflicts. Quietly an *economic epoch of human history is ending*, in which social systems competed for power, for the lead in work productivity, for the development of production, tech-

⁸ I prefer a systemic concept of culture to the vague notion of civilization. By the culture I understand a man-created, i.e. artificial system with its own objective and organizational forms (material culture and institutions), with its own constitutive information (spiritual culture), and with its own reproduction and evolution.

nology and human freedom. It turns out that particularly technically developed culture pushes back nature, that it fights the system, which is *older, wider and more powerful* and which once spontaneously provided favourable conditions for human mental and physical health.

That is why I defend the need for a major change of the current spiritual basis of culture (of the concealed cultural paradigm).⁹ *Today's predatory attitude of the culture to the Earth*, which subordinates the spiritual culture including science and education system, *has to replace – still in this century - the ontologically justified biofil paradigm*. An offensive adaptive strategy, which was once inborn to us and the success of which at the level of the planet today threatens us with our extinction, needs to be replaced by a consciously chosen *biofil strategy: by the development of culture subordinated to the prosperity of the biosphere*. Only by a new biofil strategy can mankind *keep planetary conditions for human health, i.e. for the habitability of the Earth*, and enter into the age of adulthood and responsibility.¹⁰ The human kind is not responsible for nature, which it did not create and therefore may not even fully understand. It is responsible for culture, for its work, by which the Earth, i.e. the natural and coherent system, is being unnecessarily hurt.

The current global environmental crisis is a crisis of the whole system of current anti-nature culture. That is why it is also the crisis of traditional values, traditional philosophy, religious systems, science, education and art. The defining components of modern religious culture - philosophy, science, religion, art - have been openly and covertly anthropocentric, indifferent to nature and haughty to the “values” of inanimate and living nature. Great modern thinkers thought that man is the measure of all things and that relationships between people and cultures are primary and more important than human relationship to nature. It seemed to them that man is no longer a nature being and that the culture, the value of which is above the nature, also elevates and refines him. They believed that the growing civil liberty, human culture and human relations will positively influence also the relationship of humanity to nature. This view, however, was false in two ways. It could apply only *if the man was not a natural being coherent with the biosphere, and only if there were not human generic selfishness*.

The *human generic selfishness*, which has not been theoretically categorized yet and through the development of which anti-nature culture developed, is actually *deeper and more significant than the derived, generally well-known and theoretically and artistically reflected intra-specific individual and social selfishness*. Generic selfishness, the historically first intellectual form of which is the *predatory spiritual paradigm* and the complex system form of which is the current *anti-nature culture*, is not (with exceptions) condemned legally, politically, religiously or morally.

This is also a reason why the biofil change of planetary culture will be complicated. It will require not only a new theory of culture, but also a broader and deeper *ontological theory* – expressed by an Aristotle term - a new *first philosophy*. With the

⁹ I use the term paradigm to describe the *deep spiritual basis of culture*, i.e. the concealed frame of human evaluation, deliberation and attitude to the world, which the science does not classify and which escapes the attention of philosophy. More details on this topic Šmajš, J., Klíma, I., Čilek, V. *Trí hlasy. Úvahy o povaze konfliktu kultury s přírodou*. Brno: Doplněk 2010.

¹⁰ Already in the first distinctly ecological book, *Ohrožená kultura* (1995), I described the deterioration of human health as a reliable feedback report on the disproportionate nature of culture.

help of ontology evolution¹¹, backed by scientific reasoning, we must try to *break a predatory spiritual paradigm*. Efforts to reduce the rate of culture expansion (or budgetary responsibility) will probably not suffice. *We will have to give way to nature*.

We will therefore face extraordinary challenges which will not be only *generally intellectual, but will also include courageous acts of educational, civic and political nature*. For the first time in human history it will not be about changing the traditional holders of power or proprietary production relations. It will not be primarily about who will be a ruler in the country or on Earth, or who will be rich and who will be poor. It must be a *change in our generic attitude to being*, the change that would follow up the predispositions hidden in the human genome, *which should be strengthened and developed by school education*. If, however, the human genome did not include sufficient potency of humility, awe, or fear of the powerful forces of nature, we would not create biofil culture even with the help of philosophical ontology and of the new education system.

Culture, however, is still perceived wrongly both by school and by the public, mostly as a spiritual phenomenon, known as the cultivation of man and nature. *School or subsequent civic education does not address the clarification of the essence of culture and its relationship to nature*. Human understanding of the world contained in secondary and tertiary education is indiscriminate: in relation to nature it conceals its potentially destructive component and in relation to culture it shows knowledge only as a tool for the humanization of nature and man.¹²

Even in school we therefore need to offer students not only partial knowledge and *life ignoring mathematical, geometric and physical abstractions*. From the very beginning of the education process we also need good general knowledge and *life comprising biological and cultural abstractions*. Efforts should be made to acquire a generally comprehensible form of a new interpretation of the human and natural (dead and alive) evolution. It is also necessary to teach an analogous form of the interpretation of an opposing creative human activity, i.e. the broadly conceived cultural evolution. I will try to illustrate this new *ontological minimum* that should be comprehensible to pupils, students and all citizens in five propositions.

1. Even with a very simple reflection of the global environmental crisis, we must abandon the traditional subject-object-oriented approach. It is necessary to clearly distinguish *two different evolutions, i.e. two types of Ontic creativity and orderliness, two pieces of different constitutive information (two orders)*. Human culture, including material and spiritual culture, is not a product of natural evolution, but the young and temporary *creation* of cultural evolution, i.e. the result of creative abilities of human activity. Culture is a complex open system with inside information, which is the spiritual culture. Also, the spiritual culture is a product of cultural evolution, even when it is helping to shape and develop the cultural system.

¹¹ The concept of evolution ontology is described in the book by Šmajš, J. *Evolutionary ontology Reclaiming the Value of Nature by Transforming Culture*. Amsterdam and New York: Rodopi 2008. The Czech version is supplemented with evolution gnosiology and philosophy of technology and contained in the publication: Šmajš, J. *Filosofie – obrat k Zemi*. Praha: Academia 2008.

¹² I consider the general misunderstanding of the opposing relation of nature and culture, which allows the solution of the global environmental conflict to be moved to the next generations, i.e. to live not only at the expense of our children and grandchildren, but also at the expense of less developed countries, as an inexcusable fault of today's education.

2. A human is a normal, randomly formed biological species. His uniqueness does not predominantly lie in that it recognizes, thinks, learns and believes. In lies mainly in the fact that, in accordance with his genetic equipment, i.e. due to an innate offensive adaptive strategy and ability to encode non-biological neuronal information in the language, he made it as the *second worldly demiurge, as "a small Ontic opposing God", as the sole creator of culture.*
3. Human conceptual knowledge, which became the core of the genome of the anti-nature cultural system, is a peculiar guide for creating culture by human activity. Its knowledge content is not so fascinating and objective as we thought. Especially today, we find that it helps create a cultural system, which unnecessarily ravages the planet Earth. The ecological crisis reveals that even conceptual knowledge, like sensory neuronal cognition of other fauna species, is *generically selfish*, even though it is not primarily tested only through a natural method of trial and error, but also by the aspect of truth. Unlike the non-conceptual cognition of animals it is not only Ontically culturally constitutive, but also – with regard to the nature - Ontically destructive.
4. Due to the inappropriate content of educational structure, most of today's population does not know what nature is and what culture is. People do not know what evolution is and what evolution produces. They were not instructed that evolution can produce only shapes, structures or orderliness, i.e. information. They do not know that the universe is spontaneously creative and that natural evolution has created beautiful Earth nature including the human, i.e. all natural systems, structures and shapes, all natural information. It is not emphasized to pupils and students that the culture, if it is to build its own forms, structures and shapes, must break natural forms, textures and shapes. The school does not teach that the *extinction of species* caused by the culture also is a barbaric burning of rare original texts inscribed in living systems, that it is inexcusable and by human beings irreparable *destruction of natural genetic information.*
5. Probably just a philosophical point of view of evolution, the outline of which should be included in teaching in secondary schools and universities, can help rehabilitate the value of nature and facilitate the understanding of the substance and Ontic role of natural and socio-cultural information. Today we find that natural biotic information, which creates and integrates the biosphere, does not divide nor harm the Earth. Only *human socio-cultural information* was hostile towards the Earth. It divided it to the nature and culture and temporarily *turned* the expansive *cultural system*, existentially subject to the broader and more powerful law of nature, *against the natural evolution, against life.*

In conclusion, I would like to point out seven other arguments for the need of the reconstruction of education content.

1. Pupils and students today for the first time need time to be trained and qualified not only for them to be able to make adequate job performance as adults in today's information society, in which the need for productive human labour dramatically reduces, but also to ensure that they become responsible citizens of planetary culture. It is therefore vital for them to understand the conflict of culture with nature and as citizens to be able to express it on the political level.

Schools must educate young people so that they leave their “innate” and usually family reinforced anthropocentrism, gradually to recognize the basics of “systemic” vision of reality.¹³

2. The observations of natural sciences, with their theoretical content still subordinated to the predatory spiritual paradigm (the aspect of an offensive adaptive strategy of culture), are - by their effects - as if added together and multiplied in the anti-nature cultural system; but as philosophical and useful knowledge in the living generation memory of people, they are vulgarized, diffused and mixed with pragmatic human interests, ideologies and myths. I therefore formulate a provocative argument that if an economic and technological self-motion is not adequately civically understood and practically controlled, *our ideas about science, truth, freedom and democracy will also fail*. And we, as a kind owning mobile phones and global information systems, will perish through our own fault.¹⁴
3. Today, we need education that will enhance human genetic predispositions for the secrecy, value and beauty of nature and that will enable the humanity to resolve the current ecological crisis in a democratic way. In the sensitive stage of human ontogeny, which partially covers the compulsory school attendance, the procedural view of reality, biofil values and emotional basis for a respectful attitude towards nature should be grown; the same applies to lifelong humility and admiration of the living systems. The question how things that surround us arose is a very natural question of a child. It is therefore necessary, from an early age, to teach and *reinforce* by education the *evolutionary thinking of children*. From a primary school, we should know that the Earth was created gradually, in a long cosmic evolution. We should know that this natural evolution is spontaneously creative (i.e., sacred, “divine”), that it not only created the universe and planet Earth, but also us - people - and all other natural conditions of culture. And perhaps even a child can understand that one can also create things and that by a joint effort of many people - by the socio-cultural evolution - all human socio-cultural creations can arise; but unfortunately only at the expense of nature.
4. The seemingly radical ontological evolutionary idea that man - after his creation - also creates reality, i.e. that he also lit evolution, anti-nature cultural evolution, may not be very distant from a young human mind. At the very tender age it is

¹³ Today it is prevented mainly by two obstacles. 1. Non-transparent construction of consumer microelectronic technology makes it impossible not only to understand the nature of technology, but also to understand the essence of culture and the role of the culture in the nature; 2. children adapt to attractive technical environment of today's flats and schools primarily motorically and non-verbally; this artificial environment, however, further removes them from the nature as it narrows down their inborn complex potential and develops them in the direction of mere controlling of abiotic information technology.

¹⁴ Technical and socio-cultural factors of spontaneous education influence today's young generation similarly non-intentionally and formatively as in the past the prevalence of natural eco-systems influenced the formation of our animal ancestors. The genome of the man acquires almost nothing from the culture, but the mental and physiological imbalance of the human organism deepens as a consequence of the receding nature. And also because mass media - after a short initial period of them being a tool of human cultivation - have become carriers of bad news, sensations, commercials and superficial entertainment, the transformation of the contents of school education remains *the only chance for forming an educated and mentally healthy human personality*.

necessary to create conditions for a clear distinction between *what is nature and natural and what is culture and artificial*. It is time to leave the axiologically arrogant anthropocentrism and the additional mechanistic interpretation of reality in which nothing ontically new spontaneously arises. It seems that this is the level at which basic and secondary education stopped and fortified. And that is why the first step towards the rehabilitation of natural values in school will be difficult. But - to avoid a later split of values of the human psyche – *the imprinting of life as the highest value should be anchored in our children and pupils in the school as soon as possible*.

5. Culture, which has been fully created by human work, should be studied as an artificial system with inside information, as a subsystem subordinated to a wider and older system of the Earth. But the cultural system, which even after the emergence of modern natural science developed as a rapidly growing external human body, never became a real subject of philosophical, scientific or educational interest. Today we do not learn in secondary schools and universities how the cultural system is intentionally or unintentionally created, why it has the inside anti-nature information (spiritual culture) and anti-nature structure and why it is so far so dangerously aimed against its host environment – the earthly nature.
6. I openly defend the view that the need of pro-nature (biofil) orientation of educational process is not a post-modern fashion wave. Spontaneous biofil “education” of our ancestors through natural environment preceded human written history, and is therefore just as old as humanity itself, as culture. In the long historical phase of unintentional human education by the environment the human personality has been shaped not only by the relevant culture, but also by the nature, by the prevalence of natural ecosystems. Also Neolithic economy as the main way of creating culture by human activity before the industrial revolution was clear evidence of the subordination of abiotic technology and values to biotic technology and values. In Europe, this subordination had the form of superiority of villages over cities and agriculture over the home and professional craft.
7. A noticeable turn to temporary and from the long term dangerous abiofil orientation was brought about only by the expansion of mechanical machine technology. This turnover approximately coincides not only with the productive application of natural sciences, but also with a significant productivity orientation of education, with a predominance of Galilean-Newtonian worldview. Two centuries separating us from the Industrial Revolution brought about current technology boom and prosperity, but unfortunately also the greatest devastation of Earth culture. And both of these processes have occurred with the involvement of anti-nature natural science and a similarly oriented educational system of the European society.¹⁵

¹⁵ Educational systems are conservative and tend to hide problems that should be revealed. For example, children are still being taught in schools – by inertia – that for the Earth and the whole universe the law of conservation of matter and energy generally applies, but are not reminded that, on the Earth formed by the evolution of nature and later on culture, *no law of maintaining its natural orderliness applies*, even though this sole finding shows that a possibility of unlimited growth of culture (civilization) cannot apply. The culture stands or falls with the existence of natural conditions favourable for the health and biological reproduction of the man.

Rest of the text

Also human activity should be shown as a nature-dependent creative power, which - on the naturally composed Earth - had to be first directed against the result and process of spontaneously creative activity of the universe. But we must also remember that at the stage of globalized culture its anti-nature orientation is harmful and dangerous and seriously threatens the human future. It will be therefore necessary to change this orientation and to transform the anti-nature culture that unnecessarily harms the nature to the culture which is respectful to the nature.

The system of biofil education should not ignore the destructive role of culture towards the Earth. As early as primary and secondary schools should disseminate the notion that the man-lit cultural evolution, which is now unnecessarily ravaging the Earth, must be reconciled with the evolution of the older, larger and more powerful natural system. Already at school nature has to be rehabilitated in terms of emotions, theories and value. Already here can we show that the living planet Earth represents an older, larger and more complex creative activity than the process of creating culture by human activity.

In what ways can young people be facilitated this reassessment of values, is already well beyond the means of philosophical reflection. It seems that it cannot be only the initiative task of philosophy, schools and social sciences, but also a serious challenge to other forms of spiritual culture, such as the natural sciences, journalism and fiction. It is an issue that will be crucial for human survival and that will soon have to be addressed by the policy.

Although the dangerous depletion of the natural being is caused only by the human species, certain more abstract justice can be seen in that the human being too is subject to the inexorable logic of preserving the system integrity of life. *It becomes an endangered species.* For the first time in his history is the man and his culture threatened by the native environment of the planet that once enabled his emergence.

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DVĚ POZNÁMKY KE VZTAHU VZDĚLÁNÍ A ZDRAVÍ

Abstrakt: Lidské zdraví se obvykle definuje jako stav celkového blaha fyzického, duševního i sociálního. Při tomto širokém pojetí zdraví lze souvislost mezi zdravím a vzděláním poměrně snadno prokázat historicky i aktuálně. V první poznámce autor připomíná některé biologické poznatky, které vedly k pochopení příčin infekčních nemocí, jejich šíření a předcházení. Ve druhé poznámce se věnuje nezbytnosti obsahové přestavby nynějšího systému školního a občanského vzdělání. Hodnotová rehabilitace přírody včetně rozpoznání protipřírodního charakteru nynější spotřební kultury jsou podle jeho názoru předpokladem pro pochopení strukturální a funkční souvislosti člověka se Zemí, s neživými i živými systémy.

Klíčová slova: zdraví, vzdělání, školní a občanské vzdělávání, příroda, kultura

HEALTH PROMOTION WITHIN THE GENERAL EDUCATIONAL PROGRAMME FOR PRESCHOOL EDUCATION

Zora SYSLOVÁ

Abstract: *The paper aims to analyse the General Educational Programme for Preschool Education from the viewpoint of health promotion. It endeavours to compare the content of the Curriculum of Health Promotion in Nursery Schools and the General Educational Programme for Preschool Education. Particular attention is devoted to the conditions for education for children of preschool age that must be created in nursery schools for the purpose of health promotion and the healthy development of children.*

Keywords: *health promotion, conditions for education, competency, educational programmes*

Health promotion has appeared in many various forms in documents preceding Act 561/2004 Sb. on preschool, primary, secondary, higher and other forms of education (hereafter merely the “Education Act”) and the General Educational Programme for Preschool Education, which came into effect along with the Education Act.

These documents include, for example, the White Book¹ and the long-term education plans of both the Czech Republic and its individual regions. These consider education leading towards a healthy lifestyle one of the principal aims of curriculum reform and an important tool having a progressive and long-term influence on the educational process.

Other such documents include the *Strategy for the Prevention of Socio-pathological Phenomena 2001–2004* and the *Programme of Prevention for Nursery Schools, Primary Schools and Educational Institutions*, both from 2001. These documents offer a number of specific ways for schools to begin to promote a healthy lifestyle and create the best possible conditions for the prevention of socially undesirable phenomena. They demand that schools become a safe place for effective education. They see the core of the strategy of prevention lying in **comprehensive changes taking in everything that goes on in the school.**

¹ The National Programme for the Development of Education in the Czech Republic (The White Book). Prague: The Ministry of Education, Youth and Sports, 2001, p. 38.

The reason for the formation of these strategies was the discovery that a far from small proportion of young people is proving unable to come to terms with problems at school and various difficult situations in life. They see a way out in drug and alcohol abuse, truancy, bullying, vandalism and other forms of undesirable behaviour in the area of socio-pathological phenomena. The pages of the Ministry of Education state that, “*Work with the younger generation must be of a formative and educational nature. It must involve a process of shaping and reinforcing moral values, increasing the social competency of children and young people, and developing the skills that lead to a rejection of all forms of self-destruction, demonstrations of aggression and violations of the law.*”²

The Programme of Schools Promoting Health was one of the recommended programmes for the introduction of prevention of pathological phenomena.

One of the most important documents in this area is the government programme *Health 21 – Long-term Programme of Improvement of the State of Health of the Population of the Czech Republic – Health for All in the 21st Century* (debated by the government of the Czech Republic on 30 October 2002 – Government Resolution 1046). One of the requirements of this programme, set out in Goal 13.4, is that at least 50 % of children have the opportunity of attending a nursery school promoting health and 95 % of primary school pupils the opportunity of attending a primary school promoting health by the year 2015. The basis for the implementation of this requirement was the engagement of the state administration and local government at the regional level into coordination that would further the expansion of the network of schools promoting health and the implementation of requirements for health promotion within the General Educational Programmes for both preschool and primary education. This requirement will be specified in greater detail in the following text.

The Education Act is the fundamental document in this area at the present time. Section 29 of the Act obliges schools to create appropriate conditions for the healthy development of children, pupils and students and for the prevention of socio-pathological phenomena. The GEP PE can, therefore, also be expected to consider health promotion. This educational programme does not, however, consider this area explicitly. On the other hand, it can, however, be stated that the concept of the programme demands the creation of such conditions and the development of the kind of skills that should lead to healthy habits in life.

Before we begin comparing the General Educational Programme for Preschool Education (GEP PE) with the Curriculum of Health Promotion in Nursery Schools (CHP NS), we will give a brief mention to the formation of the curriculum and its content. The “Healthy Nursery Schools” project began in 1994. It is now presented under the title The Promotion of Health at Nursery Schools. The original project was concerned merely with the creation of appropriate conditions for the healthy development of children. An expansion to include an enumeration of the competencies that should be developed among children of preschool age was not seen until the curriculum drawn up in the year 2000 (i.e. a year before the first version of the GEP PE). The curriculum is divided into three basic areas relating to education for children of preschool age in nursery schools.

² *The Strategy for the Prevention of Socio-pathological Phenomena 2001–2004* [online]. Prague: The Ministry of Education, Youth and Sports, 2000. [cit. 2009-08-06] Available on the internet at <<http://www.msmt.cz/vzdelavani/dokumenty-13>>.

It involves the **conditions** that should be created for the healthy development of children and education in nursery schools, the **educational content** based on the development of competencies, and the **evaluation** of nursery schools. We will analyse the GEP PE from the viewpoint of these three areas.

Conditions

The philosophy of health promotion is a holistic and interactive approach to health. It perceives health as the resultant of the relationships between the environment (immediate and distant, natural and social) and the human being in all its diverse scope (the organism, the psyche, the personality). For this reason, the authors of the programme take an extremely thorough approach to considering the formation of the kind of conditions that would lead children in a targeted manner towards respect for their health and practical skills protecting their health.

The table below states the conditions contained in both the GEP PE and the CHP NS.

GEP PE	CHP NS
Material conditions	The teacher promoting health
Daily regime	Classes of mixed ages
Psychosocial conditions	A rhythmical order to life and the day
Organisation	Physical well-being and unrestricted movement
The management of nursery schools	Healthy nutrition
Staffing and teaching staff	Spontaneous play
The participation of parents	A stimulating environment
	A safe social environment
	Participative and team management
	Partnership relations with parents
	Co-operation between nursery schools and primary schools
	Incorporation of the nursery school into the life of the local area

The above table shows that the CHP NS fulfils the requirements of the GEP PE, while expanding the recommended conditions to include a number of others.

It sees the condition of *classes of mixed ages*, for example, as the creation of a natural environment appropriate for the social adaptation of the child. This arrangement enables the implementation of social learning and the children learning from one another to a far greater extent.

It considers *physical well-being and unrestricted movement* essential to healthy development and overall physical and mental well-being. The allocation of specifically targeted spaces, times and means is required for *spontaneous play*, corresponding to the natural needs and interests of the child. The child's development would be stunted without this.

The GEP PE presents the seven conditions given above merely as *additional* conditions. It considers legislative definition by means of the pertinent legal standards to be the *basic* conditions that must be observed during the education of children.

It can, therefore, be deduced that the GEP PE does not consider the creation of these conditions absolutely essential or closely linked to the development of competencies in the same way as the CHP NS.

Educational content

The first version of the GEP PE came out in 2001. It did not, however, contain competencies, which were not included until the second version of 2004.

In the current conception of preschool education, competencies represent the basis of lifelong learning, linked with further levels of education. They are a group of activity-based output, important not merely from the viewpoint of preparation of the child for the commencement of systematic education, but also for further stages in its life. The GEP PE talks of the fact that, *“good and adequate foundations of key competencies established at a preschool age may be an essential promise of further favourable development and education for the child; inadequate foundations may, in contrast, represent an obstacle disadvantaging the child at the beginning of its path through life and the educational process”*.³

In drawing up key competencies, the CHP NS was based on *“programmes of health promotion for the adult population and inspired by national curricula in countries such as Scotland in Europe and Rhode Island in the USA”*.⁴

The following table shows that the conception of these competencies is again in agreement in general terms. The CHP NS, however, links them more consistently with the development of competencies promoting a healthy lifestyle.

GEP PE	CHP NS
Competencies for learning	Understands a holistic conception of health and the concepts of health promotion and the prevention of illness
Competencies for problem-solving	Realises that health is a priority value
Communicative competencies	Able to solve problems. Solves problems in real life
Social and personal competencies	A well-developed sense of responsibility for one’s own behaviour and lifestyle
Activity and civic competencies	Strengthens mental resilience
	Has skills important to communication and co-operation
	Makes an active contribution to the creation of conditions and an environment for the health of all

The GEP PE contains just one competency focusing exclusively on health promotion:

- caring for one’s own personal health and safety and the health and safety of others, behaving responsibly with a view to a healthy and safe environment (natural and social)
- Social, personal, civic and activity competency should also develop the kind of

³ *The General Programme for Preschool Education*. Ministry of Education, Youth and Sports Gazette, Issue 2, Volume LXI, February 2005, p. 10.

⁴ HAVLÍNOVÁ, M., VENCÁLKOVÁ, E. and team. *Curriculum of Health Promotion in Nursery Schools (updated programme)*. Prague: Portal, 2006, p. 93. ISBN 80-7376-061-5

skills among children that are associated with the prevention of pathological phenomena, such as:

- the child realising that it is responsible for itself and its behaviour and bearing the consequences
- being sensitive and considerate to others in a manner appropriate to a child, helping those weaker than itself, recognising inappropriate behaviour; perceiving injustice, ill-treatment, aggressiveness and indifference
- behaving cautiously when meeting strangers and in unfamiliar situations; knowing how to reject inappropriate behaviour and communication that it finds unpleasant
- being able to estimate the risks associated with its own ideas, following its goals courageously, while proving able to change direction and adapt to the given circumstances
- knowing the importance of the environment in which it lives, realising that its own behaviour contributes towards and has an influence on this environment

Further on, the educational areas are divided in a similar way – biological, psychological, interpersonal, socio-cultural and environmental. The only difference lies in the fact that the GEP PE presents individual goals given in individual areas without linkage to the development of competencies. The CHP NS gives individual goals in individual areas in tables along with the competencies they develop and the pertinent indicators that aid the assessment of whether or not development of the given competencies has occurred, enabling the teacher to make a realistic assessment.

Evaluation

The GEP PE characterises self-evaluation as *“a process of continuous assessment of educational activities, situations and conditions within the nursery school that proceed in a number of interconnected and continually repeating phases. The information obtained by this continuous assessment provides teachers with feedback relating to the quality of their own work, and should be used by teachers in a targeted manner for the purposes of optimisation and improvement of the educational process and the conditions under which teaching occurs. It does not involve one-off or random assessment of a particular phenomenon on the basis of the subjective impression of the teacher, but is rather a process implemented on a systematic basis in accordance with a plan prepared in advance.”*⁵

The CHP NS differentiates *internal* and *external* evaluation. The result of both taken together is *evaluation* as a comprehensive assessment of the work of the nursery school as a whole. It states that self-evaluation (internal evaluation) is to be performed by the school itself, without the participation of outsiders. It is a significant and essential part of the work of the school, *“...to be more precise, before anyone from outside can determine and analyse the school’s situation and problems. The fact that the school deliberately monitors and compares the results it achieves and seeks solutions to any*

⁵ *The General Educational Programme for Preschool Education*. Ministry of Education, Youth and Sports Gazette, Issue 2, Volume LXI, February 2005, p. 37.

*problems arising is the most valuable contribution made by self-evaluation. In order to fulfil its purpose, rather than being a merely formal affair, this evaluation must be conducted on a **regular and systematic** basis applying the correct **methodical approach**, focusing on **predetermined areas** for which the nursery school has stipulated indicators (criteria, indices and quality aspects). Another important precondition is for everyone involved to approach the task with an awareness of the fact that the process provides essential information for **decision-making** and the **planning** of the future development of the school.*"⁶

Considerable agreement can be seen in the two documents from the viewpoint of self-evaluation. They both see it as a process leading to improvement of preschool education. The only difference lies in the fact that tools for the assessment of conditions (the INDI questionnaire from the Ministry of Education) and for the assessment of educational results (SUKy) are created for schools within the Schools Promoting Health network.

It can be said in conclusion that the GEP PE is conceived in a similar way to the CHP NS. The curriculum is, however, conceived as a programme for the targeted creation of conditions as a basis for the development of competencies relating to the development of healthy habits in life and attitudes leading to good habits.

In essence, the GEP PE fulfils strategy requirements by creating a systematic change in the work of nursery schools. It is not, however, so closely linked to systematic development of healthy habits in life. These relate merely to certain "particulars".

When comparing these two documents, we cannot overlook the fact that the CHP NS was concerned with competencies from the very beginning (2000), while the GEP PE only began to consider competencies in its second version (2004). Similarly, self-evaluation as a component of the development of a school and the systematic improvement of its work was included in the system of schools promoting health from the beginning (1995).

It is clear that the CHP NS was ahead of its time and preceded the reform of the educational system in the Czech Republic. It considered the development of competencies and evaluation far earlier than they appeared in the legal documents. Its conception also makes it a unique and integral document concerning targeted and comprehensive development of healthy habits in life at the very beginning of the educational process, at an age at which lifelong skills and attitudes are being formed.

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⁶ HAVLÍNOVÁ, M., VENCÁLKOVÁ, E. and team. *Curriculum of Health Promotion in Nursery Schools (updated programme)*. Prague: Portal, 2006, p. 185. ISBN 80-7376-061-5

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PODPORA ZDRAVÍ V RÁMCOVÉM VZDĚLÁVACÍM PROGRAMU PRO PŘEDŠKOLNÍ VZDĚLÁVÁNÍ

Abstrakt: Příspěvek se pokouší analyzovat Rámcový vzdělávací program pro předškolní vzdělávání z hlediska podpory zdraví. Snaží se o komparaci obsahu Kurikula podpory zdraví v mateřských školách a Rámcového vzdělávacího programu pro předškolní vzdělávání. Pozornost je věnována především podmínkám pro vzdělávání dětí předškolního věku, které je nutné v mateřských školách vytvářet vzhledem k podpoře zdraví a zdravému vývoji dětí. Současně jsou posuzovány kompetence obou programů, které vedou k rozvoji zdravých životních návyků. Závěr příspěvku patří vlastnímu hodnocení školy, které mělo v Programu podpory zdraví své pevné místo již od roku 2000, tedy o sedm roků dříve, než se jeho povinnost objevila ve školském zákoně.

Klíčová slova: podpora zdraví, podmínky pro vzdělávání, kompetence, vzdělávací programy

ADAPTATION OF CHILDREN WITH LIMITED HEALTH ABILITIES TO THE CONDITIONS OF SCHOOLING. THE EXPERIENCE OF RUSSIAN SOCIAL EDUCATIONALISTS

Yulia Valeryevna STAFEEVA

Abstract: *The problem of adaptation of children with health disabilities to the conditions of studying in Russian secondary schools is presented in this article. Also we analyze here the experience of Russian specialists in the sphere of social and pedagogical support given to such children in the process of their adaptation and integration into the community of their healthy peers. As a partial result of our analysis we define conditions, which should be created in order to increase the number of inclusive schools in Russia. We also summarize psychological and pedagogical knowledge needed for professional training in the inclusive education.*

Keywords: *adaptation, integration, socialization, children with limited abilities of health, social educational specialist, social and pedagogical accompaniment*

In any community irrespective of its stage of development (whether it may be an affluent economically advanced country or a developing nation) there are people who have some deviations in their physical, mental or social development. It means that external circumstances or the state of a person's health do not conform with certain norms which are accepted in the given community. The sphere of the "normal" always have definite limits in people's mind, and everything that goes beyond the limits is defined as abnormal and pathologic.

According to the definition of M.A. Galaguzova the norm is a certain ideal entity, an arbitrary symbol for objective reality, some overall average characteristic of the reality that does not exist in it (6, p.87).

This term is widely used in psychology, pedagogics and other sciences in which there are special indicators, parameters and characteristics of the norm. If something does not correspond to the norm, it is referred to as "deviation". According to the type of deviation people who have it are defined as abnormal, deviant, defective, retarded, handicapped, invalids.

The analysis of research papers written by psychologists and educationist who have been dealing with this problem (T. A. Vlasova, M. S. Pevzner, L. S. Vygotsky, A. R. Maler, L. Pozhar and others) shows that the term “a differently able child/a challenged person” is used alongside with the notion “abnormal” and “defective”. According to N. N. Malofeev the terms that have been used by the specialists since the XIX century (idiot, imbecile, children with Down’s syndrome, cripple, mentally defective) nowadays are viewed as incorrect because of the negative connotations these words acquire when applied to the “normal people”. In modern Russian pedagogics there is a tendency to avoid the term “abnormal children” because this is a segregative term that emphasizes physical or mental deficiency of a child placed in some closed isolated system of special education which considerably restricts his or her rights (5, p.5).

Nowadays Russian specialists in social pedagogics and psychology seek to use some other terms when speaking about “special” people. Thus the term “deviant/anomalous” is widely used in modern sources. Though in some papers we can come across the word “defective” (7, p.11-12). Foreign scientists’ investigations devoted to this problem are of great interest for us. The current investigation of L. Pozhar shows that other terms are used in different countries. For example, in France they use the notion “inadaptive” (having difficulties with adaptation), in Great Britain they use the term “children and adolescents with special needs”, in Slovakia – “children and adolescents that need special assistance”, a shorter term, “injured” is also coming to use. It seems that these terms appear more correct and precise.

The Law of Education of the Russian Federation employs the notion of “a person with limited abilities” (handicapped person). It is applied to children having physical and/or mental handicaps which impede digesting educational standards without creating special conditions for getting education. Also the notion of a “handicap” is introduced and the types of handicaps are pointed out – physical, mental, complicated and severe (2, p.12-13).

Physical handicaps include confirmed in accordance with established order temporary or permanent deficiencies in the development and/or functioning of a person’s organs, or inveterate somatic or infectious diseases. Deviations in the physical growth and development of a child can include a disease, impairment of vision, hearing impairment, impairment of locomotorium.

Mental handicaps imply confirmed in accordance with established order temporary or permanent deficiencies in the mental development of a person. Here belong speech disturbance, the disorder of emotional and volition sphere, including brain damage, and also derangement of mental development, mental retardation that create difficulties in learning. Mental deficiency can be determined by the inborn deficiencies of the nervous system or caused by a disease, trauma or some other factor.

The Federal Law of the Russian Federation “On Social Protection of Invalids” says: “An invalid is a person who has health disorders accompanied with sustainable dysfunction of the organism, determined by diseases, injury consequences or deficiencies, leading to the limitation of life activity and causing the necessity of the social protection of this person” (2, p.3).

This act treats “the limitation of life activity” as “a person’s full or partial loss of ability or possibility to take care of himself or herself, to move without outside assistance

ce, to orientate himself or herself, to communicate, to control his or her behaviour, to deal with studying and labor activity” (2, p.4).

L. M. Shchipitsyna divides children with development deviations into two categories and distinguishes the notions of “children with development problems” and “disabled children”. The second group includes only those children who are considerably limited in their life activity manifestations on account of a disease or injury (8). Alongside with that another approach is widely-spread (A. R. Maler) according to which children having bad defects belong to the category of “children with limited abilities/handicapped children” as the component part of this category (4).

Investigating the problem of children with limited abilities/handicapped children in the social and pedagogical context the researchers Y. N. Bausov, T. V. Butenko, L.N.Kosheleva and others use the above mentioned notions as synonymous. Thus, Y. N. Bausov gives the following definition: “a disabled person is a person with limited abilities but capable of creative development and social activity upon condition of creating necessary sociocultural environment” (1, p.10).

Children with limited abilities, according to L.N.Kosheleva’s definition, are the children “who lack social experience, their circle of contacts is reduced, because they are always under the patronage of the family and seldom go beyond the scope of it” (3, p.12).

Thus synonymous terms occurring in scientific literature mostly reflect the model “a child with limited abilities/handicapped child – an invalid child”, where the terms are equivalent and interchangeable. Due to this interchange one can presuppose that the majority of children who are referred to as invalids in Russia have certain abilities necessary for socially useful labour in different forms and upon definite conditions. At the same time specialists who work with such children underline their objective need for social and pedagogic adaptation.

Social policy in Russia, according to V. Yarskaya-Smirnova, is aimed at widening and absorption of social space, levelling social inequality, overcoming discrimination in the realization of one’s deprivation (9, p.12). Theoretically it is not a person that has to adjust themselves to the society, but the society itself should do its best to increase the degree of social integrating of a person with special needs. This may be facilitated by the development of inclusive education system in Russia that can appear an alternative to the special education system which was created in the XX century and is aimed at teaching children with health disabilities and some peculiarities in their development. Nowadays such children do not have to go to special educational institutions because they are able to get education of higher quality and adjust to life better in general secondary school. And it will allow to develop the tolerance and responsibility of able children.

The principle of inclusive education consists in the following: administration and teachers of ordinary schools accept children with special educational needs regardless of their social position, physical, emotional and intellectual development and create the conditions based on psychological and pedagogic techniques and oriented to the needs of such children.

Currently the problem of inclusive education development in Russia is in the focus of attention not only of parents and pedagogic associations but of the general pu-

blic as well. It is no wonder that 2009 was declared the Year of Equal Opportunities in Russia. It means the recognition of this problem occurs at the national level.

It is the parents of “special” children that insist on inclusion their kids into the ordinary children community. First of all it is connected with the following: the well-balanced system of correctional (special) education with well-developed methodology of educating children with learning difficulties provides poor social adaptation of the “special” child in the reality – such children are isolated from society. It goes without saying that children with special needs adjust to life better in general secondary schools than in specialized educational institutions. The difference in acquiring social experience is especially noticeable. As to able children, they improve their learning opportunities, develop tolerance, activity level and self-dependence. But the problems linked with organizing the process of developing and teaching “special” children in ordinary schools have not been solved yet. It is connected with the specific character of methods, unprepared human resources, lack of specialists etc.

Unfortunately nowadays there is no federal program of inclusive education development in the Russian Federation. But, in spite of this fact, pedagogical collectives of many general secondary schools are designing unique authors’ programs of such education and implementing them as experimental ones. Great experience in implementing inclusive education has been gained by the pedagogical collective of Non-governmental educational institution “General secondary ‘Pirogovskaya school’” in Moscow. The program of social and pedagogical support for children with limited abilities in the process of their adaptation to general secondary school conditions is aimed at developing communicative skills in able children environment, their successful socialization, accepting such children by their able peers, forming community’s tolerance, community’s realizing the problems of children with limited abilities, and, in accordance with it, at finding the ways of interaction of children with limited abilities with their able peers, at personality development of every child with special needs on the basis of realizing their physiological, psychological and age peculiarities. Arranging social and pedagogical support for children with limited abilities in the general educational institution, specialists of this institution

- take into consideration the specificity of each child’s deviations, trace systematically the child’s status and development dynamics;
- render assistance to children with limited abilities by means of concrete actions and events which allow them to overcome or compensate emerging problems of the students;
- arrange the work of small pedagogic council (SPC) which coordinates the actions of all specialists of the general educational institution, work out the system of their interaction in every particular case;
- maintain social and pedagogical support of the family in which there is a child with limited abilities;
- provide methodological assistance for teachers in case of appearing problems connected with the acquirement of special abilities and skills, communicative skills on the part of children with restricted health possibilities;
- promote improvement in the qualification of teachers and different specialists that work with children with limited abilities;

- work with the able environment of the children with limited abilities for creating the atmosphere of tolerance and mutual respect, aimed at the development of proper pride and self-regard, the acceptance of children with limited abilities on equal grounds.

Nowadays elementary school teachers, teachers of different subjects, speech therapists, educationalists-psychologists, educationalists-defectologists, coaches in remedial gymnastics, child minders, specialists in the sphere of additional education and tutors participate in the development of inclusive education space in Russia.

As practice shows, it is inclusive schools that facilitate the adaptation and integration of children with health disabilities into the community. To increase the number of such institutions in Russia we should create the following conditions:

- financial and legal provision of the process of education that is regulated by legal documents;
- teachers and specialists prepared for the work with “special” children (the human resources of the institution). Thereby equal opportunities for getting medical, correctional and psychological support in the school must be created for all the students without any exceptions, that is usually approved by the parents of both “special” and “ordinary” children;
- materiel and technical support for creating barrierless environment (entrance ramps, elevators, specially equipped toilets, rooms for remedial gymnastics, psychomotor correction, classrooms for logopedic and correctional lessons with defectologists and psychologists, medical room, gymnasium etc.);
- adapted educational programs, making up individual syllabuses with the help of specialists, teachers and parents;
- necessary handouts and didactic material for teaching children.

One more reason because of which the development of inclusive education system is progressing slowly is the following: nowadays the preparation of human resources for working in an inclusive school is not paid much attention to. In our opinion, various subjects that foster realizing different levels of children’s readiness for education must be introduced into the system of teachers’ training. The idea of inclusive education makes special demands to the professional and personal training of specialists who have basic correctional education and of teachers with basic level of knowledge and special component of professional qualification. We treat the basic component as professional pedagogical training (subject knowledge, psychological and pedagogical, methodological knowledge, abilities and skills). The special component refers to the following psychological and pedagogical knowledge:

- realizing the concept of inclusive education, its difference from traditional forms of education;
- knowing psychological regularities and peculiarities of children’s age and personal development under the conditions of inclusive educational environment;
- knowing methods of psychological and didactic design of educational process;
- ability to implement various ways of pedagogic interaction between all parties of educational environment (with students in isolation and in group, with parents, teacher colleagues, specialists, managers).

Training courses, interdisciplinary councils, pedagogical workshops, probation periods, master-classes play an important role in the process of stereotypes' changing and hereafter in the professional position of a teacher in inclusive space. Open demonstrational events conducted by the teachers from inclusive education institutions allow to show the professional growth, to outline the further goals of personal and team activity.

Reliance on the experience of domestic correctional school allows to maintain the quality of education of children with limited abilities in an ordinary school at the appropriate level. Teachers from special schools render methodological assistance to their colleagues from general secondary schools. The cooperation of specialists makes the model of inclusive education viable and productive, because arranged interaction of specialists from institutions of different types facilitates better realization of the problems of children's deviant development.

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ADAPTACE DĚTÍ SE ZDRAVOTNÍM POSTIŽENÍM NA PODMÍNKY ŠKOLNÍHO VZDĚLÁNÍ. ZKUŠENOSTI RUSKÝCH SOCIÁLNÍCH PEDAGOGŮ

Abstrakt: V příspěvku jsou popsány problémy adaptace dětí se zdravotními obtížemi na podmínky studia na ruských středních školách. Autoři v textu také analyzují zkušenosti ruských specialistů v oblasti sociální a pedagogické podpory poskytované takovýmto dětem v procesu jejich adaptace a integrace do komunity jejich zdravých vrstevníků. Dílčím výsledkem jejich analýzy je definice podmínek, které by měly být splněny, aby v Rusku došlo ke zvýšení počtu inkluzivních škol. V příspěvku je uveden také shrnující přehled psychologických a pedagogických znalostí, které jsou zapotřebí pro profesní výcvik v inkluzivním vzdělávání.

Klíčová slova: adaptace, integrace, socializace, děti se zdravotním omezením, specialisté v oboru sociálního vzdělávání, sociální a pedagogický doprovod

MGEN: THE FRENCH HEALTH INSURANCE COMPANY AND ITS PROGRAMME OF HEALTH PREVENTION FOR TEACHERS AND STUDENTS

Marcela POUČOVÁ

Abstract: *Even if most modern countries support the inclusion of health risk prevention, and active health education into schools' curricula (considering them to be educational priorities) the actual ideas of how to implement these may differ in each country. Despite the fact that both France and the Czech Republic, as European countries, are relatively similar in their cultural identities, their priorities when it comes to the health education of the younger generation, reveal the differences. These differences are conditioned by history, geography and culture. The article deals with the health education programmes created and offered by MGEN, the health insurance company specialising in health insurance for the Civil Service employees of the departments of Education, Science and Research, and Youth and Sport.*

Keywords: *health education, prevention of health risk, French Educational System*

The previous article on health education in France stated that although most modern countries support the inclusion of health risk prevention, and active health education into schools' curricula (considering them to be educational priorities) the actual ideas of how to implement these may differ in each country. Despite the fact that both France and the Czech Republic, as European countries, are relatively similar in their cultural identities, their priorities when it comes to the health education of the younger generation, reveal the differences. These differences are conditioned by history, geography and culture. The article deals with the health education programmes created and offered by MGEN, the health insurance company specialising in health insurance for the Civil Service employees of the departments of Education, Science and Research, and Youth and Sport.

MGEN - the Health Insurance Company

MGEN (La Mutuelle Générale de l'Éducation Nationale) provides health insurance to three million clients making it the foremost health insurance company in

France, employing nearly nine thousand people. Not only does this colossus provide a fundamental insurance service to its clients, it also runs thirty-three health and social institutions (such as hospitals, mental institutions, health and physiotherapy centres, and homes for the elderly).¹ It also devotes itself to research, prevention and health education.

² Established in 1947 by the amalgamation of all the health insurance companies for teachers, its distinguishing factor is that the contributions total is derived from the salaries of those insured. Therefore, this system which transfers the fiscal means is based on the solidarity of all the clients.

The company works closely with 'Action et Documentation Santé pour l'Éducation Nationale' (ADOSEN) – a company created by MGEN itself and is its publicity and marketing arm.³

MGEN continues to keep its service provision up to date, making all its methodologies and information on prevention and health education publicly available from its website. All the information is thus easily accessible both to individuals and schools, and teachers are able to use these health education methodologies directly in their syllabus. In addition to the usual information there are applications which help clients find out about their own health condition and how to prevent various health risks. It is interesting to compare this with the service provided by the Czech General Insurance Company (Všeobecná zdravotní pojišťovna – VZP) which, as the largest Czech insurance company (6.2 million clients sic!) also deals with prevention for both adults and children.⁴ Similarly, on VZP's website, in contrast with other Czech health insurance companies, various information material and tests dedicated to prevention can be found.

What sets MGEN apart is its concentration on school programmes of health education which, together with the help from ADOSEN, it prepares for its clients – the teachers.

In the *Education* section of their website can be found information on several methodology materials suitable for use in nurseries, primary schools and secondary schools.⁵ In the same section there are videos dealing with various issues (e.g. violence in nurseries) or the user can take a test to find out whether there is a healthy and creative environment in their school. Other materials are available on the ADOSEN website. Via the site it is possible to place orders for all their products – from CD-ROMs or various educational games to leaflets explaining the basic health issues (for example dental hygiene, smoking, allergies etc.). The site also provides interactive knowledge tests, on topics such as smoking or nutrition.

1 Mutuelle générale de l'éducation nationale. [cit. 2010-08-12]. Dostupné z WWW:

<http://fr.wikipedia.org/wiki/Mutuelle_g%C3%A9n%C3%A9rale_de_l%27%C3%A9ducation_nationale>

2 MGEN, première mutuelle santé française. [cit. 2010-08-12]. Dostupné z WWW: <<http://www.mgen.fr/index.php?id=31>>

3 Mutuelle générale de l'éducation nationale. [cit. 2010-08-12]. Dostupné z WWW:

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4 Všeobecná zdravotní pojišťovna České republiky [cit. 2010-08-12]. Dostupné z WWW: <<http://www.vzp.cz/cms/internet/cz/Vseobecne/O-nas/>>

5 5 CD-ROMs and DVDs available:

1) Nutrition (CD+DVD, €15)

2) To Live with the Sun (education programme available for free download)

3) Education – Health (CD-ROM sent out free to the company's clients)

4) Torn Up Exercise Books: School Face to Face with Vulnerable Children (CD-ROM, €15)

5) Prevention of Bullying in Schools (CD-ROM, €15)

Don't tell me what to do

Let's turn our attention to two of the CD-ROMs on offer – *Education for Health* (2003) and the CD+DVD *Nutrition* (2005). *Education for Health* is designed primarily for use by pedagogical workers, student teachers, students and parents. Over six hours of consultations brings information on diverse topics. Interviews with health workers, experts in a variety of lines of prevention, teachers, students or interactive texts and tests – all can be downloaded and printed out to use in the users' own didactic projects. The three main themes (*Every Day Health; The Risks of Adolescence; Practical Health Education*) are divided further into sub categories which aim to map the fundamental points of those issues. Theoretical solutions are mixed here with real life examples: the user is introduced to the primary principles of children's and young people's risk behaviour prevention and, at the same time, they can obtain materials which can be used in their work.

The main characteristic is the tolerant approach to each of the themes and the aim to create non-directive teaching methodologies. The “*you must/you mustn't*” method is substituted here with illustrative examples and an endeavour to approach each problem from several angles. It is obvious that France has absorbed its long established multi-culturalism which questions the model of one generally-held truth and attempts to educate by use of examples rather than by proclaiming singular suppositions and solutions. This approach is in direct contrast with the model still presented by some of the Czech materials on the VZP website. While the French professionals, who undoubtedly do come across some examples of drastically endangered health or even fatal situations, are trying to explain the means with which to create a healthy school environment and what kind of preventative principles to inculcate pupils and students in order to influence their behaviour, the Czech materials sometimes read more like a listing of horrors and disasters. In turn, these make the majority of parents paranoid individuals. Children are then in turn also traumatised by this kind of prevention. Imagine how distressing it must be for a child to see their parents smoke after Sunday lunch, having been shown at school photos of lung cancer, albeit having been done in good faith.⁶

We Really Are What We Eat

The CD-ROM *Education for Health* attempts to avoid such traumas. The basic principles are rounded up into ten simple points and then further richly illustrated by real-life examples from various specialists with children's comments.

The CD+DVD *Nutrition* is an exemplary presentation of these principles. There are two parts to it, the first one being a DVD designed mainly for parents and children. The 180 minutes are divided into three parts (*Eating Habits; Food and Meal Times*) with 28 themes. Using short film sequences the well known nutritionist Dr Laurence Plumey introduces the principles of a healthy and balanced diet as well as basic eating habits. Once again the main presentation principle is non-directive. Let's see how these principles are used in the overall concept of a preventative programme.

She is well aware that **‘to be informed and to approve of something does not necessarily mean you want to do it yourself’**. Especially if it comes to such delicate

⁶ *Éducation-Santé* (CD-Rom), Adosen Paris, 2003.

themes such as bringing up children and the family's eating habits where any specialist giving advice can find themselves skating on thin ice. A directive approach to issues, to which most of us react sensitively since they concern our most intimate and private life, can be counterproductive despite the best intentions. Therefore Dr Plumey does not demonstratively throw away all food out of a fridge, leaving only the most definitely healthy items – which most of the Euro-American population find inedible (e.g. various grains and beans, vegetarian meat substitutions or healthy drinks which taste like petrol) – because she knows that **'all risk behaviour is conditioned by something'**. Instead she tries to explain and demonstrate that everybody can eat a healthy and well balanced diet, even those who shop in supermarkets and, being too busy, heat up their frozen food in microwaves because **'it is better to stay away from statements attacking general habits or preferences'**.

At the same time, because she is well aware that **'dramatisation and diabolisation of a problem does not help in identifying with the presented message'**, she adds simple advice on how, in today's busy life, to avoid making neurotics out of our children who determinedly refuse to eat anything but sausages and chips with ketchup. Putting aside the indisputable quality difference of food available in French and Czech shops, as parents, we can relax. We can see that it takes minimum effort to bring up our children as healthy individuals without any nutritional frustrations or phobias.

Similarly Dr Plumey presents the pluses and minuses of different types of food and the quantity and advantages of their consumption in our healthy development. In the last part which deals with the three main meals of the day, we are introduced to several principles showing how to make a little celebration out of every meal, not only fulfilling all the necessary nutritional values but also making eating together an opportunity to enhance family life. Although the DVD's creators are aware that **'it is impossible to forbid or order a certain kind of behaviour within the cultural environment and generational differences'**, they still placed their bets on the fact that the traditional model of French dining, where the family eating together represents the main social event of the day is still strong, and should this not be followed it would result in traumatic consequences.

Then there is an educative CD for French teachers, with the same videos as on the DVD for children and parents. Here is extra material prepared for each of the themes discussed, which can be used both individually or in bigger groups. All materials can be printed out and used immediately. The teachers should be aware that **'the process of health education is not to be based on demanding a new set of habits and behaviour but should allow, as much as possible, to make your own, conscious decisions'**. And should the teachers want to try to convince their students about the advantages of certain eating habits, in the form of the CD+DVD Nutrition they have effective means to do so.

It may seem to most of the Czech specialists that this kind of information is obvious and superfluous, but it takes only a single glance into a local restaurant, observing simply the body posture and the way the cutlery is held, to spot who has been eating all their life in front of a TV, buried in a sofa with a plate on the coffee table. Another example are those – both men and women – who can be seen eating out, alone or with a partner, reading while eating. And this is often the case even in canteens and restau-

rants specialising in healthy foods. So, even the way we eat should be an integral part of a healthy life style.

It is often mentioned that Czechs hold the top position in the world's consumption of good quality beer. However, it would be interesting to find out how it is with their consumption of low quality tea. The way at which drinking weak and more or less sweetened black tea is embedded in Czech society is rather shocking. It is found all the way from maternity wards, through school and company canteens, to the homes for the elderly. It would be truly interesting to know what hygienists, health workers and nutritionists of other European countries make of this fact. Hence it seems that, at least when it comes to breaking down stereotypes concerning dining culture, Czech schools have a lot to catch up on. Though the question remains whether they are aware of the fact.

Yes Minister?

From the case of the forth-coming controversial handbook of sex education for primary schools which stirred up the 2010 summer silly season in the Czech Republic, it is obvious that the curriculum of social sciences is problematic in all societies, no matter how they define themselves. In modern times it has always been Europe which set out the direction of social development and it was Europe's 'libertarianism' which has always, in the end, won over 'traditional' values. Today's Post Modern European democracy shows a considerably liberal attitude towards various schools of thought because she is probably convinced that her modernist interpretation will triumph once again. Nevertheless, it seems that in societies which have not yet completely resigned from the traditional family model (and Czech society is undoubtedly one), the parents' determination to maintain control over certain kinds of information on physical and mental health remains, no matter what educational approach they take. And it is so, despite the indisputable development of 'scientific' learning. Hence more than ever it will be necessary to continue the dialogue as one of the fundamental principles of health education. Historical studies of our daily lives which would clearly show the influence schools have had on the change of lifestyles within different countries over the previous decades could, to us Europeans, explain and clarify facts about our cultural and social habits, and therefore about ourselves.

Ten principles of health education from the CD-ROM Education for Health

1. One of the aims is the ability to learn to make the right decisions. To not be categorical and to avoid rash decisions. The process of health education is not based on demanding new behaviour or habits but it should allow for the making of well considered decisions.
2. It is not enough to know in order to become motivated to change one's behaviour. To be informed does not necessarily equate to wanting to change. Information is, most of the time, necessary but never the complete answer. It does not, as a matter of course, have to be a starting point. It does not have to precede but should rather follow or conclude the process of learning.

3. To approve of something does not automatically lead you to doing it yourself. It's not enough to want in order for it to happen. It is possible to co-operate on listing the obstacles which prohibit certain preventative behaviour and trying to overcome them.
4. No behaviour is senseless. There are always 'good' reasons that encourage health damaging behaviour. Each risk behaviour has its own cause. Helping others to clarify the reasons and conditions of risk behaviour, and discussing them, results in a realisation and possible instigation of change.
5. Low self esteem is the origin of addiction. All addiction prevention should stress self confidence and forestall both implicit and explicit self-depreciation.
6. We take up new ways of behaviour more easily if we see that they are supported by our society. In respect to the social environment and generational differences, it is not possible to forbid or order one sort of behaviour. It is imperative to learn about the social habits and models of a group before any preventative advice is issued.
7. It is advisable to avoid any statements which directly attack any general habits or preferences. The desire for freedom and respect of an individual should be made foremost. It is advisable to help others to start questioning their place in society and their personal freedom in relation to society's demands.
8. Prevention cannot be based on fear. Over-dramatisation and demonisation of a problem restrains identification with the presented message. On the contrary, such behaviour instigates refusal. Prevention does not equal moralisation. Education for Health means supplying information, advice and providing a dialogue. Let's not be scared of talking about the pleasures – the alluring aspects introduced by some of the health damaging habits.
9. Dialogue. Discussion and listening must take precedence over fact deliverance. It is recommended to prioritise a dialogue and satisfy the audience's expectations.

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FRANCOUZSKÁ ZDRAVOTNÍ POJIŠŤOVNA MGEN A JEJÍ PROGRAM ZDRAVOTNÍ PREVENCE PRO UČITELE A ŽÁKY

Abstrakt: Ačkoli většina moderních států zařazení prevence zdravotních rizik a uvědomělé výchovy ke zdraví do školních programů podporuje a řadí ji k výchovným prioritám, samotné představy o náplni těchto programů se mohou v jednotlivých státech lišit. Ačkoli Francie a Česká republika k sobě jako evropské státy nemají kulturně daleko, jejich priority v oblasti zdravotní prevence mladé generace vykazují jisté odlišnosti. Tyto odlišnosti jsou podmíněny historicky, geograficky i kulturně. Příspěvek se zabývá výukovými programy výchovy ke zdraví, které vypracovala a nabízí svým klientům zdravotní pojišťovna MGEN specializující se na zdravotní pojištění zaměstnanců spadajících pod ministerstva školství, vědy a výzkumu a mládeže a sportu.

Klíčová slova: výchova ke zdraví, prevence zdravotních rizik, francouzské školství

SCHOOL AS A LINK INTEGRATING HEALTH SUPPORTING ENVIRONMENT. FROM HEALTHY SCHOOL TO SCHOOLS FOR HEALTH IN EUROPE

Dariusz BIAŁAS

Abstract: *In the postmodern health discourse, the predominant importance is assigned to education and health promotion. The prestige of education is emphasized not only by the WHO project “Health for Everyone in 21st century”, but also by the World’s Health Declaration. The key issues are the forms and contents of school health education. The assumption points they all shall shape the skills of civic involvement in social, economic and political undertakings and prepare those being educated to participate in the responsibility for health and express the core of the problems bothering postindustrial societies. The constitutive element of the operational dimension in educational processes is the health awareness of an individual, aiming at change of the reality with accordance to pro-health standards of WHO. The task of education is to develop the health awareness of a citizen and building up health-related knowledge in individual, social and ecological dimension. The history of health and disease-related educational programmes is of revolutionary character. Transformation of health promotion model at schools shifts from elementary health promotion model, through the project of Health Promoting Schools to the model of Schools for Health in Europe. Transformations in educational models coincide changes in approaching the health model from disposition or environmental perspective to system perspective of positive health. The new perspectives of health and health education take into account psychosomatic, ecological, cultural and technological aspects, including the restrictions resulting from human genetic adjustment to changeable conditions.*

Keywords: *health, Health Promoting Schools, Schools for Health in Europe, education, health education, health promotion*

In a multicultural and technically dominated reality of contemporary world the issue of health and disease merges many discourses. It is found not only in biological and medical science but in discourses of ethics, religion, politics, technology and number of other dimensions of broadly understood culture. The issue of health is one of the key trains interpenetrating the social communication processes used in advertisements,

media news, parliamentary debates and everyday gossips. In such discourses significance is attached to taking care of one's health, and the hygienic demands are the immanent ingredient of each ethical and religious system. Simultaneously, the variability of moralities interprets any sort of actions against health as a sin, crime or violation. The direct connection of problems located in the health sphere with upbringing perceived in informal manner and institutional education were emphasized by all the well-known doyens of education starting from ancient philosophers to the initiators of contemporary educational systems. It particularly relates to modern times including the postmodern discourse. Hence, it is not revealing to claim that wide perspective of health reaches deeply in the social science, including pedagogy.

The value of health as the term popularly understood increases particularly in the case of life threat. The fear of a disease and death constitute a vital element of particular attention paid to health. It is a sort of guarantee to stay alive. At the same time, a noticeable issue is the way in which individuals in various historical periods and cultures interpret and define the model and symbolize the idea of health. The issue of health and illness is involved in typical for the culture and its logical manner systems of categories systematizing items and ideas, as well as standards and borders. Since the dawn of the culture the ideas of health and sickness have been a subject to specific categorization, being a point of reference to the existing life conditions, knowledge on physical and social reality, religious beliefs and science model, life style and many other environmental and social determinants. A special place in discourses regarding health and sickness are the normative systems, expressing moral assessment of a certain behaviours and the consequences of the actions undertaken and abandoned¹. The question of complex health determinants including the relations within the individual himself and in his surrounding, creates a wide range of phenomena. These are customs, do's and don'ts, hygienic bans and recommendations regulating the pattern to accomplish basic tasks starting from day-to-day activity such as keeping tidiness, storing and preparing meals, working, relax, sexual behaviours, interpersonal relations to complex construction called by the ancient physicians as the *harmony of mind*.

Postmodernism, however, questions health in another manner. The key aspect is not whether health issue shall merge the educational discourse, as it is almost obvious. In postmodern discourse the key issue are the goals, shapes and contents of health education referred to actual problems impacting postindustrial societies. The predominant aim for education and health promotion is the direction of changing the health awareness and lifestyles expressed in health-orientated projects. This aim is also focused on developing such knowledge about society and environment that shall allow to introduce health-orientated changes in the individual, social and ecological dimension. Contemporary education moving beyond the self-evident nature of health promotion raises questions on the health dimension of education as such.

The way of perceiving health importance and sickness in human existence rooted in the history of a mankind shaped the discursive formula predominant in biomedical model, interpreted as disposition approach. This formula serves as a dogma consoli-

¹ D. Białas, *Zdrowie jako system postaw, a wizja zdrowia w przekonaniach lekarzy*, [in:] B. Płonka-Syroka, A. Syroka [red], *Leczyć, uzdrawiać, pomagać, studia z dziejów kultury medycznej*, t 11, Wrocław 2007, pp. 13-35.

dated in preconsciousness constituting not only the medical discourse. It is also present in law, religion and ethics, permanently reinterpreting the train of one's availability – the subject burdened by essential tendencies to stigmatize actions and reactions with pathologies, guilt or sin. Disposition approach makes up the traditional way of perceiving health education. The counterbalance for the negative subject's dispositions is the vocation to heroism and sanity based on idealistic visions of a persona, turning education into self control, responsibility and abstinence. For the members of society individually and disposition oriented the key questions in the health issues are *who is guilty* or *who is responsible* for the certain shape of reality. In the case of pathology, the very first questions are naturally moving towards determining the reason for such situation and automatic determination of who or what to blame (for instance bacterias, the weather, the perpetrator of the accident). In the opposite situation, when the health condition improves they key issue is who is to take the credit for (a doctor, miracle-worker, divinity)². It is always easy to put the blame for sickness on the caretaker – a tutor, parents that don't look after the child sufficiently (working too much), teachers (that are ignorant) or genes – something very few have the idea of but commonly known is that “whatever is wrong with me, I must have inherited it after parents”.

The disposition model facilitates the simple upbringing formula morally and instrumentally related. All shall understand the meaning of *better be safe than sorry*. Equally popular are aversive phrases such as *smoking makes you impotent*. The myth of easy, cheap and efficient health education is in contemporary health promotion model of public health plays still a key role.

In the circumstances of globalized world, where the postindustrial societies make up a mosaic of informative, industrial and agricultural societies, mixed with even more archaic, tribal, even hunting-gathering communities, the disposition approach is a subject to intense criticism by authors of the public health idea gathered around WHO. Experts of this organization relying on the social concepts promote positive and utility health model with environmental model of sickness. In the junction of many discourses streams there are problematic fields that require permanent and lifelong education process. In this process the school – perceived as specific public institution – is assigned with important mission of establishing a system of health education and health promotion based on scientific grounds, additionally establishing pro-health and pro-ecology oriented society of knowledge.

The long-lasting combination of health and sickness issues with moral and social aspects is a key element of problems related to shaping new vision of health and health education. Social customs, considered in the social model as the issue of lifestyle, include the health care requirements in the issue of upbringing and education both as the determinant of individual condition and sustaining the continuity of culture. The history of health education is a field of knowledge permanently connected with general history of education and upbringing³. The phenomenon of situating and rooting any sort of discourses in their historical and social context is particularly worth noticing. Contextual analysis of the discourse facilitates recognizing the area and range of beliefs expressed

² P. Zimbardo, *Efekt lucyfera*, Warszawa 2008, pp. 29-31.

³ L. Barić, H. Osińska, *Oświata zdrowotna i Promocja zdrowia*, Warszawa 2006, pp.12.

as religious beliefs assigned by factual status in each epoch⁴. Unfortunately only few of these beliefs considered real may constitute the objective knowledge or a knowledge that might facilitate solving key problems of contemporary world. In such perspective the crucial question is the demand for supporting the knowledge with practical theories, proven by demanding scientific tests⁵.

Health education is particularly expressed in the context of elementary teaching. The shape of the educational level called hygienic education, was for centuries associated with culturally varied belief systems, thinking styles and science models typical for certain cultural and religious spheres. The variability in approaching the hygienic issues reflected number of differences mainly deriving from environmental conditions in which a culture of a certain society was being shaped. It is rather hard to understand today why in some systems it was deeply believed that that shrimps and beef are unchaste, left hand shall be only for toilet purposes by its nature and shall not be used while eating, using drugs allows to see the depth of the reality and own self or that unbaptized child is particularly prone to diseases, death and growth disorders. Most of the traditional hygienic recommendations were of strict character and their justification is a taboo combining the medical and hygienic dimension with the moral one. The supporters of this taboo find it the necessary condition of remain healthy. Others claim that it is just a superstition or even barbarism. The striking example in this regard is the fusion of social patterns with biomedical standards with reference to sexual health. It results in aggressive tone of discussion on the norm of sexual behaviour, with sexual hygiene, deviation and tolerance aspects in this matter.

The division and variability are crucial impediment for implementing universal standards of health education promoted by WHO, and in experts' opinion there are vital in contemporary, globalized society. The first reason of implementing such approach were the dangerous pandemics such as the Spanish flu. The efforts to introduce homogeneous standards of public and environmental health were undertaken by international society after II WW. Within the framework of WHO established in 1946-48 many issues were taken up. Those were for instance unification, codifying and coordinating actions supporting health including scientific research, combating diseases and health promotion with health education. One of such steps aiming to make the health and hygiene issue universal was recognizing and retying the WHO Constitution by the International Health Conference in New York in (1946). This document in the preamble includes the first positive and holistic definition of health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, additionally declaring human right to health as the common right and the condition of reaching peace and security⁶. In the years 1977-78 during the WHO conference in Alma Ata (1978) the goals of the strategy action for health were set up (Health for Everyone). Simultaneously the term health promotion was finally shaped and distinguished from health education. Nowadays, the health promotion refers to the need of change in the living conditions

⁴ B. Płonka-Syroka, *Od historiografii nauk przyrodniczych do antropologicznej wiedzy – kształtowanie się nowej dyscypliny badań* [in:] B. Płonka-Syroka (red.), *Antropologia wiedzy. Perspektywy badawcze dyscypliny*, Wrocław 2005, pp.35.

⁵ K.R. Popper, *Wiedza a zagadnienie ciała i umysłu*, tłum. T. Banaszak, Warszawa 1998, pp. 21-39.

⁶ World Health Organisation: Basic Dokument: preamble to the constitution of the World Health Organisation, http://www.who.int/governance/eb/who_constitution_en.p

and lifestyle. Health education is elementary dimension of widely interpreted health education oriented at improving individual skills, knowledge, attitudes and beliefs regarding widely understood environmental, social and political health determinants⁷.

One of the key problems of contemporary health education is the need to define educational goals with regard to changeable conditions of postmodern reality and global aspects of political, economic and ecological situation in the world. The necessity of unification and coordination actions in favour of health becomes an impediment for the phenomena related to commonly existing cultural, social, religious and economical differences. The diversity impacts even the most basic issues. Even the health model and its definition recognized by the WHO is a subject to severe criticism as imprecise, situational and idealistic. The heart of the criticism is perceiving the state of perfect physical, mental and social well-being as synonym to health. Considering the common assumption that health is equal to absence of disease, recognizing the equivalence of happiness with health results in problems of almost ontological origin. Taking common awareness into consideration, the most credible understanding of health condition objective by biomedical criteria is seen as somatic and social norm anticipated as *not falling ill* and *normality* i.e. accordingly to the parameters of norms. Such model, coherent with disposing vision of a human is deeply rooted in social awareness and by its nature does not become a ground of attempts to combine subjective, contextual and culturally involved salutogenetic vision of happiness and health⁸.

Many accusations refer to restricting health to three dimensions; somatic, mental and social, passing over the aspect of spiritual health in transcendent sphere of human life. However, taking spiritual aspect of health into account make the promoted by WHO process of unifying terms even more difficult. By the genetic relativism of the term *spirituality* with its religious connotations, mysterial conception of nature and awareness, the spiritual health is a subject to separation from mental dimension of life situated in transcendent and metaphysical sphere. Mysterialism allows many speculative, risky and metaphysical ideas to be a part of the health discourse, even though they are beyond the scientific knowledge sphere embracing education and medicine⁹.

WHO pays particular attention to the necessity of maximal rapprochement of intuitive patterns of thinking about health to the knowledge considered objective in academic sense. The problem of educational contents as the ground for the learning process is an important element in the WHO project. Such foundation, according to WHO specialists, shall be well-grounded with scientifically proven knowledge, serving the increase of human health potential and developing personal skills. The project emphatically raises the abovementioned question of scientific criteria in the process of education and health promotion. The objective knowledge criteria shall constitute predominant value in relation to other determinants of this process¹⁰. Knowledge founded on scientific criteria perceives health factors in psycho-somatic, environmental and cul-

⁷ L. Barić, H. Osińska, op. cit. pp. 12-14.

⁸ D. Białas, *Zdrowie jako system postaw...* op. cit. pp. 21-24.

⁹ B. Woynarowska, *Edukacja zdrowotna*, Warszawa 2007, s. 31; D. Białas, *Strategia narracyjna w procesach edukacji zdrowotnej*, [in:] B. Plonka-Syroka [red.] *Antropologia medycyny i farmacji w kontekście kulturowym, społecznym i historycznym*, Studia Humanistyczne Wydziału Farmaceutycznego Akademii Medycznej we Wrocławiu, t.1, Wrocław 2008, pp. 80-85.

¹⁰ Ottawa Charter for Health Promotion, [in:] J. B. Karski, *Praktyka i teoria promocji zdrowia*, Warszawa 2008, pp. 247, 249

tural dimensions, it also considers factual threats, but mainly shall influence the content and forms of health education.

According to WHO specialists, the health education programs shall include all the contents profoundly preparing to actions undertaken in order to actively promote health in the society. The issues of health education perceived this way are tackled by the health policy project for the European Region by WHO "Health for Everyone in 21st Century". The education-related tasks are expressed particularly strong in goals: 3- healthy life start, 4- health of the youth, 5-health of the elderly people. Such goals present education as a permanent process from the birthday until the advanced age. Therefore particular emphasis is put on the issue of healthy life start using promotion of conscious maternity and conscious, responsible care taken for infants and small children. According to the guidelines, young people should play parental role responsibly and consciously, having been prepared for it not only in family circle, but within the school education too. Young people's health shall be grounded in better preparation for life in postmodern circumstances, higher level of life skills and – particularly important – possibilities and abilities to make pro-health choices¹¹. The key issue is preparing and training children and young people to making aware and responsible choices that shall continue till adulthood and later.

Health education, due to permanent changes of the living conditions of contemporary societies typical for postmodernism, shall be a lifelong learning process, as it is oriented at permanent improvement of skills and knowledge facilitating the development of health potential. In adulthood they key issues are the possibility of taking up a job, residence and financial support, as well as participation in public life, particularly satisfying needs connected with relationships, family and breeding children. One of the important aspects of education aimed at adulthood need is pursuing the equity in health, taking into consideration gender perspective and other factors varying personal needs. In this context question of integrative and emancipating education seem to matter most. Integrating school as one of the forms of health promoting schools constitutes a system aiming at the process of including into social communication those individuals and groups that are classified as minorities endangered with social maladjustment and exclusion phenomena. Such school shall establish circumstances enabling subjective approach basing on such skills as recognizing the equality of diversified individuals, cooperation between various groups of interest, ability to accomplish the equality of rights, ability of subjecting experience, falsifying stereotypes, justifying beliefs, constructive resistance supported by ability of critical thinking and questioning obviousness, civil courage in exercising own rights and the value of democracy¹².

In accordance with education theory, school and family shall constitute two basic institutions accomplishing the educational process, including health education. Undoubtedly between these two subjects carrying out this task, there has been and will be a lot of tension and conflicts occurring. The family rather transmits the habits connected to a various degree with health awareness and knowledge about diseases as well as the hygiene

¹¹ A. Kozierekiewicz [red.] *Zdrowie 21 Zdrowie dla wszystkich w XXI wieku*, Publikacja Biura Światowej Organizacji Zdrowia Regionu Europejskiego 1999, przeł. J. B. Karski, Kraków 2001, pp. 61-68.

¹² Stanowisko Krajowej Konferencji Naukowej *Wyzwania i Zagrożenia Zdrowotne w Świecie Procesu Integracji*, Warszawa 22-23 Marca 2002 r. [in:] J. B. Karski, *Praktyka i teoria promocji zdrowia*, Warszawa 2008, pp. 267, 271 J. B. Karski, *Praktyka i teoria promocji zdrowia*, Warszawa 2008, pp. 247, 249..

related customs. However, it is the family circle where the child acquires behaviour patterns and habits, valued whether promoting health or anti-health ones. On the other hand, the duty to pass the knowledge on health and shaping pro-ecological and healthy attitudes and behaviours rests on school. It must be accomplished accordingly to the latest and scientifically proven knowledge about health in its somatic, mental and social dimension¹³.

The differences between both of these environments in approaching health are particularly noticeable within the scope of moral sphere. They appeared from the very begging of establishing the systems of public and compulsory education and social medicine. As early as in the times of economic and social transformation in industrial societies of 19th century, the school became naturally involved in the stream of reorganizing the civic awareness on a large scale within systematic and public educational actions, competing with extremely intensive at the turn of 19th and 20th centuries revolutionary processes. The hygienic education tasks were being accomplished in the middle of 20th century, parallel to general alphabetization of societies, often morally rooted in prescientific awareness. A typical example of diversity and backwardness in knowledge on health among many Polish communities at the turn of 19th and 20th centuries is the case of doctors' fight with the myth of *plica polonica* disease¹⁴. The scientifically battle against the *plica polonica* myth was undertaken in 19th century by Joseph Dietl, and last case of it was recorded in 1957 by T. Brzeziński in the Polish region of Suwalszczyzna¹⁵. The medicine struggle with *plica polonica* myth, referring to superstitious fear of washing and combing hair took over a century in Poland. This example, no matter how trivial these days, clearly expresses the power of health-related taboo.

The determination accompanying first hygiene experts of health enlightening explains the first forms of carrying out the tasks of health education. It mainly consisted of restrictions, even penalization and close hygienic surveillance inspired by medical police in enlightening absolutism. Medical police as a public sanitary and medical service was authorized to intervene private lives using administrative and legal rights, as well as school functioning and the system of breeding children, it all aiming at the struggle for public hygiene¹⁶. In the atmosphere of fighting the hygienic and health ignorance, the first curriculum of school health education in Europe were mainly oriented at accomplishing instrumentally and prescriptively process of supporting families in the developing appropriate hygienic habits, and in more serious cases persuading the caretakers to change their breeding patterns towards children. Such system called health education was of not only instrumental character, but it was also shaping elementary basic behaviors enabling overcoming diseases such as tooth decay, tuberculosis, poliomyelitis and sexually transmitted diseases. Later, the health education put more pressure on prevention of civilization diseases as heart attack, then tackling the problem of fighting with alcoholism and tobacco addiction, gradually broadening the scope with other addictions.

Since the conference in Alma-Ata, along with the change of health issues approach shifting from disposition perspective to environmental model, a crucial modification of health education model appeared. In the middle of 1980's, second to Healthy

¹³ Cz. Lewicki, *Edukacja zdrowotna*, Rzeszów 2006, pp. 171-172.

¹⁴ T. Brzeziński [red.] *Historia medycyny*, Warszawa 1995, pp. 121-122, 344, 383-412.

¹⁵ *Ibidem*, s. 122.

¹⁶ W. Szumowski, *Historia medycyny filozoficznie ujęta*, Warszawa 1994, s. 534; T. Brzeziński op. cit. pp. 234, 235, 337, 387, 389, 394.

City, another project Health Promoting School was introduced¹⁷. A period of intensive development of school systems of health education aiming at Health Promoting School began. Within Western Europe the transformations were in accordance with the Health for Everyone project guidelines, moving towards Schools for Health in Europe.

At the same time (1980's-1990's) there was still structural and instrumental system of Polish health education in force, being a part of national state education. The hierarchy of experts, mainly physicians and sanitary-epidemiology station staff was in charge of setting up the programmes¹⁸. Education understood in such way, still at elementary level, was being carried out in Polish schools for decades. Regarding hygienic and physical education the inspiration was derived from the interwar period, continuing it in instrumentally changed form, appropriate to the criteria of real socialism in postwar communistic Poland. This stage may be described as elementary, internal school health education. By the end of 20th century, the predominant form of health education in Poland was a centralized, top-down transmission system of biologically-based knowledge. Accordingly to scientific paradigm, such model was in 20th century considered effective and stable. The educational goals were precisely determined in the circle of experts, adjusting the transmitted knowledge to beforehand assumed perceptive abilities of all the school pupils.

The curriculums for health education were centrally designed, serving as a foundation for content choice, the methods and forms of teaching.

Despite the appearance of more and more intense criticism in the light of political transformations of 1990's and the inflow of knowledge connected with attempts to include Polish education into European educational process, the internal school model of elementary education still persisted as verified, reliable and according to the native tradition. The crucial link in the process of internal school health education was the teacher, originally competent in health issues. The knowledge and skills, and first of all the personal example set by the teacher was to constitute the element determining appropriate course of health education process and assumed level of achievements¹⁹. Unfortunately the discrepancy between the theory and practice appeared in various areas. Still in majority of schools in 1980's there were billows of smoke in the school staff room, almost equal to the clouds of smoke in pupils' toilets. The examples are countless.

The necessity of profound changes in the health education model had been experienced before. It was emphatically expressed by the doyen of Polish health pedagogy, prof. M. Demel in his speech given during the National Physical Education Symposium in Kielce in 1971. He criticized Polish health pedagogy as based on system of preventive threats and bans. The picture of health presented in the health education model was assessed by him as "negative empty-being", and the education portrayed as "gray, ineffective and imperceptible". In a general evaluation he harshly defined it as "joint of boredom with helplessness"²⁰. The conditions enabling changes appeared within political changes after 1989. Health Promoting School project initiated in 1991

¹⁷ B. Woynarowska [red.] *Jak tworzymy szkołę promującą zdrowie, poradnik dla szkolnych koordynatorów i zespołów ds. promocji zdrowia*, Warszawa 1995, pp. 11.

¹⁸ L. Barić, H. Osińska, op. cit. Pp.59.

¹⁹ Cz. Lewicki, op. cit. p. 172.

²⁰ M. Demel, *Wychowanie zdrowotne, geneza i perspektywy*, [w:] *Wychowanie zdrowotne w szkole. Materiały Krajowego Sympozjum Wychowania Zdrowotnego Kielce, 13-14. X. 1971 r. Warszawa 1974*, pp. 14-18.

by WHO, was introduced in Poland, Czech Republic, Slovakia and Hungary. In 1992, as a result of agreement between WHO, Council of Europe and the EC Committee, the European Network of Schools Promoting Health was established. Until 1995 the network of schools associated in European Network of Schools Promoting Health embraced around 350 Polish schools, mainly primary, gradually extending with gymnasiums and nursery schools²¹. However, in predominant number of Polish schools the internal school model of health education prevails. It shall be considered as negative phenomenon particularly due to the fact that it is unnoticeable from the inner perspective of teachers.

The point that there is a threat of teachers being excessively used to internal school model of health education needs to be justified. The first reservations is the instrumentally typical assumption in pedagogy about the model role of teachers. Their competences and qualifications of publicly trusted individuals are always strongly associated with the term authority, deeply rooted in social consciousness. Teacher's authority becomes for many people a foundation constituting professional identity of people being partly responsible for shaping the awareness, attitudes and skills of the entrusted youth. The recognition that a teacher by nature represents the model of attitude and behavior doesn't stand the criticism, identically as the assumption that the teacher believes in lofty ideas and presents ideal moral and health behaviour. Recognizing authority perceived in such way has been contemporary accurately questioned on the grounds of emancipatory discourse as a form of authoritarianism. The traditionally perceived role of a teacher as public service officer is being explicitly criticized by H. Giroux. Referring to conservative perspective of exercising pedagogy, he indicates the way of perceiving authority in instrumentalism as someone transmitting universal beliefs and values existing absolutely. In radically conservative scope, the authority knows such beliefs and originally represents the world of universal values. He/She is also authorized to impose these values onto imperfect and limited pupil. Taking it into account, the pupil is obliged to be obedient *de nomine*, and the freedom emerges as a result of recognizing the set of values provided by the teacher.

In reference to Giroux's opinion and in Polish context, there is an exemplification of such criticism towards the project proposed in 2007 called "Zero tolerance for violence". The authors inspired by Polish national-catholic tradition identified the source of deal and security at schools with such measures as discipline, uniforms, surveillance supervision, granting teachers the competences of an official comparable to police officers. The authors of criticisms emphasized that such programme is nothing but a deceptive vision of governmental officials and teachers gone stale, demanding the right to authority guaranteed by a top-down regulation coming into force²².

The next point criticized in health education model is its elementarism and preaching didacticism. The elementarism is expressed by attempts to shape habits, recognized by the experts as hygienic and pro-health actions, simultaneously important for social reasons from certain cultural, political or economical view. The knowledge on health is administered in methodical and way in quality and quantity essential for instrumentally perceived sake of pupils, or in relation to elderly people for the sake of the patient.

²¹ B. Woynarowska [red.] *Jak tworzymy...* op. cit. pp. 9-13.

²² M. Dudzikowa, *Autorytet jest zawsze relacją*, „Psychologia w szkole” no 3, 2008; J. Gęsicki, *Dlaczego uczniowie są wredni*, „Psychologia w szkole” no. 1, 2008.

The elementarism of Polish health education in 1945-1999 was expressed by narrow problematic areas, poor number of issues tackled within the area recognized, and trivializing them. The vision of elementarism, authoritarianism and didacticism in Polish (health) education depicted by Demel at the beginning of 1970's was not a subject to transformation till the end of the century, becoming a part of general social atmosphere of Polish at the turn of 1980'-1990's. This view is also noticeable in many textbooks on health education, revealing its poor substantial contents. "Health Education" published as one of very few such manuals by M. Sygit in 1977 shows a typical problematic areas located in the scope of the interests of health education experts of the time²³. Apart from the definitions review regarding health, sickness and social care system, the main topic is illnesses analysis tackling cancers, tuberculosis, diabetes, cardiovascular diseases and depression. Next, the author presents the biophysical threats of contaminated physical environment (soil, water and air contamination, industry, noise, pesticides). The next elements are the factors of main civilization diseases such as tobacco, alcohol and drugs addiction plus some typical elements of a lifestyle tackling food, physical activity, relax and leisure time as ways of stress reduction. The entire content analyzed on 200 pages may be expressed in few words: don't smoke, it causes cancer, don't drink – it causes liver cirrhosis and leads to death, don't use drugs as you will die even faster, avoid obesity as the main cause of heart attack, be active as sport is healthy.

Reduction of the substantial content to the important and key, however clearly elementary issues, trivializes the knowledge about health and healthy lifestyle, limiting the socially crucial discourse to giving talks, reprimanding and superficial evidences of the facts theoretically obvious. The results of such education are reflected in cynical jokes such as "don't smoke, don't drink, you'll die healthier", "who smokes and drinks knows no creepy-crawly", or "smoking kills slowly, but who wants to die fast"? Indeed, cynical attitudes towards health seem to be a dangerous result of deconstructive education. Negative education as it's superficial and simplified. Elementarism of health education also results in behavior-related emotional paralysis, cognitive absence of rational skills and facts analysis. This is also a consequence of overwhelming sense of being prone to diseases, bacterias, viruses, contamination and poisoning. It is expressed in a specific way of avoiding risks and mentally rooted allergy to all what artificial, unnatural and civilized. The life in 'technosphere' appears as a great trap. The only way out is to escape in naturalistic and mystic utopias expressed as healthism: obsessively fearing and taking care of one's health²⁴.

The conviction that most things in life considered pleasant are harmful, deeply rooted in Judeo-Christian mentality, is also one of the phenomenons dangerous for the health education. To confirm this argument it is enough to say that Polish therapist are adamant supporters of teetotal methods of treating addictions, being skeptical or even hostile towards substitute therapies. They also indulge in promoting teetotal methods of contraception called Natural Family Planning, severely criticizing other contraceptive methods and sexual hygiene including using condoms. The conviction of harmfulness of the pleasant experience and the necessity to sacrifice to a large extent lead to negative reality perspective, in which life is full of evil and by its nature harmful, according to

²³ M. Sygit, *Wychowanie zdrowotne*, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 1997.

²⁴ B. Woynarowska, *Edukacja zdrowotna*, op. cit p. 74.

another cynical adage, that “life is a painful, fatal and sexually transmitted disease”. The feeling of hopelessness and inconvenience in pursuing health is expressed by decrease of motivation to change unhealthy habits and activating numerous protective motives, among which the most common is the unrealistic optimism and deriving pleasure for unhealthy habits compulsively²⁵.

The elementarism in Polish schools is also expressed by obsessive avoidance of problematic areas, indicated by WHO as the major determinants of health. The reduction particularly refers to problems tightly related to ideological, moral and religious aspects. Educational elementarism is strongly expressed by emphasizing the disease risk factors directly related to dispositions, behaviour and responsibility of an individual (smoking cigarettes, inappropriate eating habits, lack of physical activity, alcohol and drug abuse, etc). Pathophysiological disease risk factors (hypertension, high cholesterol level, adrenaline release) as alleged result of personal negligence are equally strongly emphasized, whereas only a small part of elementary health education is played in the problematic areas by issues related to social, environmental and psycho-social factors. Such crucial health determinants as poverty, low social status of groups and individuals, any kinds of discrimination (ethnic, religious, racial, gender or age-related) are clearly neglected in the problematic fields. These problems are found ideological and not disease-related by teachers. Social stratification is underestimated regarding health issues neglecting income variability, social status, access to the resources, social isolation, lack of support and weak social bonds. The risk of high level of self-blaming and the lack of sense of importance is identified as modesty and perceived as desirable attitude. With the issue of health on the elementary level there are essential determinants of it marginalized, such as exercising rights and civic freedoms, housing conditions, communication, employment, possibilities of saving up even such basic issue as sense of security²⁶.

Sources of this problem must be noticed in the type of cultural circumstances of Polish society, individualistically oriented, searching the answer to key good and evil-related questions in the depth of a human being (perceived as a free subject of certain genetic, intellectual or spiritual dispositions). For many Poles disposition thinking is a typical thinking pattern combining elements of individualism, authoritarianism and low level of social trust. This problem in Polish society is expressed by many analysts of social circumstances, such as J. Czapiński, and J. Gęśicki paying attention to the problem of mistrust culture. In their opinion the mistrust, merging and negatively structuring the fluid reality of 21st century Poland is deeply rooted culturally and mentally. Gęśicki indicates that the source of mistrust lies in the type of Polish traditionalism favouring homogeneity, density and identity dissociation of a catholic Pole, combined with homo-sovieticus mentality imposed at the time of communistic Poland²⁷. In the mistrust view, disposition explanations are particularly popular. This is the argumentation behind majority of problematic phenomenons such as violence, population fluctuation, issues of gender difference and last but not least, the disease problem. Disposition thinking is

²⁵ P. G. Zimbardo, M. R. Leippe, *Psychologia zmiany postaw i wpływu społecznego*, przeł. P. Kwiatkowski, Poznań 2004, p. 420-421.

²⁶ J. B. Karski, op. cit. p. 39-42.

²⁷ J. Czapiński, T. Panek, *Diagnoza społeczna 2007, warunki i jakość życia Polaków*, Rada Monitoringu Społecznego, raport 11.11. 2007, <http://www.diagnozaspoleczna.pl>; J. Gęśicki, *Dlaczego uczniowie są wredni*, „Psychologia w szkole” nr 1, 2008.

also typical for biomedical model of health predominant in Polish health propaedeutics, health education and medicine. The disease has always its causes, and must always be a result of mistakes, negligence and nonfeasance. This “obviousness” directs traditional health education towards authoritarianism, didacticism and restricted instrumentalism.

A separate ideological problem strongly determining discourse on health is the sexual health controversy causing a lot of confusion. The sexual health is defined by WHO as integral part of reproductive health, constituting healthy sexual growth, equal and responsible partnership relations, sexual satisfaction, the lack of disease, insufficiency, sexual impotence, violence and other harming sexual practices. Sexual health should be of high importance as its a crucial dimension of shaping the general health potential. It integrates biologic, emotional, intellectual and social aspects of life, paramount for the positive personality, communication and love development. The complexity of problems is expressed in Sexual Rights Deceleration passed by WHO. In the document, among other things, the are promoted ideas such the right to sexual freedom, independence of decisions and behaviours in the intimate sphere, the right to sexual satisfaction and free sexual contacts, as well as the right to in-depth sexual education from the early years, through the entire life, engaging all social institutions²⁸. Still, in Polish schools sexual education is predominantly inspired by catholic church doctrine, where the theme in this regard is the call for life in chastity. ...*Chastity requires self-control that is the pedagogy of human's freedom. The alternative is clear: one controls his/her passion and pursue calm, or lets it control over him/her making him/her unhappy*²⁹. In the social discourse on health and sexual education clerical circles demand limiting sexual education to the aspect of family education. At the same time, it is characteristic for Polish health education to broaden three health dimensions (physical, mental and social) with one more: spiritual health understood as recognizing transcendent factors, belief in something more beyond human mind, recognizing and implementing rule and religious beliefs in life, perceiving openness to spiritual experience in such way³⁰.

Health education being accomplished in the moral stream of didacticism is stigmatized by behaviorally typical perception of possibility to freely form human identity by the means of imposing the desirable behaviour pattern using restrictions and reinforcement mixed with disposition idea. Both approaches express reductionism and moral didacticism bringing health education process to insistent eradication of the so called anti-health behaviours. Hence, most of the transmission is negative or directive, referring to fear and belief that rational justification of profound fear of disability, disease and death is the best tool shaping adult's identity. Invoking fear is a commonly used way of transmitting information on health. However, conviction of its efficiency is equally disputable as behavioral belief in the results of negative reinforcement in education. Promotion of certain behaviour using fear must take into account more than this sole element, not to mention existential fear of death. The ingredients of effective deterrence were summarized in the idea of protective motivation by R. Rogers. People become mo-

²⁸ Dokument Międzynarodowej Konferencji ONZ na rzecz Ludności i Rozwoju, Kair 1994, § 7.36, [as in:] L. Starowicz, A. Długolecka, *Edukacja seksualna*. Warszawa 2006, p. 265, 135.

²⁹ Quotation: Katechizm Kościoła Katolickiego, Poznań 1994, § 2339.

³⁰ A.Nelicki, *Metakliniczna koncepcja osoby V. E. Frankla*, [in:] Gałdowa A. [red.] *Klasyczne i współczesne koncepcje osobowości*, t.1, Kraków 1999, s. 177-194; B. Woynarowska, *Edukacja zdrowotna*, op. cit. p. 31; Szkoła Promująca Zdrowie – koncepcja i strategia, 24/11/2007 - 12:42, <http://www.cmppp.edu.pl>

tivated to quit the harmful behaviour (for instance smoking) when they are profoundly convinced that:

- certain factor (cigarette smoke) is really harmful to them;
- as the information addressee they are personally prone to a harmful factor;
- there are actions eliminating harmful factor accessible to them;
- they are capable of internal involvement in the process of changing their own behaviour pattern (the will, self-discipline, persistence).

The research conducted in cognitive stream of health psychology prove that the effectiveness of transmission increases particularly in the case of referring to the sense of internal steerability and control over own life³¹. At the same time the sense of internal steerability and control constitute one of the many pillars of contemporary understood mental health. However, internal steerability is developmentally determined and possible to accomplish by an individual of properly developed identity and personality. Assuming that personality development proceeds naturally and spontaneously until the age of 20 and that an individual during this process is permanently exposed to educational influence, the sense of internal steerability must include a number of features shaped and acquired during the process of education. Among those are the style of processing information, self-awareness, self-confidence, empathy, cognitive interest, aims and style of operating goals. These features are not subject to the invariability law and, in contrary to conventional and behavioural features internalized in pre-conventional phases (honesty, integrity, composure), are dynamic, coexisting with the systems of transforming the stable features³². Internal steerability requires the ability of thinking at a higher level of information processing and operating abstraction (secondary) cognitive style³³. It also requires the ability to conceptualize the fragmented, heterogeneous and changeable reality. Creating self steerability does not proceed in conditional way and it demands operating ambiguous, abstraction language – a hierarchic code of cognitive orientation. Hence, it's a form of constrained mind work possible to develop in the early adulthood. Operating the hierarchic code enables referring any given term to a number of others – similar or contradictory terms of narrower or broadened range. Operating the hierarchic code allows creation of complex constructs i.e. reality models, therefore is an absolute condition of carrying out the tasks of health education. This condition is equal to the need for extending the project School for Health to further educational stages, including graduate and postgraduate ones³⁴.

Tu sum up, health education must take into account all disease and health-related issues, adequately to the development stage and education level of a subject, in accordance with cognitive orientation hierarchy of codes and the abstraction level of thinking. Health education shall not oscillate between common patterns and problems such smoking, eating habits and physical activity, permanently emphasizing them and

³¹ P. G. Zimbardo, M. R. Leippe, op. cit. p. 423 – 425.

³² J. C. Cavanaugh, *Starzenie się*. [w:] P. E. Bryant, A. M. Colman [red.] *Psychologia rozwojowa*. Poznań 1997, s. 124, 125. S. E. Hampson, *Kształtowanie się osobowości*. [w:] S. E. Hampson, . M. Colman [red.] *Psychologia różnic indywidualnych*. Poznań 2000, p. 38.

³³ J. Preston, *Zintegrowana terapia krótkoterminowa*. Gdańsk 2005, p. 88.

³⁴ K. Obuchowski *Człowiek intencjonalny, czyli o tym, jak być sobą*. Poznań 2000, p. 42, 68.

recommending the role of health education reduced to a meeting in the squirrel clubs (once popular in communistic Poland school clubs of Polish Red Cross introducing elementary personal hygienic standards among elementary school pupils). Simultaneously, education for health demands changes in the vision of school itself, that shall direct towards shaping abilities of thinking instead of learning definitions, statements, facts and norms by heart.

The core of the problem can be noticed at the very base of it, especially in unpopularity of some key terms of health theory and unwillingness to increase the level of abstraction and make the problematic area complex. The most convenient way to perceive health is the low level of abstraction contradicting disease, which is the condition of not falling ill. It becomes a convergence problem – it consists of one correct solution, which shall simply be transformed into recommendation such “eat yoghurt to be healthy”. More complicated are those positive definitions that approximate the idea of health to happy, fulfilled life, as the utilitarians say: maximum happiness for maximum number of people, in other words health for everyone. Such perspective is of divergence nature – it’s specific for various more or less probable solutions. It’s even harder to influence the consciousness with the typically divergence idea of salutogenetic health – happiness which fixed factor is the permanent growth and sense of coherence. The idea perceiving health narratively as health situation expressing life history calls for dynamic process of salutogenesis, creating the health potential of a human and generalized resistance resources³⁵. The multidimensional health potential consists of three essential aspects broadening the system of meanings included in commonly known division of health into three spheres soma-psyche-ethos:

- the life story, balance of experience: achievements, effort, success and drawbacks in the life continuity perspective,
- human capital – stored knowledge, skills and personal resources including resistance, strength, competences and material resources,
- social capital – the system of social bonds, integrity level, possibility of support from civic society.

The uniqueness of the new perspective is putting the emphasis not on the independence and individual responsibility for own health, but reaching higher level of responsibility equal to interdependence. The core problem of the education for health is to create postindividualistic, or as expressed by K. Obuchowski neo-individualistic, responsibility in the way of private sense of responsibility of each individual for the entire world and health of the entire society, regardless the range of influence the reality accessible to the neo-individualist³⁶. Postindividual health potential allows resigning from own rights and goods for the sake of bigger number of people with no sense of individual sacrifice. The clue of social potential is the trust as the link for the society functioning and determinant of existence of the factual authority of those accomplish-

³⁵ A. Antonovsky, *Rozwikłanie tajemnicy zdrowia. Jak radzić sobie ze stresem i nie zachorować*, tłum. H. Grzegółowska-Klarkowska, Warszawa 2005, s. 11, 19-20, 24-25, 33-34. D. Białas, *Strategia narracyjna ...* op. cit. p. 87-89.

³⁶ K. Obuchowski *Galaktyka potrzeb. Psychologia dążeń ludzkich*. Poznań 2000, p. 100-101.

hing educational mission. The mentor authority indeed expresses the confidence we place in the one permanently tested.

The terms health capital and social capital refer explicitly to the phenomenon of networking, based on mutual bonds between people, their good will, trust, liking and assistance. The key element supporting salutogenesis and individual resources recovery are the mechanisms of social support, contributing to establishing of open, democratic civic community³⁷. Still, Polish educational system is soaked with individualistic thought, expressing individual responsibility for illness that one experiences due to own negligence, failure, bad luck or the god's will.

The chance to transform the Polish health education is an intense development of the movement including schools into European Network of Health Promoting Schools. The most distinctive features of a school carrying out the schedule of internal school health education are the assumptions that:

- health education is an important element of school curriculum,
- regarding health, the school cooperates with parents and local community,
- the health ethos (the ulterior school programme) is being developed in school³⁸.

The characteristic feature, distinguishing the scheme of health promoting school (recently more frequently referred to as School for Health in Europe) is carrying out the health education programme in ulterior manner, spreading to entire school environment and the settlement that school is an integral part of. The ulterior programme must be differentiated from intentional learning programmes aiming at goals on the basis of a certain material, planned and evaluated didactic process and final programme evaluation. The ulterior programme is closely linked to more or less changeable circumstances of settlement, where is school community and material surrounding rooted. This programme is placed in the conditions of accomplishing the education process, in formally not expressed convictions of school staff, their thinking style, youth, teachers and other staff morals, as well as in the atmosphere resulting from the number of pupils in the class, curriculum overload, lack of equipment, hurry, or the way pupils or other persons are checked by the school entrance. This is the feature distinguishing ulterior programme from the intentional education one, oriented at effects of education resulting from curriculum content³⁹. The knowledge included in the ulterior programme is originally unpredictable, fluid, subjective, often contradictory to the internal school programmes of experts, and due to these reasons is considered as the element interfering accomplishing the educational process. Relying on the ulterior program by a school promoting health appears as a phenomenon regarding Polish educational experience, as in its functioning it attempts to use the ulterior program in order to promote health lifestyle of the entire community.

The Health Promoting School is an idea that may not be reached as a perfect state. However, it can be implemented undertaking long-term actions. Due to this fact, the

³⁷ W. Łukaszewski, *Umysł smutny i zmęczony*, [w:] *Psychologia umysłu*, Z. Piskorz, T. Zaleśkiewicz [red.] Gdańsk 2003, s. 152-155; R. D Putnam. *Samotna gra w kręgle. Upadek i odrodzenie wspólnot lokalnych w Stanach Zjednoczonych*, tłum. P. Sadura, S. Szymański, Warszawa 2008, p. 34.

³⁸ B. Woynarowska [red.] *Jak tworzymy...* op. cit. p. 22.

³⁹ K. Kruszewski, *Sztuka nauczania*, Warszawa 1998, p. 100-103.

project coordinators recommend the “small steps” method, where the school determines the goals considering the needs, conditions and possibilities of accomplishing it in a realistic pace. The expert’s and environmental task is to support the initiatives undertaken by the school community, not imposing tasks and controlling its completion. The key issue is also paying attention to the positive aspect of health-happiness, not only emphasizing health threats and combating illnesses⁴⁰.

Referring to the ideology of Health Promoting School principles, many experts call for conducting the health education process as a key link in the education as such, being a formal and ulterior process, accomplishing in both prevention and intervention dimensions⁴¹. Such proposal is a serious risk for new and examined idea. There is a risk that the model perspective of health promoting school, regardless stable increase of schools included in the network, will become saturated with traditional pattern of internal school education. The quantity combined with attempts to make use of “tested patterns” may disturb the quality. This threat is particularly intensified by the fact, that the health promoting school project is aimed at those aged between 4 and 18. In theory the programme of such school engages the educational process of those in nursery, primary, secondary and comprehensive schools. The actual, not formal, level of involvement in accomplishing this goal raises doubts. The real engagement due to elementary character of information within the early school learning still refers to primary schools only. It requires solving the issues of more and more complex health determinants of higher educational levels and combining those with the practice of internal school life. In secondary health promoting schools, the example of problematic areas essential to be solved not only tackled, are the issues of violence, communication, sexuality, addictions – it all in a wide scope of social health. An utter mistake would be to repeat the elementary content in comprehensive and vocational schools that is of different character therefore requires different goals, methods and assumptions connected with adult’s health. The function of institution supporting school promoting health, alternatively training the health educationist-to-be, is in this project assigned to higher education. It shall be considered as mistake to exclude higher education from active participation in the system. The necessity to modernize the Health Promoting School project is also connected with the results of evaluation of their actions and conclusions tending to reorganize the European Network of Health Promoting Schools into the network of Schools for Health in Europe. From 1st of January 2008 the project of health promoting school is being carried out within the Schools for Health in Europe⁴². The argumentation behind it lies in the crucial change of the idea about the role played by school in the framework of Health for Everyone in 21st Century project. The school mission is to include the integrating link into actions based on numerous projects accomplishing European health strategy. The evolution of health model towards School for Health in Europe requires further conceptualization of the project. The key rule of new conceptualization shall be the transformation from perceiving school as isolate institution dominated by formal and ulterior programme supported by the institutions around schools as the settlement into

⁴⁰ B. Woynarowska [red.] *Jak tworzymy ...* op. cit. p. 22-23, 27, 30-33

⁴¹ L. Barić, H. Osińska, op. cit. p. 115.

⁴² *Dlaczego Szkoły dla Zdrowia w Europie*, Biuletyn „Szkoły dla Zdrowia w Europie” nr 1, czerwiec 2007 r. <http://www.cmppp.edu.pl/node/28602>

idea of school perceived as constant educational process with all permanently engaged individuals participating in establishing civic society of knowledge. This project implies more intense integrity of the network programmes of “SHE” with a local project Healthy City, as well as with widely perceived economic and ecological projects (balanced development) and projects that must be established and implemented. Among such there is urgent call for project Healthy Village. The project of widely understood School For Health at the top level shall be coordinated with the projects of building up a knowledge society based on the European Higher Education Area that promotes free flow of scientific achievements serving the optimal transmission and knowledge transformation, as well as the health determinants by WHO such as education, exercising rights and civic freedoms, interpersonal communication and employment⁴³.

If there shall no attempts be made in order to broaden problematic spheres and the range of the project of school for health in the ulterior program formula won't extend to all educational levels (including the University of the Third Age), there is a serious risk that the Polish health education model will stick to traditional, ineffective idea of health using restrictive, directive and moral methods (restricted to elementary level of health knowledge). Such knowledge will still be grounded in fatalistic vision of a human condition living in archaic social, economic and ecologic circumstances. The disadvantages of such forecast have been elaborated in details above.

ŠKOLA JAKO INTEGRAČNÍ ČLÁNEK PRO ZDRAVÍ PODPORUJÍCÍ PROSTŘEDÍ. ZE ZDRAVÉ ŠKOLY NA ŠKOLY PRO ZDRAVÍ V EVROPĚ

Abstrakt: V postmoderní rozpravě o zdraví je dominantní důležitost přiřazována na podpoře vzdělání a zdraví. Významnost vzdělání je zdůrazňována nejenom projektem WHO “Zdraví pro všechny v 21 století”, ale také ve Světové deklaraci zdraví. Klíčovou problematikou jsou formy a obsahy školního zdravotního vzdělávání. Osvojované body, které všechny utvářejí schopnosti občanského zapojení v sociálních, ekonomických a politických závazcích, a připravují ty, kteří jsou vzděláváni, aby sami participovali na zodpovědnosti za zdraví a vyjadřovali podstatu problémů, které trápí post-industriální společnosti. Základní element pracovní dimenze v procesu vzdělávání je uvědomění si zdraví ze strany jednotlivce zacílené na změnu skutečností v souladu s pro-zdravotními normami WHO. Úkolem vzdělávání je rozvíjet zdravotní povědomí občanů a vytváření se zdravím spojených znalostí jednotlivců v sociální a ekologické dimenzi. Historie vzdělávacích programů spojených se zdravím a s nemocemi má revoluční charakter. Transformace modelu zdravotní propagace ve školách se posouvá od základního modelu zdravotní propagace, přes projekt Školy propagující zdraví až k modelu Školy pro zdraví v Evropě. Transformace ve vzdělávacích modelech se shoduje se změnami v přístupu ke zdravotnímu modelu, a to z dimenzionální nebo environmentální perspektivy na systém perspektivy pozitivního zdraví. Nové perspektivy zdraví a zdravotního vzdělávání berou v úvahu psychosomatické, ekologické, kulturní a technologické as-

⁴³ Bologna process, http://www.nauka.gov.pl/mn/index.jsp?place=Menu06&news_cat_id=953&layout+2

pekty, včetně omezení vyplývající z lidského genetického přizpůsobování měnícím se podmínkám.

Klíčová slova: zdraví, Školy propagující zdraví, Školy pro zdraví v Evropě, vzdělávání, zdravotní vzdělávání, propagace zdraví

VALUE OF HEALTH IN MOTIVATIONAL SPHERE OF CHILDREN

Halina ANDREYKO

Abstract: *A culture of health is an inalienable constituent of general culture of personality, providing the certain level of knowledge, abilities and skills of maintenance and strengthening of health. It is characterized forming for the children of motivation on the conduct of healthy way of life and valued attitude toward an own health and health of circumferential. The important task of adults is education of healthy child in the period of the active somatic forming and psychical development. It consists in activating for the children of desire to the maintenance and strengthening of health, to high morality. We are treating the results of testing of pupils from 4-6 forms of school of health, which is situated in the Kharkov region. It was found out that a health occupies in the motivational sphere of children. The analysis of concepts, being in one group with a health, demonstrated intercommunication of emotional constituent, relationships with parents and at school with motivation of child to the health. Further recommendations are discussed.*

Keywords: *health, motivational sphere, necessity, education, harmonic development, emotional constituent*

During centuries-old history of mankind at all socioeconomic structures is of a problems of health took the important place in society's life. They have been closely connected with development of a social production and formation of social being.

Culture of child's health is the integral component of the general culture of the person, which provides the certain level of knowledge, skills of preservation and strengthening of health. It is characterized by formation of value of a healthy way of life and the valuable attitude to own health and health of associates [1].

Health can be presented as a degree of the intrasystem order, i.e. a degree of a harmony of system. It defines health state of the person and his opportunity to carry out biological, social and creative functions. Laws of harmonization are realized only in positive information space.

Harmony gives persons psychological adequacy in perception of itself, disharmony - is on the contrary. In mental health a significant role is played steady « I am the concept », i.e. a positive adequate long-term self-estimation. It is very important for adaptation of the person, especially the child, in society. Health means self-realization of the person in a life.

Harmony is created by the nature, broken by mind of the person as mind generates the negative information. Negative ideas and emotions lead to infringement of harmony. Experiences lead to fear for the physical existence, uselessness in a life, outing of creative opportunities. Ignoring their factors occurs is more often for children. Long imposing of stress on normal character leads in due course to development of a neurotic condition or chronic stress. Therefore studying effective ways of diagnostics and decrease in intensity of negative emotional conditions is actual at present times. As there is a neutralization of their negative influence on vegetative nervous system that is effective means for normalization of a functional condition, improvement of the general state of health and a level of positive emotions at children.

All-round and harmonious development of the child is not only ideal of each parent, but also societies as a whole. All parents aspire their children to grow healthy and happy.

Love and harmony generate at the child feeling of security in a life. Hence, development and perfection of culture of family and school is one of the basic directions of formation of culture of health and its strengthening at children of any age. The important problem of adults is education of the healthy high-grade child during active somatic formation and mental development. Leading aspect of this education is activation of positive emotional conditions at children, their desires to preservation and strengthening of health, to high morals and value of a life.

Object and methods of research

Testing was made by means of L.I.Solomina's modified test for revealing of motivation of the person created on the basis of a technique by A. M. Atkinda TCA (the test of color attitudes) [2]. L.I.Solomina's test is based on the assumption, that the designation of different concepts of emotional-motivational sphere by one color is an indirect parameter of similarity of the emotional attitude to the given concepts. At carrying out of testing the standard set of colors with which they work at school has been used habitual for children. To provide maximal freedom of a choice, the colors were various. For reception groups of similar concepts the quantity of colors was six times less quantities of estimated concepts. The list of concepts is made so that at it there were the categories reflecting different kinds of activity, need, value, emotional experiences of different people, including children. Examples of concepts: « My father “,” the study “,” interesting employment » whom I wish to be » what I am actually “,” threat “,” my future “,” my teacher “,” creativity “,” irritation “,” trouble », etc.

The certificate on appeal of any concept, on the positive attitude to it, is assignment to it of favorite's colors by the child. On the contrary, to the concepts designated by unpleasant colors, children also concern, most likely, negatively. The designation of several concepts with one color specifies approximately identical attitude to them. So in these concepts for children there is something the general, and they not casually get in one group.

The purpose of research is finding-out children's attitude to concepts of «health» and «illness», the analysis of the categories getting in one group with them. It is important for improvement of understanding the maintenance of motives and needs of

children, a degree of their satisfaction, possible ways of adaptation, sources of stress and negative experiences.

The General characteristic of sample: 44 pupils of 4-6 forms assistance school of health №3 city of Ljubotin of the Kharkov region have taken part in research. Among them - 20 girls and 24 boys. Middle age of children from 10 till 12 years.

Results and their discussion

At inspection of children, as a rule, the basic attention addresses on studying of a condition of a different level of functional and adaptable opportunities of an organism, and also personal and typological features, uneasiness and cognitive sphere of children [3, 4].

In offered work, we have lead the analysis of motivation to health at children as in it is carried out synthesis of reactance and activity of the person presented by specific features-original of self-control of behaviour.

In opinion of Yeliseyev [5] penetration into essence of motivation leads to a conclusion that in a reality there is a whole structure of ways, motives and the operations of activity incorporated by coordination essence of leading strategy of human life.

It is considered that the purposes of human behaviour connected with satisfaction of basic needs, are defined by aspiration to maximize encouragement and to minimize punishment [6].

Submitting data carried out research; we have isolated categories, which school-boys placed in one group with concepts "health" and "illness". We assume that they have not casually appeared beside, as they render mutual influence against each other, forming the importance and need of various spheres of ability to live of children.

All set of the concepts, offered to children, we have formed into ten groups:

1. Purposefulness: success, leadership, freedom, work, knowledge.
2. Representations about itself: I actually, I wish to be, the present, the future, health, illness.
3. Attitudes of the home (home mutual relations): mum, the daddy, the brother/sister, my house, house duties.
4. Attitudes at school (school mutual relations): school, school duties, the class teacher, teachers, study, reading, and classmates.
5. The attitude with associates: the friend, friends, adult.
6. Hobbies: game, the creativity, interesting employment, dialogue, the nature.
7. Positive emotions: pleasure, love, security.
8. Negative emotions: bad mood, irritation, conflicts, troubles, failure, fear, threat.
9. Material benefits (values): money, things, the TV, a mobile phone, advertising, a computer.
10. Bad habits.

By consideration of results of testing, the rating of "health" and "illness" in motivational sphere of all group of research, and also separately at boys and girls (tab. 1) came to light.

Table 1. the Attitude to concepts “health” and “illness” in motivational sphere of children (n = 44)

№		Health			Illness		
		girls (n =20)	boys (n = 24)	an average	girls (n = 20)	boys (n = 24)	an average
1	Rating	3,2	2,9	3,05	6,2	5,6	5,9
2	predomin. color	yellow	red	yellow	black	brown, black	black

Analyzing obtained data, it is possible to tell, that from eight positions the rating of motivation to health settles down on the third place. Thus, it is not so high of children, though boys have some above, than at girls. Probably, it is connected with their greater attachment to parents and the home, less social adaptation. It is necessary to note, that 13,6 percent of schoolboys (5 girls and 1 boy) have arranged in one group both analyzed concepts. It specifies for an opportunity of fast displacement of balance depending of influence of external circumstances and 9 percent of schoolboys have put aspiration to health below, than motivation to illness. Among concepts of one group with them «threat», «troubles», « attitudes at school » also are named.

At a choice of color, yellow prevails at girls and in all group interrogated. Prevalence of yellow color speaks about pleasure; hope for happiness fortunately, aspiration to new, yet not generated, directed to the future. Boys more often associated health with the red color designating expression of vital force and activity, aspiration to success and the vital blessings. Any of investigated has not designated this category with brown color. Prevalence of black color for a designation of concept «illness» speaks about a condition of internal alarm and replacement of the exciting influence, frightening shortage and deprivation something very significant in life. There is no association of «illness» with yellow and dark blue color.

In table 2 frequency of a mention of significant concepts which meet in one group with categories «health» and «illness» is resulted. Apparently from the resulted table representation about health at children has the general with the categories including concepts « attitudes at school », «hobbies», « representations about itself », «purposefulness» and « attitudes at home ». Thus the role of positive and negative emotions in formation of motivation to «health» is practically identical. However, for boys positive emotions and conditions are more vitally significant, than for girls.

Table 2. Frequency of a joint mention of categories with concepts «health» and «illness».

№		Boys		Girls		Total	
		health	illness	health	illness	health	illness
1	Purposefulness	23	5	16	6	39	11
2	Representations about itself	28	5	16	2	44	7
3	Attitudes in the home	21	8	15	5	36	13
4	Attitudes at school	28	16	19	8	47	24
5	Attitudes with Associates	12	2	12	1	24	3
6	Positive emotions	16	3	7	-	23	3
7	Negative emotions	12	50	9	39	21	89
8	Material benefits	19	16	16	12	35	28
9	Bad habits	-	4	2	3	2	7
10	Hobbies	21	3	24	-	45	3

It is necessary to note, that about half of children (45,5 percent) connect motivation to health with parents, and 47 percent – are direct with influence of teachers and the class teacher. It in an equal measure concerns both girls, and boys. Thus, high value of health is connected with mutual relations of children with significant adults. Any infringements of these attitudes can shift the given balance aside «illnesses» as negative emotions are interfaced to physical changes in an organism. The inability to operate negative emotional conditions conducts to occurrence in children of unpleasant painful sensations. They sharply experience unpleasant situations in the company of contemporaries and of home, feeling of «derelict» (superfluous). Moreover, frequent conflicts at school, especially with teachers, can lead idle, to bad habits, emotional instability and non social to behaviour. For opportunity of development of such situation specify results of 20 percent interrogated, placed in one group with concept «illness», significant adults and negative emotional conditions.

For harmonious passage of a stage of socialization of children, it is necessary to coordinate prominent features of their development (emotional instability, a unbalance) with influence of environment conditions. In process of development of the surrounding validity, the system of personal attitudes is gradually formed at schoolboys. Its basis is made with direct emotional attitudes with parents, coevals and teachers. They prevail above all other factors and circumstances.

Thus, from the approach of adults to education, especially parents and teachers, depends the future of the child. If the adult takes of a position of the quiet, understanding instructor, the child without fear and humiliations addresses to him for help. Thus, children are able to learn much, more adequately to generate own picture of the world, independently make the choice in various vital situations. Such behaviour will promote their development and self-realization in the life.

Knowing the stated problems, for correctional influence it is important to involve both poles – both children's, and the adult. Discussion of problems of health with children needs to do only with their consent. Thus, it is necessary to keep trust with each other, to form active mutual aid in collective. Only in this case the child will grow harmonious and healthy, physically strong and hardy. He will easily overcome any vital obstacles. Because only spiritually and physically healthy person can understand the world, feel pleasure of life and pleasure of creation of himself and the Universe.

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HODNOTA ZDRAVÍ V MOTIVAČNÍ SFÉŘE DĚTÍ

Abstrakt: Kultura zdraví je neoddělitelnou složkou kultury osobnosti obecně, která zajišťuje určitou úroveň vědomostí, znalostí, dovedností a schopností udržovat a posilovat zdraví. Vyznačuje se tím, že představuje pro děti motivaci směrem ke zdravému způsobu života a je to cenný přístup k vlastnímu zdraví i ke zdraví okolí a prostředí. Důležitým úkolem dospělých je vychovávat zdravé dítě v období aktivního somatického formování a psychického vývoje. Spočívá v aktivování touhy dětí udržovat a posilovat své zdraví a k důsledné disciplíně v tomto ohledu. Předkládáme výsledky zkoumání žáků ze 4 - 6 forem škol zdraví se sídlem v charkovské oblasti. Bylo zjištěno, že je zdraví zakotveno v motivační sféře dětí. Analýza koncepcí prokázala vzájemnou komunikaci emocionální složky, vzájemné vztahy s rodiči a ve škole motivaci dítěte ke zdraví. Jsou rozebírána další doporučení.

Klíčová slova: zdraví, motivační sféra, nezbytnost/nutnost, vzdělání/výchova, harmonický rozvoj, emocionální složka

LIFE SKILLS AS THE INDIVIDUAL AND SOCIAL HEALTH RESOURCES

Anna SLADEK

Abstract: *The approach oriented at developing life skills as one of the health education strategies is rooted in the wider context of social and cultural transformations influencing changes in the scope of human self-understanding and one's role and functioning in the world. In the sphere regarding health and health education these transformations lead to paying more attention to individual responsibility for own health. The wider dimension of social and cultural changes on the other hand shows the subjectivity of an individual as a key to economic, social or cultural society growth. Personal resources in this context become not only individual but also a social growth factor. In this sense, the health resources and particularly life skills are the foundation for actions aiming at taking individual responsibility for own health and in the further perspective – responsibility for local community health and a society in general. The goal of this paper is to emphasize some of the determinants and consequences of such understanding of health and health education.*

Keywords: *health models, health education, life skills and competences, individual and society health resources*

1. Variability of understanding health. From social to individual responsibility for health

In the literature referring to this issue there are many definitions of health as it is one of the major spheres of human's life, what in consequence makes this issue a crucial field of interest not only on the medical or social ground, but in the context of individual, ordinary everyday life too. A number of definitions may be analyzed in continuum that presents the directions of change in understanding the term: from positive to negative ones. Generally, the negative definitions related the health condition to the lack of illness. The ground for positive term of health is the WHO definition from 1946. It perceives it as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (Woynarowska, 2008, p. 19). Although the definition is criticized for vagueness, it changed the way we tend to think about health and illness. Health as positive category is associated with terms such as quality of life, potential or resources. Many authors emphasize that the positive understanding of

health is based on combining the subjective and objective criteria (Woynarowska, 2008, p. 24). C. Herzlich described three types of informal understanding of health: superficial (occasional focus on health, mainly while falling ill), in the reserves categories (health as resources, capital) and the balance (as subjective standard of experiencing pleasure we strive after) (Juczyński, Ogińska-Bulik 2003, p. 10). From these three perspectives, the first one refers to negative meaning and the rest are positive.

In the health science, apart from the attempts to define health, there are broadened characteristics, so called health models. Their description should be analyzed in a broadened context of social and cultural changes that have been reflected in variability of philosophical ideas and ways of understanding human and his functioning in the world. These changes may be observed in the humanistic and social science dominated by the multidimensional perspective as physio-psycho-spiritual existence. Moreover, it is also noticeable in drawing attention to the world of individual experience and the sings of subjective reality inspection and intersubjective communication processes. The individual perspective, subjective and not collective, dominates not only in science, but it is also observed in mass media and day-to-day life. All the changes of the ways of thinking might be expressed by mutual definition of processing from the modern to postmodern reality project (Bauman, 2006).

The change of paradigms in social and humanistic science lead to crucial consequences in the patterns of perceiving health. The traditional perspective represents biomedical model of health (also called pathogenic) that came into existence due to dualistic and mechanistic Cartesian philosophy. In this case health is understood objectively, described by the medical criteria as the state of no disturbance in biological functions of the organism (Woynarowska 2008, Sheridan, Radamacher 1998). This model concentrated on the illness as the main issue and on the ways of coping with it, including determining the symptoms and eliminating them¹. In other words, it came down to treatment or preventing the disease by creating proper external and internal conditions accompanying the “lack” of illness. The medical staff and appropriate institutions were responsible for such understanding of health. However, the individual responsibility was restricted only to respecting the external determined recommendations and standards. In biomedical model the individual responsibility for own health was of indirect and passive character and based on the obligation to “listen to” specialists.

In the second half of 20th century, the holistic model of health relating to systemic perspective was promoted. Health in such case is understood multidimensional, multifaceted and procesual. It may be analyzed in two dimensions. The first is broaden dimension when the body is perceived as living system and health understood in such way includes many subsystems and dimensions. This dimension emphasize a human being as integral part of social and cultural system and the health is both an individual and the environmental issue. Such perspective is called the social-ecological model of health. There are many interpretations of this perspective, the best known is the „health mandalas” (Kowalski, Gawel 2007; Woynarowska 2008). The salutogenetic model, describing

¹ Currently the domination of holistic model is recognized, hence biomedical model is referred to as the past one. However, it must be remember that there is a possibility of coexistence of all health models or making a subjective choice from them. It is a consequence of postmodern reality project, as pluralism and relativism constitute such reality.

the factors and mechanisms of reaching health is also worth mentioning. Here, health and illness are shown in continuum, where a human proceeds during life. According to Antonovsky the crucial question is what makes people retain health despite pathogens and why some recover and some do not. In this model emphasis is put on health, not the sickness and the risk factors as in the pathogenic model (Antonovsky 2005).

The alteration of thinking about health shifted the emphasis, as it is clearly seen in the holistic or salutogenetic model. Both models indicate health and its retaining as the heart of the issue. However, there are some differences between them. The holistic model puts pressure on multidimensional understanding of health. Hence, the question of retaining health comes down to caring of its different spheres, both assigned to a human himself and those beyond him. In this perspective health promotion and health education consist in supporting the individual in the effort of taking care of own health, and on the other side it is about creating the appropriate external, environmental conditions and directing the action to the entire societies in order to boost their health potential. That is the reason for importance of multidimensional understanding of health, where social and environmental factors (including health care) are as crucial as subjective factors and the lifestyle. In this model the responsibility for health is shared between the individual, society and specialists. Such perspective is also important due to the fact that it emphasizes not only the individual health, but the society and environmental health too.

The salutogenetic model on the other hand indicates the state of sustaining health despite harmful factors or recovering despite the illness. A. Antonovsky showed the difference between the ways of coping with the risk factors and difficult situations (including sickness) and retaining health despite influence of these factors. The problem of retaining health lies in creating subjective health determinants. It's therefore justified to assume that health promotion and health education come down to strengthening or creating subjective ways of coping (including various life skills) regardless being directed to individuals, groups or societies. On the other hand, the actions focusing on creating the appropriate external conditions may also in consequence concentrate on indirect shaping the individual strategies of coping. For instance, developing the social-cultural potential of societies may be the growth factor of social support for individuals, becoming also the compensatory actions as coping strategies. In the case of salutogenetic model, the responsibility for health is individual, as the human can develop his health potential himself.

It is clearly seen that the shift in understanding health are far beyond its scientific perspectives and might lead to domination of positive descriptions, concentrating on remaining and developing the health potential, but also making the individual responsible. Hence, each of us is responsible for our own health in such perspective.

2. Practical skills as the basic resources of individual health

The theory of human potential developed since 1960's and then the theory of social potential both emphasize the human factor as the crucial resource in economic growth. The term "human potential" refers to knowledge resources, skills, health or vital energy of societies that might be a subject of growth by so called human investing. On

the other hand the “social capital” refers to social resources such as trust, standards and social relations that may boost the society competence by facilitating actions coordination and civic involvement. Such strong bonds and social trust are important both for individual and social growth, hence they influence indirectly economic growth (Młoko-siewicz, 2003; Łyszczarz and others 2009).

In the light of these theories there is a growth potential seen in a human and societies that might be developed into individual, social and economic resources. These theories were widely echoed in social and humanistic science. Nowadays it is obvious to analyze the resources as the development potential in the context of health and life. In this paper I would also like to point at the individual and social resources as the potential crucial for health and growth.

It is emphasized that the term “resources” had already existed in economic and ecological science before becoming important psychological term. Psychology still lacks its clear definition (Mudyń, 2003). Generally it might be stated that the “essence of this term are the specific functional abilities, potentially existing in a human, his environment and environmental relations (Sęk, 2003, p. 18). The resources are of holistic, interdisciplinary, often unspecified, intuitive, relative and positively valued character. Being relative and positively valued seem crucial for the term, defining its condition at the same time. It is worth mentioning that the resources do not exist objectively but are of subjective character, always owned by someone, therefore are relative, i.e. referring to specific needs or goals of the individual, what also implies their accessibility. Positive evaluation of resources is also important, hence we can not refer to it as to something negatively assessed, for instance, the thief’s skills won’t be defined as resources. Moreover, positive evaluation of resources is related to their deficiency and restrictions in relation to other needs. The profile of resources facilitates the conclusion that “something” becomes a resource for a certain individual or generally people when it meets certain criteria, hence division between factual and potential resources. The factual resources are those that satisfy needs or goals of a certain individual, that of their existence he’s aware of and has the access to. The potential resources on the other hand are those that can be used in a specific situation, but under certain conditions, i.e. when individual gain or regain access to it in the future. What matters, combining knowledge about existence of “something” and its accessibility allows to specify factual or potential resources and the lack. Therefore, one might speak of one’s knowledge, and the content of this knowledge (awareness) refers to the relation between possessing “something” and certain need or goal. Then, accessibility is the consequence of this awareness. If someone has such knowledge and access to the resources, this “something” becomes factual resource. If this knowledge connected with certain needs is shared by other people it becomes their potential resource. It might also happen that others will notice “something” in an individual not aware of it, then these resources are hidden for this individual, though potentially being there (lack of access) (Mudyń, 2003). This division is important for the resources use. If the individual alone does not notice the resources owned, hidden from him but noticeable for others, it might bring about two reactions. First it might lead to making use of this resources by others to satisfy their own needs. Secondly, it might be the basis of strengthening his potential and growth in environment. Taking into consideration abovementioned theories on human and social capital, in the second option

we may speak of investing in the capital (i.e. personal resources) that might become a potential value both for the individual and society.

When it comes to resources classification, they are generally divided into internal and external, or personal and social (Şek, 2003; Chodkiewicz 2005). External resources include:

- a) biological resources i.e. biological resistance
- b) mental resources i.e. all general and partial psychic features (such as temperament, cognitive-intellectual functions and structures, the feature of “me” structures, psycho-social competences and etc);
- c) spiritual resources (the sense of meaning and transgression);

The internal resources include groups as:

- a) physical environment resources (climate, quality of air, material environment);
- b) biological environment resources (living organisms resources);
- c) social-cultural resources, however:
 - cultural resources are of more general character and emphasize the quality of social resources (tradition, customs, standards, regulations, important reference systems such as cultural and art institutions, etc);
 - social resources include all the spheres of social support such as strong bonds, reference groups, associations and supporting groups along with social care systems, etc.

The above classification do not embrace probably all the resources, however it allows to characterize them generally, as the abovementioned external and internal and the division into personal and social resources are crucial for the issue. In many studies the personal resources are considered equal to mentioned internal resources, whereas the social are perceived as external. However, considering the most broaden understanding of personal resources as any sort of possibilities (internal and external) that one has and that influence his functioning and determine his resistance (Chodkiewicz, 2005, p. 152), the hierarchical dependence of both classifications is accepted. The division into external and internal resources hence becomes a part of personal resources of an individual. On the other hand, the social resources include all the resources disposable by the group or society.

In this study I'd like to pay attention to the resources (individual and social) that are used in order to satisfy the needs and goals connected with health and personal growth. I assume here that health sphere is a part of growing process, therefore speaking of health resources I assume their influence on growth possibilities at the same time. Such perspective is proper considering health as resources both for individuals and societies, what is confirmed by international documents (Ottawa Charter for Health Promotion, 1986). Personal resources held by an individual create certain conditions for functioning, hence become subjective determinants of health (and growth too). On the other hand external resources of the surrounding constitute the environmental determinants. Amongst many subjective determinants of individual health the most crucial seem to be the biological conditions and lifestyle regarding health promoting actions (Woynarowska 2008). In the context of analyzed issue factors related to shaping one's lifestyle seem to be particularly important, in contrary to biological determinants that are the part of exploitative resources. It is additionally complicated by the fact that the life-

style is shaped in the process of mutual influence of cultural-social determinants and the subjective properties of each individual. In the individual growth process the subjective determinants are becoming more and more important. Among them, the major attention is drawn to (Kowalski, Gawel 2007 s. 114-150; Woynarowska 2008, p. 103-106):

- a) cognitive factors (knowledge, beliefs, expectations and health attitude);
- b) skills including:
 - instrumental (related to taking care of one's health);
 - psychosocial (so called life skills) related to coping with day-to-day challenges and establishing satisfying interpersonal relations.

Emphasizing the role of practical skills as crucial health resources was connected with the variability of perceiving the sense of health, especially its positive perspective. This pattern of thinking drew attention to a phenomenon called resilience (this term has no equivalent in Polish). It originated from research on children that did not share the negative experience of their parents despite living in unprofitable social and economic conditions. Resilience is the process of positive adaptation in unfavorable situation where the protective factors lower or compensate the influence of risk factors. This process is connected with making use of the psycho-social competences and their growth, lack of emotional and/or behavioral disorders and undertaking developmental tasks (Ostaszewski 2005; Wojnarowska 2008). Next to resilience and factors related to it, the researchers found the term *resistance resources*, i.e. factors favoring boosting the resistance to stress, making the individual healthier at the same time (Antonovsky 2005; Chodkiewicz 2005). Both of these perspectives indicate psych-social skills (competences) as personal resources facilitating coping with difficult situations and by this mean retaining or returning to health.

The life skills are defined as “skills (abilities) facilitating positive adaptation behaviour that allow the individual to cope with tasks and everyday life challenges effectively” (Sokołowska 2008, p. 444). Skills understood in such way function in order to reach satisfying life, make getting to know oneself possible, help in coping with problems, decide on the possibility to make aware decisions, choices and actions. They are also the condition of establishing good and satisfying relations with other people, facilitating active engagement in social life, dealing with job market and are favourable to health improvement and protection, including lowering the number of risky behaviors (Sokołowska 2008, Woynarowska 2001). In the scope of health education and promotion, this issue appeared as approach designed for shaping the life skills (*life skills approach*) studied by WHO in 1993 to 1999. It was expressed in the WHO policy Health for Everyone as a task related to shaping youth health. “Until 2020 in the region young people shall become healthier and better prepared to play their role in the society” (Health No. 21, 2001). Consequently, two more organizations got involved (UNICEF i UNFPA). This approach was designed for education of children and youth considering them as particular subjected to risk of violent social and economic changes in contemporary world. The size and speed of changes demands from the youth more and more each time and in consequence it demands changes in their education. Hence attention is paid to the goal of education not only as preparations for the next stage of education or taking up a job, but first of all to cope with life. This approach was practically used within the European Network of Health Promoting Schools. In Poland within the pilot

project in 2001 and 2002 the strategy of implementing such approach in schools was designed (Wojnarowska 2001, Sokołowska 2008).

In the literature on the subject there is a wide range of life skills classifications. This variability is due not only to the way of understanding it (as the definition is rather general) but mainly due to recognition some of the functions as superior in relation to others. Therefore, initial division made by WHO took into consideration the character of prevention and health problems that children and youth might face in everyday life. On this account there were two life skills groups specified (Wojnarowska, 2001):

- a) skills basic for everyday life: making decisions, creative and critical thinking, communication and positive interpersonal relations, self awareness, empathy, coping with stress and emotions;
- b) specific skills related to coping with risk such as addictions, violence, risky sexual behavior.

UNICEF on the other hand in the life skills classification from 2000 (Wojnarowska 2001, Sokołowska 2008) presented following division:

1. interpersonal skills (empathy, active listening, verbal and non-verbal communication, assertiveness, honesty, negotiations, solving conflicts, cooperation, team work, relationships, cooperation with community);
2. the skills of stimulating self-awareness (self-assessment, identifying weak and strong sides, positive thinking, building up a positive self-image);
3. the skill to build one's own system of values (understanding of various social standards, beliefs, cultures, tolerance, establishing own system of values, attitudes and behaviors, discrimination and stereotyping prevention, acting in favor of law, responsibility and social justice);
4. the skill of decision making (critical and creative thinking, problem solving, identifying own and others' risk, searching for alternatives, gaining information and assessing their value, foreseeing the consequences of own actions, setting goals);
5. the skill to cope and manage stress (self control, coping with pressure, time management, coping with fear and difficult situations, seeking help).

However, in the WHO document dated 2003 there were only three life skill groups specified (Sokołowska 2008):

1. communication and interpersonal skills (verbal and non-verbal communication, assertiveness, empathy, team work, advocacy);
2. making decisions and critical thinking (storing information, assessment of solutions and their consequences, analysis of the influence of attitudes and values on motivation and action);
3. self-management (stimulating self-esteem, self-awareness, self-assessment, determining own goals, emotion managing, coping with stress).

Interpreting shifts in classifying life skills in the context of changing the way of thinking on health and prevention gradual shift of emphasis may be observed in few directions (Wojnarowska, 2002):

- within the scope of the goals: from preventing risky situations to supporting accomplishment of growth tasks, facilitating coping with everyday life problems;

- within the scope of the addressee of prevention tasks: from the risk groups to the entire population of children and youth;
- within the scope of those that carry out the programs: from external specialists to teachers from the environment cooperating with students;
- within the scope of the duration: from short trainings to long-lasting, multistage programs (called *spiral*).

The analyzed changes in life skills classification, as well as various experience in implementing programs to promote them in schools indicate that they are one of the key resources of human health. It's worth to ponder on their importance for the social and society resources too.

3. Copying with everyday life problems. From individual health to healthy community

The problem of life skills is connected not only with health education but it also tackles the issue of mental health, copying with stress and emotions or emotional intelligence as such. This entire issue might be placed in the stream of positive psychology. For instance the understanding of mental health is nowadays being redefined more and more frequently expressed as positive mental health. The change in this scope is to shift the focus from the lack of illness to the ability to control the symptoms and by this – adaptation to changeable living conditions (Persaud 2006). Self-control is associated with terms such as copying or managing, concluded from research on stress and critical events. In this research stream, the shift of emphasis from difficult situation to the process of copying and overcoming is noticeable. Generally speaking, the entirety of changes may be characterized in the ways of shifting the emphasis from passiveness to involvement i.e. from the perspective of external observer (what difficult situation may result in) to the attempt of activating individual by showing possibilities of own management of this situation. On the other hand, the research on emotional intelligence (Goleman 1997) indicate that life prosperity is greatly influenced by copying with emotions, building up the motivation, ability to understand oneself and other people and establishing relations with others. Gained education or general intelligence level is marginalized as the term of emotional and social intelligence is connected with broadening the scope of research on personal and social competences.

The research themes characterized above draw the attention towards the process of self-managing with difficult situations. Managing is understood as “complex and dynamically changing set of physical processes and behaviors reaching to shape new ways of meeting the demands of goals in a situation when external and internal conditions important for an individual cause physical strain and the condition of interfering with human's adaptive resources” (Şek 1991, p. 34). It must also be noticed that this term refers to dynamical and positive understanding of health in the categories of reserves (resources). The process of managing is creative as bases on individual search for new patterns of action. It's also a dynamic process as the individual is not passively expecting changes, but the situation evokes the need to search for solution. The area of searching includes individual or/and social resources. As the researchers involved in this issue indicate these resources are perceived in the competence criteria. It seems that the terms

“competence” and “skill” are often equated, however having a lot in common, there are fundamental differences between them. It is therefore worth having a closer look at their nature as in this context the health education focused on life skills development becomes broadened.

The analysis of the term *competence* indicates its broad range including the term *skills*. Competences mean “the way of making use of own abilities to handle some skills, supported by a certain theoretical knowledge for effective managing in the surrounding world in a certain aspect” (Skrzypczak 1999, p. 404). Shaping competences includes therefore few related tasks (Skrzypczak 1999):

- developing certain knowledge (that must be comprehended and absorbed),
- developing certain skills (abilities) on the grounds of the gained knowledge,
- equipping in certain instrumental predispositions, i.e. the tools of sensible action in a certain situations,
- developing the motivation connected with the aims of action and influencing the efficiency,
- equipping in certain directional dispositions, i.e. shaping the value system that enables making use of competences in appropriate way (it must be remembered that being competent is also dependent on the power of conviction of the need to use certain skills).

Competences understood in such way are the subject of interest in various spheres of actions aiming at human development, especially educational actions in a broad sense. It is reflected in such documents as educational policy papers of EU in the scope of Lifelong Learning Programme (Key competences 2005; Recommendations 2006). It seems that emphasizing the competence theories is a sign of changes in paradigms of perceiving human in social and humanistic science. Indeed, this term indicates human freedom, individuality and own responsibility for life.

Within the range of health education, underlining the importance of competence aims not at simple definition change from skill to life competence. It is more about noticing important consequences of such change for education, not only health education itself. The variety of tasks related to developing competences suggests that it shall be a long-lasting, multistage process that gradually broadens range and stages of developing competences. Secondly, competences are related to a certain range, therefore are connected with improving actions referring to a certain goals or needs, hence they require to be included by the individual to the scope of own life activities and due to that shall not be imposed. In the context of these two conditions positive direction of changes in the scope of educational health must be emphasized. The experience of health promoting schools seem to support this conclusion (Wojnarowska 2002). Besides, these competences are mutually related to each other and make up a certain hierarchy. Hence, the most broad competences should be developed at the beginning, acting as a foundation for the rest. Such approach is reflected in the action undertaken within the EU policy in the context of lifelong learning, as one of the goals is to determine the key competences and including them in the process of education. Therefore it seems reasonable to combine actions of directional approach towards developing life skills (health education) and actions aiming at working out and implementing key competences (general knowledge) as they aim at mutual goals (lifelong learning and learning in the environment). With

reference to hierarchic process of building up life skills it is noticeable that the role of developing accomplishing competences is favoured, marginalizing the evaluative and cognitive competences that enable establishing the actions in the broadened process of decision making, based on the value system (Borowska 1999). The education focused on developing skills implies such potential threat.

At the end I would also like to tackle one more issue. Directional approach being implemented within the health education is directed to those under 18, similarly as the key competences proposal in obligatory education. It is understood if we consider the perspective development of societies, taken into account in actions undertaken within the framework of educational and health EU policy. Still, the directions of actions aiming at adults shall be considered as far as the increase of individual responsibility for health is considered. The need to develop life skills among them supporting the process of coping with everyday life or critical situation seem to be more and more urgent. The increase of mental problems is striking (Persaud 2006, Chodkiewicz 2005), with the sources found in the speed of social and economic changes and problems with coping and adjusting to it. Undertaking institutional actions supporting the solution of abovementioned problems seem rather impossible, perhaps except from action directed to narrow groups, for instance the unemployed. Besides, institutional actions are contradictory to the same idea of shaping life skills and the process of self management of difficult situations.

It seems that one of the proposals is the adult education. As M. Malewski notices (2001), the direction of changes in adult education is related to the attempt to using the theory of individual and social potential. Social potential is particularly worth mentioning as it leads to shaping the idea of situated learning. It was practically implemented in two spheres of actions: professional sphere as learning organization, and in public sphere as community learning. The ideas mentioned mainly point out the shift in focus from education to the learning, i.e. individual involvement in the process of gaining knowledge, skills, adjusted to own needs, possibilities and motivations, situated in the context of one's life situation and in relation to social problems. In this meaning, the process of adults' learning is closely connected with their involvement in acting in favor of their community. The knowledge, skills and competences used in a certain problematic situation constitute personal resources, being a part of a human capital, acting in favour of community development. The community itself may become a source of individual growth by the range of social relations and trust (social capital). Individual and social resources as well as certain situation become linked to each other making a certain context of individual and social growth.

It might appear to some that I strayed from the subject of health and health education. However, it is difficult to separate each spheres of human development and perceive them separately. The process of learning, interspersed with day-to-day situations, contributing to personal development, is a source of shaping health at the same time. On the other hand, the level of individual health determines the range and quality of actions in other spheres, hence it is impossible to neglect the issue of social health. The quality of individual health is not simplified and directly interpreted as the health condition of a society. The personal resources of each member of the community make up a potential of growth that might be used not only by the individuals but certain groups or entire

society. It must be remembered that adult's engagement in solving day-to-day problems regarding their community or more general - society contributes to developing their (life) competences. They may counterweight the phenomenon of trained helplessness, particularly noticeable in post-communistic societies. Moreover, creating conditions to use the life competences (skills) is important factor of further growth of children and youth. Therefore it seems necessary to create favourable conditions for social involvement, which might be one of the key resources of social and individual health. Developing the life competences lead not only to the increase of individual health potential but it establishes a healthy community too.

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DOVEDNOSTI POTŘEBNÉ PRO ŽIVOT JAKO INDIVIDUÁLNÍ A SPOLEČENSKÉ ZDROJE ZDRAVÍ

Abstrakt: Přístup, orientovaný na rozvoj životních dovedností, jako jedna ze strategií výchovy ke zdraví má své kořeny v hlubším kontextu společenských a kulturních transformací, které ovlivňují změny rozsahu sebeporozumění a roli člověka a jeho fungování na světě. V oblasti zdraví a výchovy ke zdraví tyto transformace vedly k poznání, že je třeba věnovat více pozornosti odpovědnosti jedince za vlastní zdraví. Širší dimenze společenských a kulturních změn na druhé straně ukazují subjektivitu jedince jako základ k hospodářskému, společenskému nebo kulturnímu růstu. Osobní

zdroje se v tomto kontextu nestávají jen faktorem individuálního, ale také společenského růstu. Takto chápáno, zdroje zdraví a zejména životní dovednosti jsou pilířem pro činnosti, směřující k převzetí zodpovědnosti jedince za své zdraví a v širší perspektivě – k převzetí zodpovědnosti za zdraví místní komunity i celé společnosti. Cílem této práce je zdůraznit některé determinanty a důsledky takového chápání zdraví a výchovy ke zdraví.

Klíčová slova: modely zdraví, výchova ke zdraví, životní dovednosti a kompetence, zdroje zdraví jednotlivců i společnosti

THE PERCEPTION OF THE SCHOOL STRESSFUL SITUATIONS BY ADOLESCENTS

Eva URBANOVSKÁ

Abstract: *Common daily problems associated with a school can present significant risks to mental health. To a great extent, it depends on their subjective perception and interpretation. This article is based on an empirical research and informs about perception of incidence and intensity of school stress situations by secondary school students. Differences in the evaluation are investigated both within the whole sample and with respect to gender, type of school, class and school performance. The results correspond with our previous researches and also with the knowledge presented in the literature. The incidence of the stressful situations is generally lower than the level of the subjectively perceived stress. The difference is significant especially in the situations concerned with the relationship between a teacher and a student, whereas it is insignificant in the situations related to learning process conditions and the school performance.*

Keywords: *stress, common daily problems, school, middle adolescence, gender, type of school, school achievement*

Introduction

The school environment is associated with many situations that are possible to call stressful. An individual can feel uncertainty, strain, threat or increased tension on his skills. The stressful situations are e.g. fear from exams, lowering the school achievement, own insufficiency, the feelings of disability to make inadequate requirements possible, but also difficult situations of interpersonal interaction, conflicts with peers, rivalry, making or holding a position in a group, communication with the teachers, everything that is in the literature described as so called hidden curriculum. Despite these situations are not extraordinarily traumatizing experiences in principle, they can represent a chronicle stress when occurring regularly and very often, and therefore they can cause high mental strain. However, the way of the subjective perception of the stressful situation is determinative.

The stressors associated with an educational institution and their perception by the adolescents gain a specific character during the adolescence. It is a period of significant changes including a change of the relationship to authorities, of seeing and evaluating the surrounding world but also themselves.

We are trying to make clear some aspects of the perception of incidence and intensity of the stressful situations perceived by adolescents. With regard to research approaches, their relationship is not investigated too often in literature.

Theoretical background

We consider stressful situations as a situation of disproportion or imbalance between requirements of a particular situation and competences or possibilities that are necessary to overcome these situations, eventually a disability of an individual to use these competences. (compare with Oravcová, 2004, Kebza, 2005, Havlínová, 1998). The situations that are associated with negative feelings and that are described as stress. According to Atkinson (1995), events perceived as the situations of physical or mental danger are involved.

A school was always full of these situations. Besides above mentioned situations, e.g. amount of learning and homework, pressure on school performance, examination and marks represent an extensive mental strain. An individual is regularly in danger that he will be compared and not able to stand up to peer competition or complete all requirements that he is asked for. E.g. Havlínová et al. (1998), Mlčák (1999), Nitch (1981) analyse and systematize the stressors associated with school environment in their interactive model of school strain. School strain situations especially connected with coping are in the long term focused on in Slovak Republic (e.g. Medved'ová, 2004, 2008, Senka, 1996, Sarmány Schuller, 1997).

We can easily apply Kebz's classification of stressors on school environment. From the psychological point of view, he divides them on stressors that start in consequence of extensive requirements on performance or time limitation needed to their achievement; stressors that start in consequence of insufficient or excessive stimulations; and conflicts (Kebza, 2005).

J. Mareš (Čáp, Mareš, 2001) describes a school strain situation that can have different sources and character with respect to time duration, place and effect. It can be similar to usual requirements, more important challenges or even danger of an individual's bio-psychosocial sphere.

However, every stressful situation does not have to represent trauma, an element that harms health. Significant inter-individual differences exist in perception, evaluation and experience of stressful situations. They present a destructive, paralysing factor for some people, for other people these situations are a motivating stimulus that is needed to mobilize their potential and to optimise their achievement. It is connected with a wide variability on the side of a stressful situation and on the side of a particular individual's character, too. In general, we consider the situation as more stressful if it is uncertain, uneasy to follow, beyond control and if it has an unpredictable development (Oravcová, 2004, Atkinson, 1995). Difficulty of a particular situation and requirements, that is the individual asked for, have an important role. However, these aspects are not possible to evaluate without looking at the individual's character, competences and his ability to complete the requirements. An important stimulating factor is adequate requirements possible to manage. In literature, such situations that slightly exceed current individual's skills to manage them are considered as stimulating for the individual's development (see Havlínová, 1998, Kebza, 2005, Čáp, Mareš, 2001).

A psychological effect of a stressful situation is also determined by its incidence. However, the relationship between frequency of the stressor's influence and its intensity is not easy to define. Sometimes, only one extremely strong stimulus (some overwhelming events) can cause breakdown. The strong stimulus has a destructive effect also when applied only once. On the other hand, a repetitive stressful situation that the individual overcame (a stressor he faced up to) can strengthen the individual's resistance to the stressful situation. But, it is known that a permanent exposure to strain (and it can be also common daily problems) are very stressful for the individual. A long term strain often cumulated can dramatically worsen the individual's situation and it can negatively influence his ability to evaluate these situations and to overcome them (Křivohlavý, 2001, Čáp, Mareš, 2001).

An individual always evaluates typical aspects of a stressful situation in the process of its perception. The process of evaluation is usually described from a primary and a secondary layer in literature (see Lazarus, Folkmanová, 1984). During primary evaluation, the individual considers how much the situation is endangering, what risk it represents. The secondary evaluation involves the analysis of own possibilities to overcome the stressful situation, judging the sources that are at the disposal. The processes of the primary and the secondary evaluation and the process of dealing with stress do not happen separately but they probably blend together and determine each other.

The processes of evaluation of the stressful situation are however influenced by previous individual experiences. This can lead to incorrect interpretation of the situation especially by children and adolescents (it can be both overvaluation and undervaluation and the possibility to influence the situation). The inter-individual variability in perception of a stressful situation is significantly determined also by personal characteristics of the individual. We want to emphasize especially the subjective interpretation of the situation, and active or passive attitude and motivation to manage it from many of the personal characteristics that are analysed in literature quite often (such as temperament, self-evaluation, self-confidence, self esteem, stress resistance etc.). If some situations are subjectively described as very important, then they are probably perceived as more stressful (Plevová, Urbanovská, 2007). It is crucial not the objective level of all mentioned characteristics for the stress intensity, but how they are perceived, felt and evaluated by a person. This fact was proved on the base of research investigations (Lazarus, Folkmanová, 1984, Čáp, Mareš, 2001, Plevová, 2007 et al.). An active attitude to the particular stressor has a very important role. The individuals who understand a demanding situation as a challenge to know the borders of their abilities, are not exposed to stress so much (Atkinson, 1995).

We assume that all the moderators of stress (both the dimensions of the particular situation and inner conditions of the individual) are in the relationship of interaction and reciprocal influence. In our research we focused on the relationship between the incidence of a stressful situation and the level of subjectively perceived stress.

The aims of the research

We have been dealing with the problem of school stress for several years already. The results presented in this article are a part of a broader research focused on the perception of school stress. With respect to this article, the main aim is:

- to find out how the older adolescents perceive a school stressful situation from the incidence and intensity point of view (stress that the students feel in this situation)
- to find out the differences in perception of incidence and intensity in relation to gender, class, type of school and school achievement
- to compare the incidence of stressful situations in relation to stress amount they can cause

The Method

A new version of the questionnaire of stressful situations was modified in our research, which started as a reduction and adaptation of the previous questionnaire with 89 items. It was used in our previous researches (closer see Binarová et al., 2005). We verified functionality and a structure of the reduced questionnaire in 2006 and 2008. We tried to describe the principle of the reciprocal dependences among the items on the base of repeated factor analyses (closer see Urbanovská, 2007).

The questionnaire contains 2 x 47 items in two parts with a description of the situations that can represent inadequate stress for students. In the first part of the questionnaire, the situations are judged on the five point scale from the incidence point of view. In the second part, the identical situations are judged on the five point scale in relation to the level of stress they can evoke.

The situations cover five categories: A – relationship between a teacher and a student, B – school marking, D – learning process conditions, E – inter-personal peer relationships, F – other factors.

Particular items are then classified according to three factors (I, J, K), that are indicated by explorative factor analyses: the factor I which we specified as directed on emotions (passive managing), the factor J – directed on a problem (active managing) and the factor K – managing by avoidance (closer see Urbanovská, 2007).

The results were analysed on the base of statistical calculation of the Spearman's ordinal correlation, the Pearson's coefficient of correlation and Wilcoxon's binary test.

The characteristics of the research sample

The research was realized in spring 2008 at seven vocational schools and grammar schools in Moravian region. 619 students took part in the research (1st and 3rd classes, at age of 15 – 20, the average age was 16,87, 257 boys and 362 girls, 301 students of grammar schools and 318 students of vocational schools with different specializations).

The results and a discussion

The incidence of the stressful situations

The average values are as a whole close to grade 2 (rarely) on the five point evaluating scale. It means that in average the stressful situations occur at the chosen secondary schools only rarely or sometimes.

In regard to the particular categories, all respondents indicate as the most frequent the situations connected with learning conditions and school performance. The difference of average values of this group of situations and category on the second place (situations connected with school classification) is significant. The situations connected with the teacher – student interaction are the third most frequent as a whole and at vocational schools, however, at grammar schools other situations are the third most frequent (situations connected e.g. with behaviour of a school porter, cooks, other students in a school canteen etc.).

From the I, J, K dimensions point of view, the situations that are saturated by factor J are the most frequent (the individual can influence the process and the result of this situation with the help of his activity connected with active managing directed on the problem). The situations connected with manifestations of hostility, aggression, noisy and unpleasant atmosphere (factor K) were placed on the second place. The situations hardly influenceable are judged as the least common. In these situations, the relationship to an authority dominates, connected rather with passive managing directed to emotions (factor I).

We present the average values of incidence of the situations as a whole and with respect to the type of school in the chart 1.

Chart 1: The average values of incidence as a whole and in term of type of school

Type of school	AS A WHOLE		VOCATIONAL SCHOOLS		GRAMMAR SCHOOLS	
	Average	Order	Average	Order	Average	Order
Average	2,30		2,27		2,33	
CATEGORIES						
A	2,07	3.	2,10	3.	2,03	4.
B	2,21	2.	2,27	2.	2,15	2.
D	2,91	1.	2,81	1.	3,02	1.
E	1,98	4.	1,97	4.	1,99	5.
F	1,92	5.	1,79	5.	2,05	3.
I	2,09	3.	2,10	3.	2,08	3.
J	2,83	1.	2,75	1.	2,91	1.
K	2,18	2.	2,12	2.	2,24	2.

In respect to type of school, there were **significant differences** both in overall average and the situations B, D, F, J and K (see chart 2). The students of grammar schools indicate significantly higher incidence both as a whole and especially at the situations connected with learning process conditions and school performance (category D), with other various aspects (category F). The results related to factor J (influenceable, active managing) and K (hostility, escape) correspond with this fact. The students of vocational schools then judge the situations connected with school marking (B) as more common.

Chart 2: Differences in evaluation of incidence in respect to type of school (Mann-Whitney's U test)

parameter	Overall score	A	B	D	E	F	I	J	K
z	2,7057	-1,128	-2,072	5,874	0,487	7,424	0,579	4,913	3,136
level of p	0,0058	0,259	0,038	0,000	0,625	0,000	0,562	0,000	0,001

Key: Z – test quantity, p - probability (corresponding level of significancy)
 Values (tests) indicated in red are significant on the level $p < 0,05000$

Significant **differences of incidence with respect to gender** were proved in several categories of situations (see chart 3):

- In comparison with girls, the boys evaluate as significantly more common the incidence of the situations connected with relationship teacher – student (A), with school marking (B), other situations (F) and situations connected with passive managing (I).
- On the other hand, the girls evaluate as significantly more common the situations connected with learning conditions (D).

The overall score of the incidence is lower at female group; however, the significant difference was not proved.

Chart 3: Differences in evaluation of the incidence with respect to gender (Mann-Whitney's U test)

Parameter	average	A	B	D	E	F	I	J	K
z	-1,205	-2,759	-2,570	2,000	0,086	-2,269	-2,087	0,860	1,274
Level of p	0,2281	0,0057	0,0101	0,0454	0,9314	0,0232	0,0368	0,3893	0,2025

Key: Z – test quantity, p - probability (corresponding level of significancy)
 Values (tests) indicated in red are significant on the level $p < 0,05000$

Significant **differences in respect to class** were proved only in the category E (reciprocal peer relationships). The students of the 3rd classes evaluate these situations as significantly more common than the students of the 1st classes.

On the base of Kruskal-Wallis's test, it is possible to acknowledge statistically significant **differences in evaluation of incidence of the stressful situations with respect to school achievement** in Czech language and math in categories A, B, E, F, I. The most distinctive differences were proved at situations B connected with school marking. The students with mark 3 and 4 from Czech and math indicated the incidence of these situations as significantly more frequent than the students with better mark. In relation to school achievement in math, a significant difference was proved also among students with mark 1 and 2. The students with mark 2 evaluated these situations as significantly more frequent. A similar character of differences (the students with better school achievement evaluated these situations as less frequent) was proved also at most of the stressful situations.

The intensity of subjectively perceived stress of the stressful situations

The average values of intensity of subjectively perceived stress of the stressful situations in the whole sample but also in relation to the particular types of schools oscillate around the middle value of the five point scale. It means a middle level of stress (see chart 4).

We can claim that as a whole the stressful situations present in average the middle level of stress for students at chosen secondary schools.

From the particular categories point of view, the situations connected with teacher – student interaction (A) are indicated as the most stressful in the average of the whole sample. The difference of average values of this group of situations and the category which was on the second place (D – situations connected with learning conditions and school performance) is minimal. An interesting fact corresponds with this result: from the dimensions I, J, K point of view, the dimensions saturated with factor I (passive managing directed on emotions) are indicated as the most stressful, on the second place with minimal difference dimension J (active managing directed on a problem). All students perceived as significantly least stressful the situations connected with peer relationships (E) and with “avoidance” (K).

The differences of stress intensity with respect to type of school are possible to read from the data in chart 4 and 5. The students of grammar schools feel higher level of stress as a whole but also in all types of the situations. Chart 5 shows significant differences on the level of significancy 0,01 between the evaluation of grammar schools students and vocational schools students in all categories of the situations.

The differences are, however, also in order of particular categories. The most stressful situations for vocational schools students are those connected with learning conditions and school performance (D), but the grammar schools students are under the stress mostly by the situations connected with teacher – student interaction (A). This fact corresponds with different evaluations of the stress at the situations I and J. Vocational schools students indicate as the most subjectively stressful the situations of factor J, so the situations that we connect with the possibilities of active managing directed on the problem. On the contrary, it is most stressful to deal with the situations connected with so called passive managing or managing directed on emotions (factor I) for the grammar schools students. The order of other categories (B, E, F, and K) is the same at both types of schools.

Chart 4: Average values of subjectively perceived stress as a whole and with respect to type of school

Type of school	AS A WHOLE		Vocational schools		Grammar schools	
			Average	Order	Average	Order
Average	3,03		2,82		3,25	
Categories						
A	3,14	1.	2,86	2.	3,44	1.
B	2,99	3.	2,82	3.	3,18	3.
D	3,13	2.	3,03	1.	3,24	2.
E	2,62	5.	2,43	5.	2,81	5.
F	2,78	4.	2,50	4.	3,08	4.
I	3,20	1.	2,89	2.	3,53	1.
J	3,14	2.	3,02	1.	3,26	2.
K	2,59	3.	2,49	3.	2,70	3.

Chart 5: The differences in evaluation of the intensity with respect to type of school (Mann-Whitney's U test)

Parameter	average	A	B	D	E	F	I	J	K
Z	7,944	8,075	5,493	4,333	5,272	8,241	9,175	4,818	4,036
level p	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Key: Z - test quantity, p - probability (corresponding level of significancy)

Values (tests) indicated in red are significant on the level $p < 0,05000$

We can follow **the differences in evaluation of stress intensity with respect to gender** in chart 6.

Significant differences in perception of stress intensity between boys and girls were proved in all categories of situations besides category F (other situations). Plus values predicate that in all cases the girls indicate the situations as significantly more stressful than boys.

Chart 6: The differences in evaluation of stress intensity with respect to gender. (Mann-Whitney's U test)

parameter	average	A	B	D	E	F	I	J	K
z	3,336	3,313	2,125	2,567	6,979	0,781	2,335	3,063	4,785
level p	0,000	0,000	0,034	0,010	0,000	0,435	0,019	0,002	0,000

Key: Z - test quantity, p - probability (corresponding level of significancy)

Values (tests) indicated in red are significant on the level $p < 0,05000$

Significant **differences with respect to class** were proved only in one category of situations: In comparison with 1st class students, the students of 3rd classes indicate the situations connected with teacher – student interaction (A) as significantly more stressful.

Significant **differences of stress intensity with respect to school achievement** in Czech language are possible to prove in all categories and overall score on the base of Kruskal-Wallis’s test. With respect to school achievement in math, it is possible to prove the differences in overall score and most categories, besides situations connected with learning conditions, active managing and avoidance. The differences with respect to school achievement in Czech language are more distinctive.

If we resume all found significant differences in perception of stress intensity with respect to school achievement, we can state that the students who have mark 2 in Czech language and math feel the highest stress as a whole and nearly in all categories. On the other hand, the students with mark 3 and 4 indicate lower stress and the differences in their evaluation in relation to students with better or worse school achievement are in many cases significant. The students with mark 4 perceive the lowest stress intensity. This knowledge is interesting because if we speak about stress and trauma from failure, usually students with not so good school achievement come into our mind. But in our sample, these students were the least stressed by the situations from all respondents.

The comparison of the incidence and stress intensity perception

Accordingly to above mentioned theoretical background, it is necessary to consider stress intensity of particular situations in the context of their incidence to know better the atmosphere at a school.

Chart 7: The comparison of incidence and intensity – average and order – whole sample

	Incidence	Order	Intensity	Order
Average	2,30		3,03	
Average A	2,07	3.	3,14	1.
Average B	2,21	2.	2,99	3.
Average D	2,91	1.	3,13	2.
Average E	1,98	4.	2,62	5.
Average F	1,92	5.	2,78	4.
Average I	2,09	3.	3,20	1.
Average J	2,83	1.	3,14	2.
Average K	2,18	2.	2,59	3.

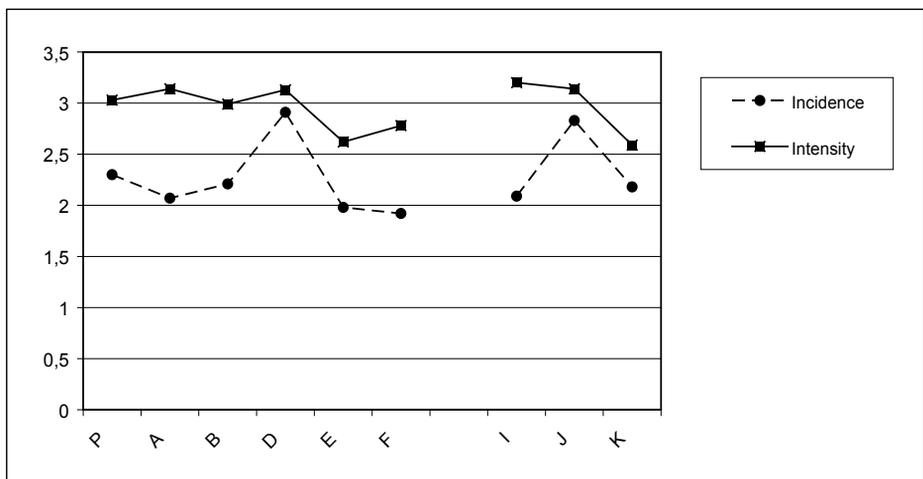
The chart 7 shows, that the overall average and average values with respect to particular categories are lower at incidence than at stress intensity.

It is evident also from chart 1 that the lowest difference among average scores of incidence and intensity is at situations J and D. It means that situations that are connected with active managing and directed on the problem (mostly the situations dealing with learning conditions and school performance) have the highest incidence and at the same time they are quite stressful.

On the other hand, the situations dealing with reciprocal teacher – student interaction (category A) and the situations connected with passive managing (factor I) are indicated as the most stressful but their incidence is not so high (the third in order).

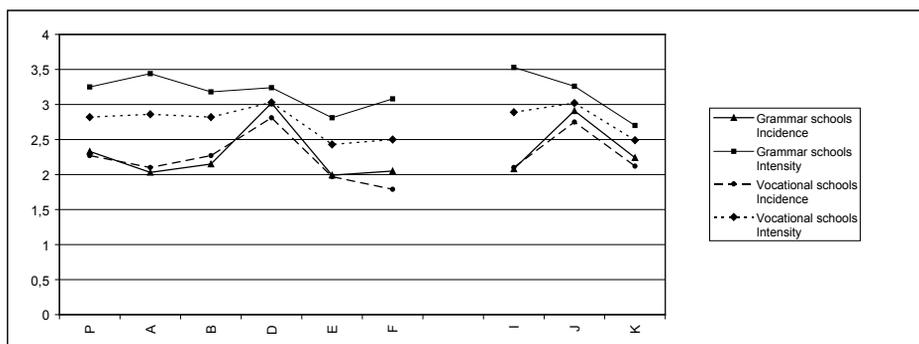
Chart 8: The comparison of incidence and intensity – average and order – type of school

	Grammar school				Vocational school			
	Incidence	Ord.	Intensity	Ord.	Incidence	Ord.	Intensity	Ord.
Average	2,33		3,25		2,27		2,82	
Average A	2,03	4.	3,44	1.	2,10	3.	2,86	2.
Average B	2,15	2.	3,18	3.	2,27	2.	2,82	3.
Average D	3,02	1.	3,24	2.	2,81	1.	3,03	1.
Average E	1,99	5.	2,81	5.	1,97	4.	2,43	5.
Average F	2,05	3.	3,08	4.	1,79	5.	2,50	4.
Average I	2,08	3.	3,53	1.	2,10	3.	2,89	2.
Average J	2,91	1.	3,26	2.	2,75	1.	3,02	1.
Average K	2,24	2.	2,70	3.	2,12	2.	2,49	3.



Graph 1: The comparison of incidence and intensity – whole sample

P = average, A, B, D, E, F, I, J, K = particular categories and dimensions



Graph 2: The comparison of incidence and intensity – with respect to type of school

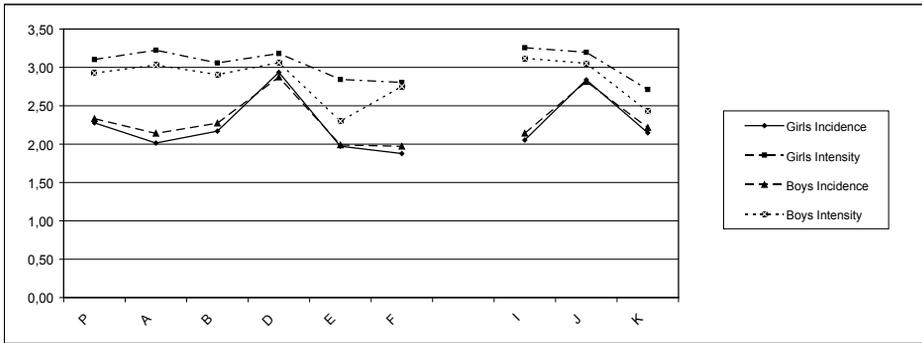
P = average, A, B, D, E, F, I, J, K = particular categories and dimensions

The comparison of incidence and intensity **with respect to the type of school** shows that the grammar schools students perceive the incidence of the stressful situations as a whole and in some categories as significantly higher, but the differences are not as distinctive as the evaluation of intensity. In other words, there is not so distinctive difference in evaluation of incidence between both types of school as in subjectively perceived stress that the students in these situations feel.

The comparison of incidence and intensity **with respect to gender** shows that the girls indicate significantly lower incidence of stressful situations both as a whole and in most of the categories, but significantly higher level of stress intensity in all categories and also as a whole. This fact corresponds with transaction stress theory of Lazarus and Fokmanová (1984). According to this theory, people do not have to feel more numerous stressors, but after all they can feel them more intensively. However also in this case, we can see, that gender differences in perception of incidence are not so distinctive as in subjectively perceived stress that the students feel in these situations.

Chart 9: The comparison of incidence and intensity with respect to gender

	Girls		Boys	
	Incidence	Intensity	Incidence	Intensity
Average	2,28	3,10	2,33	2,93
Average A	2,01	3,22	2,14	3,03
Average B	2,17	3,06	2,27	2,91
Average D	2,93	3,18	2,87	3,06
Average E	1,97	2,84	1,99	2,30
Average F	1,88	2,80	1,97	2,75
Average I	2,05	3,26	2,14	3,12
Average J	2,84	3,20	2,82	3,05
Average K	2,15	2,71	2,22	2,43



Graph 3: The comparison of incidence and intensity – with respect to gender

P = Average, A, B, D, E, F, I, J, K = particular categories and dimensions

An interesting knowledge is that significant differences in perception of incidence and intensity **with respect to class** were proved only in minimal number, always in one category. So the parameter age does not probably mean so important role in perception of incidence and intensity of the stressful situations as other investigated parameters.

Significant differences of values in incidence and intensity were proved at most items and averages of particular categories. The score of perceive stress intensity is higher than the score of incidence of the stressful situations in all cases of significant differences. It means that in spite of the fact the situations are evaluated as very stressful, their incidence is evaluated as significantly less common.

The significant differences were not proved only at several particular situations that are connected with learning conditions (examination, writing essays, unpleasant environment of classrooms) and with peer interactions (group rivalry and superiority of older students). The values of incidence and intensity at these situations are very close. If it is low, middle or high incidence and stress, it is possible to judge only with respect to average values of these items (see chart 10).

Chart 10: The average values of incidence and intensity at items where significant differences were not proved (the whole sample)

Item	Description of the situation	Incidence	Intensity
12 KE	There are groups which compete among themselves.	2,5	2,6
15 JD	You are examined at the blackboard.	2,9	2,8
27 JD	You write an essay which is very important for you.	3,5	3,5
33 KF	Older peers forerun in the queue in the canteen.	2,4	2,4
36 JD	You write more tests in one day.	3,7	3,8
45 KD	The classroom is unpleasant.	2,5	2,5

The chart shows that the values are close or overreach the middle value (3) only at three situations (in bold). All these situations deal with writing essays or examina-

tion. The situations that are evaluated as very stressful and they appear quite often at the same time are possible to declare as dangerous for mental health. We detected other very stressful and often repeated situations during the analysis of incidence and intensity values of particular items. Though a significant difference was proved in their incidence and intensity (see chart 11).

Chart 11: The situations with the highest values of intensity and incidence where the significant differences were proved (the whole sample)

Item	Description of the situation	Incidence	Intensity
11 JD	You are supposed to learn a great amount of information to next day.	3,8	3,4
7 JD	The afternoon school takes long time.	3,7	3,2

Summary and discussion

The known results are in step with previous researches. The average value of subjectively perceived intensity is in the zone of middle stress. The values of incidence are lower than the values of intensity; they are close to level “rarely”. The situations from the categories: teacher – student interaction, learning conditions and school performance are the most stressful for the students. The stress intensity in the factor dimensions of passive managing and active managing corresponds with this fact. The situations of learning conditions and school performance and factor dimension of active managing are perceived as the most frequent.

Statistically significant differences in perception of incidence and intensity with respect to gender, type of school, and school achievement were proved. The girls, the grammar schools students and the students with mark 2 feel significantly higher level of stress. The found differences in perception of stress at girls and boys are not surprising. Previous researches (e.g. Mlčák, 1999, Medved'ová, 2004) show higher sensibility of girls in any stress. The difference is probably determined by basic gender differences. It is possible to assume, that male population interpret a stress situation more rationally, on the contrary, female population more emotionally. Other researches prove (Plevová, 2007), women ascribe to stressful situations bigger importance. Then, it is possible to explain why they perceive the situations as more stressful (closer see Plevová, Urbanovská, 2007).

From the same point of view, it is possible to consider the differences with respect to the type of school. The higher subjectively perceived stress of stressful situations at grammar schools students can be explained by higher importance that is ascribe to them. Moreover, it is possible to discuss also the influence of higher level of responsibility, that the grammar school students feel, and also higher requirements that they are asked for.

We identified the biggest stress at situations from the category A (teacher – student interaction) and D. In this respect, we admit consensus with results of L. Medvěďová (2008) in her research of school stressor in early adolescence. The most stressful were the stressors of school competence (strict school rules, subordination to an autho-

ity) and stressors directed to school performance. Piekarska (2000) found out that the most stressful part of the school stress is teachers' behaviour and attitude to pupils. In other researches, tests and examination were proved as the most stressful, so in respect to our division, it is category D (Warianová, 2000). We can state, that our findings correspond with the results in other researches.

The found differences with respect to school achievement are interesting. Mostly, it is assumed high stress intensity at students with bad school performance. This fact was not proved at our sample, on the other hand, these students perceived the lowest stress. Surprisingly, the students with objectively good results felt the highest stress intensity. It is possible to assume, the result of learning activity is important for these students, maybe because they have also higher aspirations. It is quite probable, that they do not evaluate their school achievement as sufficient; they want to achieve better results. Therefore, the situations connected with learning activities and active managing are so stressful for them.

However, it is also possible to assume another causality. The found perceived high stress intensity can present a reason why they do not reach mark 1. The high stress intensity can have negative influence on their performance during tests and examination. We think that a model of criterion evaluation at secondary schools, which was introduced in Slovak Republic by Z. Vašáková (2006), could be one of the possibilities of positive change in students' attitude to school and school evaluation. It is possible to assume, that the transparency of evaluation criteria can significantly lower the examination pressure for students who perceived the school achievement as subjectively very important.

Significantly distinctive differences were proved in perception of stress intensity with respect to gender and type of school than in perception of incidence of the stressful situations. This fact introduces a question of causality of this phenomenon. It is possible to admit that so big inter-individual differences do not exist in evaluation of incidence, that the perception of incidence in comparison with the perception of intensity is not so significantly determined by personal determinants, but it is based on objective indicators. Then, we can assume that the statements about incidence correspond more or less with objective fact which the adolescents are able to objectively judge.

The significant differences between perception of incidence of the stressful situations and their intensity were proved. The biggest difference between the incidence and the intensity exists at the situations connected with teacher – student interaction. We consider this knowledge as positive one because strongly stressful situations occur only rarely. It is possible to suppose, that school and classroom climate, influenced by the teacher to a great extent, does not have to represent only negative characteristics at our schools (compare with Grecmanová, 1998). The minimal differences are at the situations from the categories connected with learning conditions and school performance. Especially these situations, when the students write important or unexpected tests or more tests in one day, are very stressful for the respondents and at the same time, they occur very often. This knowledge should lead the teachers to think about the organisation of learning activities and to find the possibilities to lower the mental stress of the pupils and the students. With respect to high values of intensity and incidence, we think that these situations can represent risk for mental health of adolescents.

Conclusion

The research data gained in 2008 with the help of modified questionnaire of stressful situations correspond with the results from our previous researches. We confirmed a middle level of the overall stress; the average incidence of the stressful situations did not reach the middle values. The significant differences between the perception of the incidence of the stressful situations and the subjectively perceived stress intensity were proved.

Gender differences, differences with respect to the type of school and also to school achievement were proved in perception of incidence and intensity. More distinctive differences were shown in perception of stress intensity; there was agreement more often in perception of incidence.

We applied the questionnaire of the stressful situations within the overall quantitative research, which brought some interesting and important findings. However, it is showed at the same time that statistical treatment of data can hide some significant facts. Therefore, we emphasize the validity of stress conception as the multifactor phenomenon that is necessary to judge in respect to particular context with inter-individual and intra-individual variability in our mind. In these dimensions, it is possible to consider also the stress adequacy or stress inadequacy connected with school environment.

We are sure that it is necessary to use more detailed data analyses with respect to particular environment of the schools and students and to interconnect the research with qualitative approaches for the possible intervention of particular pedagogical conditions.

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PERCEPCIE ŠKOLNÍCH STRESOGENNÍCH SITUACÍ ADOLESCENTY

Abstrakt: Běžné denní problémy spojené se školou mohou představovat významná rizika pro duševní zdraví. Do značné míry to závisí na jejich subjektivní percepci a interpretaci. Příspěvek na základě empirického výzkumu informuje o tom, jak současní středoškolští studenti percipují frekvenci výskytu a intenzitu působení školních stresogenních situací. Rozdíly v hodnocení jsou zde zkoumány jak v rámci celého souboru, tak z hlediska pohlaví, typu školy, ročníku a školního prospěchu. Výsledky korespon-

dují s našimi předchozími výzkumy i s poznatky prezentovanými v odborné literatuře. Frekvence výskytu zátěžových situací je celkově nižší, než úroveň subjektivně vnímané zátěže. Rozdíl je výrazný zejména u situací vztahu učitel - žák, zatímco u situacích se k podmínkám učebního procesu a podávání výkonu je zanedbatelný.

Klíčová slova: stres, běžné denní problémy, škola, střední adolescence, pohlaví, typ školy, prospěch

USE OF COPING STRATEGIES BASED ON PHYSICAL ACTIVITIES IN STRESS ELIMINATION IN SCHOOL ENVIRONMENT

Marie BLAHUTKOVÁ, Evžen ŘEHULKA

Abstract: *As we have have testified in our research, the level of stress in the school environment directly influences all its participants. Adults are influenced in different periods and with higher intensity than children. Teachers have proved a high level of stress in this research. As an outcome of the proposed and applied methods we have learnt it is necessary to respect the offered help by means of selected physical activities according to the specialisation of every single person, i.e. with the individual approach. Special sets of physical activities have been built up from the proposed methods and we may divide them into three basic areas – sports physical activities, psychomotricity and its alternatives and kinesiotherapy and its alternatives. It depends on every particular person as well as on his/her stress level. In adults we have proved the positive effect of all mentioned variants, whereas in children only psychomotricity and kinesiotherapy showed positive impact.*

Keywords: *mental health, movement, quality of life, stress, coping strategies*

School environment represent a specific system in which a certain hierarchy may be seen with its own inner rules. For the external world this system seems often rather indistinct and the external environment is often not acquainted enough with all circumstances of the events happening in a school. Therefore, it is necessary to respect this system as a framework based on several interconnected levels that contact the external environment by means of information transfer toward the parents and the public in an official way (e.g. teacher-parent meetings, pupil's book, school web sites or doors open days, etc.) or by means of a more common form, i.e. by leakage of unsubstantiated pieces of information and half-truths, which usually opens a wide-ranging discussion about the school.

All the above mentioned features are always interconnected and their partial changes entail changed pieces of information and thus a non-adequate reaction of the participating persons, i.e. stormy reaction of the parents or teachers that may however not be based on truthful information. Therefore, certain tension appears inside the system itself and it is often caused by the external interferences, although not knowing the reasons of the origin of these situations and their further circumstances.

The school environment system itself includes many features which may elicit in-

ternal unease and tension and this may also breed increased nervousness in all participants of the school environment and sometimes it a negative transfer on individuals appears. Negative environment influences the origin of misunderstanding and gradually, negative emotions, which develop into a more permanent stress, may appear as well. Stress is a generator of several serious diseases and influences both school and class atmosphere. We consider stress a burden, i.e. a state evoked by action of certain initiatives in excessive amount and for a longer period. Generally speaking, stress may also be a state of deficiency, i.e. deprivation (Vymětal et al., 2009). Regarding human beings, stress was originally considered a negative emotional experience, accompanied by a set of biochemical, physiological, cognitive and behavioural changes (Křivohlavý, 2001). Nowadays we speak more of an extreme load that leads toward internal tension and critical balance disruption (homeostasis) of the organism. In case the physical or psychological balance of a human organism is imperilled, it answers with a stress reaction (Atkinson, et al., 2003). Stress may be appear as a reaction on unexpected events, which is then labeled “acute stress“ or as a reaction on a long-term load, i.e. „chronic stress“ (Jones, Moorhouse, 2010). As soon as the organism is exposed to stress for a longer period, severe changes in human organism happen, such as loss of muscle tone (especially the body posture decreases), immune system debilitates and thus the performance of man decreases. We may state that stressed people find it more difficult to communicate with others, they react on common requirements in an inappropriate way and they shut away from the outside world. Children may often be taciturn, inattentive, non-cooperating in a team, introvert, uncreative and uninterested in play. It is often one of the first and typical reactions on a load induced by stress (Fink, 2000).

Stress may also be perceived in a positive way, in case it is not a negative emotional experience but an attempt to manage particular situation or something that makes us happy while we must make an effort. In such a case we speak about the „eustress“ (Křivohlavý, 2001). Experienced teacher may use this positive stress type in the school environment in order to improve the school results. However, its long-term overuse may bring a negative result.

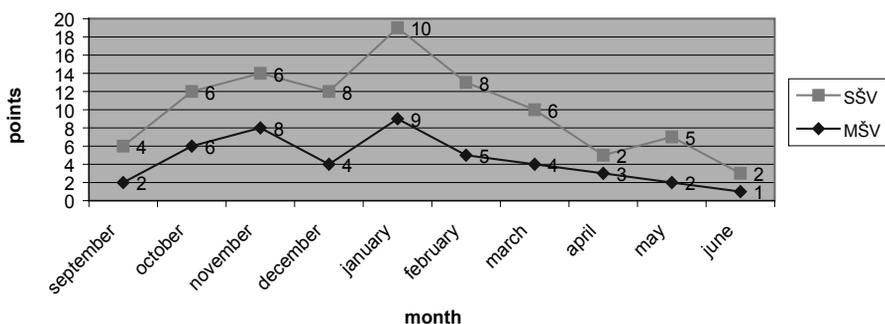
In our *School and Health 21* research project we dealt with stress in school (distress) and its roots. We learnt that stress is a common serious problem of the contemporary school and it varies according to the participants (age or time aspect). During the 2-year research we obtained a detailed analysis of the stress state in 6 selected schools in the Czech Republic in 2264 pupils of primary schools, 320 teachers and 12 school employees. We learnt that stress in pupils appears less frequently than we had expected, i.e. in 13,5 % (see Table 1). There was more stress symptoms in young school age children and in females. We were also interested in the fluctuation of stress in relation to school year period and thus we repeated the research procedures in selected pupils of particular school several times. We learnt that the stress level fluctuates in dependence on the school year continuance (see Picture 1). The highest stress level was evident in children at the beginning of the school year and in during the half-term. In the older-age children it was evident before the end of a school year as well. In teachers the stress level is rather high and we may state that one third of primary school teachers prove themselves to have stress (see Table 2). Stress fluctuation in dependence on time is different from pupils as teachers have the highest stress level before Christmas and towards the end of a school year (see Picture 2). Many of them leave for holidays rather exhausted and they

have labeled their stress „hard to cope with“. We also attempted to address other school employees but only 12 of them were willing to cooperate (bursar, secretary, chief cook and janitor). In two employees we ascertained repeated stress of a higher level and one of them decided to cooperate with us in order to eliminate the stress symptoms.

Table 1: Higher stress level in pupils of selected school in the Czech Republic

Stress level	Number of pupils	Total number of pupils
Pathologic stress	12	2264
Heavy stress	44	
Big stress	89	
Increased stress	155	

Stress fluctuation in pupils

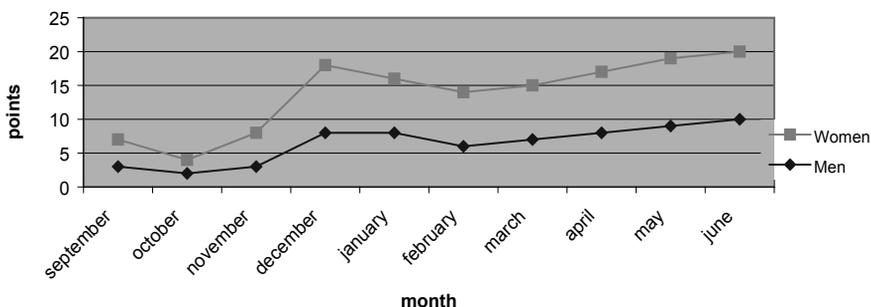


Picture 1: Stress fluctuation in pupils in dependence on time

Table 2: Higher stress level in teachers of selected school in the Czech Republic

Stress level	Number of teachers	Total number of teachers
Pathologic stress	14	320
Heavy stress	22	
Big stress	29	
Increased stress	47	

Stress fluctuation



Picture 2: Stress fluctuation in teachers in dependence on time

During the result processing we also initiated further cooperation with schools in the area of care of health and we focused on coping strategies of stress elimination in school. The process of managing stress situations is known as „coping“. It consists of two basic forms. One can focus on a particular problem or situation that has appeared and try to find a way of changing this situation or even of avoiding such a situation in future. This form is called “problem-focused coping“. However, we may also focus easing the emotions connected with the stress situation, although the change of the situation itself need not come about. This process is known as an “emotion-focused coping“ (Atkinson, et al., 2003) . The keystone of stress management is in good health and enough power (Křivohlavý, 2001). We shall also emphasise that a stressed person must be convinced that he wants to eliminate his problems and therefore is willing to do something about it. This is a positive attitude to problems. Some authors also mention adequate social or material support of the stressed person. Psychological resilience is an expected prerequisite of success in the environment under high psychological pressure. Therefore some teachers or parents intentionally evoke stress situations as they suppose they will improve the psychological resilience of their children. In a questionnaire research, we conducted in selected persons showing repeatedly a higher level of stress, we obtained information of the stress origin and causations. In this stage it was necessary to divide the coping strategies into two categories with one being focused on pupils and the other on teachers and non-pedagogical employees. Our interventions focus on physical activities that may contribute to stress elimination in a positive way as well as to increase of psychological resilience.

1. Pupils

Teachers were informed about the fact that some children prove problems with stress coping (in some cases the teachers themselves had labeled such pupils). By means of questionnaire survey we learnt that the pupils are unsatisfied with both the offered sports activities and other selected sports which have not been in offer so far. We thus focused on the offer of psychomotor games and exercises which are based on experience and joy of movement as well as on selected steps from the area of kinesiotherapy, the basis of which we presented to PE teachers and other participants. 14 seminars for teachers in total (2 in each school) were conducted and some of the teachers also participated in a course arranged by the Department of Special Pedagogy, Faculty of Education (32 hours – 6 participants in total) or in licence course at the Faculty of Sports Studies (3-day course – 8 participants in total). Play was the keystone of the selected exercises and it enabled the pupils to participate in the activities spontaneously. At the same time it is necessary to respect the fact that play is a basic element of social and intellectual development of human personality. By means of playing we develop motricity and both non-social and social skills as well as social roles. Cognitive side of a child is developed, behaviour is innovated and signalisation is changed – one’s self-presentation towards close objects (in young children represented by parents, in older children by classmates, friends and adults including teachers). These features are particularly important for a further development of children as in the period of dependence they achieve not only formal education under the intention of values and traditions of culture, but they are also confronted with various social roles they have to play and manage (Michel, Mooreová, 1999).

Components of kinesiotherapy were used especially in children who proved pathologic stress level. These children are under medical surveillance and cooperation with teachers is particularly intensive. Some children with pathologic stress had even stopped attending school as a result of this serious disease (4 children in total). This area of our cooperation with selected schools is continuously developed and another research survey is planned for spring 2011.

2. Teachers

Surprisingly high stress level occupied all the addressed school directors who consequently requested a suitable intervention for their teachers. Some teachers did not show any sign of interest in further cooperation. However, many of them gradually started reacting in a positive way and took part in the offered physical activities.

Sports movement activities – particular schools have offered selected sports disciplines to teachers in the afternoon hours on a voluntary basis:

- volleyball (2 schools)
- basketball (1 school)
- football (1 school – women and just 2 men)
- fitness centre (2 schools)
- aerobic (2 schools)
- swimming (1 school)

Teachers who proved normal stress level also participated in the above mentioned activities. They supported the successful cooperation and motivated their colleagues who were under stress and had problems with performing any physical activity as well. Sport and sport-movement activities are significant for adults as regular movement activity contributes to the correct body posture, obesity and overweight decrease, protection against civilisation diseases and it also prevents hypokinesia that is evident in increasing number of adult population. Physical activity also contributes to a better psychical condition and therefore to the increase of quality of life.

Psychomotricity – in the selected schools we conducted 2 seminars of psychomotricity and kinesiotherapy in which all teachers and some non-pedagogical employees participated. Many teachers started using the activities from the area of psychomotricity in their lessons, apart from physical education, e.g. in maths, music, Czech or in foreign languages teaching (English, German). The teachers themselves have admitted that they participate in the psychomotor activities with their class in order to get to know the group of pupils and to improve mutual cooperation.

Kinesiotherapy – teachers who experienced pathologic stress were recommended to attend seminars of psychomotor therapy that take place at the Faculty of Education, Masaryk University. Out of the total number of addressed teachers 5 of them (4 women,

1 man) attended these seminars. 3 teachers have quit their job for health reasons and 2 teachers are find themselves in a long-term state of work inability.

We are going to continue this form of cooperation as well and we plan to conduct one more seminar in each school and evaluate the whole project eventually.

Our research and cooperation with the selected schools have brought several experiences on the basis of which we shall state the following recommendations:

1. Stress in the school environment is a characteristic negative feature.
2. Stress level of the pupils relates to the contemporary conditions of school and it is necessary to monitor this feature. Higher stress level is often to be seen during a serious disease outbreak or in children from insecure social environment without adequate social support.
3. Stress level increases under the conditions of agresivity that may precede even school bullying.
4. Teachers should systematically increase their psychical resistance within their job in order to prevent the burn-out syndrome or fatigue syndrome.
5. Physical activities are basic features of coping strategies that contribute to the increase of resistance in school.

Within the health care movement is especially important and all its forms should make a regular part of our lives in order to improve the quality of life and to live a full-value life at the same time.

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VYUŽITÍ COPINGOVÝCH STRATEGIÍ S NÁPLNÍ POHYBOVÝCH AKTIVIT PŘI ODBOURÁVÁNÍ STRESU VE ŠKOLNÍM PROSTŘEDÍ

Abstrakt: Jak jsme prokázali v našem výzkumném šetření, míra stresu ve školním prostředí přímo působí na všechny jeho účastníky. Na dospělé v jiném období a s vyšší intenzitou než na děti, přitom učitelé v tomto šetření prokazují vysokou míru rizika. Z navrhovaných a posléze aplikovaných metod jsme zjistili, že je nutné respektovat nabízenou pomoc formou vybraných pohybových aktivit dle zaměření jednotliv-

ce, tedy individuálně. Z navrhovaných metod jsou sestaveny nabídky, které spadají do tří základních okruhů – sportovně pohybová aktivita, psychomotorika a její varianty, kinezioterapie a její varianty. Závisí na jednotlivci i na hladině stresu, kterou člověk vykazuje. U dospělých se nám osvědčily všechny zmíněné varianty, u dětí pouze psychomotorika a kinezioterapie.

Klíčová slova: duševní zdraví, pohyb, kvalita života, stres, copingové strategie

THE CHARACTERISTICS OF THE DISADAPTIVE CONDITIONS OF THE UNIVERSITY STUDENTS AND THE POSSIBILITIES OF THEIR CORRECTION

Lyudmila K. BUSLOVSKAYA, Yulia P. RYZHKOVA

Abstract: *The functional possibilities of the organism, anthropometrical parameters of first-year students, a level of physical development, dynamics of parameters of cardiovascular system parameters of blood at students, types of adaptable reactions, the adaptive peculiarities of the first-year students were studied. The desadaptive conditions of the university students taking into account the levels of the students' body health were characterized. The complex correctional was done, after which the quantity of the students with the satisfaction adaptation increased, their psycho-emotional condition, advancement improved. The predominance of the higher activation reactions comparing to the calm activation before correction was established to the students with low level of the body health.*

Keywords: *health students, adaptation, desadaptive conditions, complex correctional*

Introduction

At first and second years of education falls period of acute adaptation of students, that's why not all first-year students quickly adapt to new environment and high activity, what leads to disadaptation. Disadaptation is a process, which appears by influence on human's organism of environmental factors, that exceed in amount possibilities of adaptive system, and causes adaptive reactions of organism abnormalities.

More often, you can find disadaptation at first-year students with extremely high trait anxiety, with serious somatic diseases, at invalids, orphans from the infancy and people suffered from lack of mothering [8;9].

That's why it is important to carry out modern diagnostics, correction and preventive care of disadaptive conditions development of first-year students.

Among medicines, applied for compensation of organism's functional state, it is worth to notice amber acid medicines. According to M.P. Saakyan and others [10], amber acid takes part in correction of energy metabolism abnormalities as powerful proton source and ATP and also as antioxygent which provides improvement of energy metabolism.

The aim of our researches is to study university first-year students' disadaptive conditions and possibilities of their correction. To reach this aim, the following tasks were set: to evaluate adaptive possibilities of students, to give characteristics of disadaptive conditions of students and to study efficiency of complex correction appliance.

Materials and research methods

The researches were carried out at Pedagogical Department of Belgorod State University in 2005-2008. In general, there were examined 724 students of 1st-3d years of education. Integrative health rate (health level), vegetable homeostasis, adaptive potential, etc. were determined [6] according G.L. Apanasenko's method [1]. In family practice center of University clinical blood's analysis was done, state of cardiovascular system was evaluated. On signal indicators of peripheral blood's leucogram were identified types of blood's adaptive reactions, characterized by nonspecific resistance of organism. As for lymphocyte's ratio to segmented neutrophils (L/N) were identified reactions of training, quite arousal, high arousal, stress, over-arousal [5]. Efficiency of education activities was evaluated in terms of test score and current progress. The researches were carried out within one term period and exams period.

Results

On the basis of all data analysis [2;3;4] the group of students with tension of adaptive process (disadaptation) was separated, in this group were found reliable differences of haemodynamics parameters, potential of circulatory system, vegetable homeostasis etc.

The quantity of first-year students with disadaptation, in average, composes 22 % from all first-year students, it corresponds with data of R.G. Gilmutdinov (2005), who found out in his researches up to 30 % of students with serious problems with educational activities while adaptation process [7].

Within the disadaptive group there were separated subgroups taking into account estimation of individual health reserves with the help of rapid-test of diagnostics suggested by G.L. Apanasenko. Among students with disadaptation, 52 % has low level (subgroup No1), 30 % - below average (subgroup No2), 18 % - average level of physical health (subgroup №3).

Average values of systolic and diastolic blood pressure, frequency of heart beats of students in subgroup №1 were reliably higher, than of students in subgroup № 2 and 3. It is, probably, connected with high tension of adaptive mechanisms of students with low level of physical health.

By vegetable status, 75 % of students in subgroup No1 were sympathonics, they had predominance of ergotropic regulation mechanism, 16,7 % were vagatonics, i.e. with trophotropic mechanism's predominance, 16,7 % were vagatonics, i.e. with predominance of trophotropic mechanism. 8,3 % of students had euthonia and balance of nervous system's vegetal departments. In subgroup No2 and 3, the quantity of students with trophotropic type of reaction was higher on 11,9 % and on 33,3 % in comparison with subgroup No1 accordingly.

Efficiency test of Hildebrant allowed to reveal that 58 % of students in subgroup No1 have the presence of normal intersystemic interaction in cardiorespiratory system, 42 % had discrepancy in operation of cardiovascular and respiratory systems. In subgroups No2 and 3, 71-75 % have coefficient of Hildebrant within norm, 25-29 % - discrepancy in cardiovascular and respiratory systems' operation.

To determine level of circulatory system operation and adaptive capabilities of whole organism, adaptive potential value was calculated. Average values of adaptive potential of students in subgroup No1 were higher on 12,3 % ($p < 0,05$), then in subgroup No2 and on 24,2 % ($p < 0,05$), then students of subgroup No3, what indicates considerable tension of adaptive mechanisms of students with low level of physical health.

By the results of psychological testing most of students in subgroup No1 and No2 have melancholically type which characterize by unbalanced behavior, complete and long emotional experiences, unstable mood with pessimism predomination. In subgroup No3 predominates choleric type.

To study possibilities of lowering stress-reactions of students with tension of adaptive processes in pre-sessional period, complex correction work was carried out within month, it included adaptogen dose of amber acid from biologically active supplement in food doses, allowed by Nutrition Institute of Ministry of Health of the Russian Federation; classes with psychotherapeutic and training of self-regulation methods to use it in stressed situations, etc.

After correction work in subgroup No, quantity of vagotonics has increased on 8,3 % , in subgroup No2 - on 11,4 % and in subgroup No3 - on 10 %. In subgroup with low level of physical health the quantity of students increased on 8,7 % with normal intersystem interactions in respiratory system, in subgroup with physical health level below average – on 9 %, at students with average level of physical health - on 25 %.

In subgroup No1 after correction the quantity of students with satisfactory adaptation increased on 16,7 %, in subgroup No3 – on 75 %.

After correction in subgroup No1 the quantity of students with moderate anxiety increased on 47,7 %, in subgroup No2 – on 31,4 %, in subgroup No3 – on 75 %.

Adaptive reactions of organism are antistressed reactions, which reflects impact force and organism's reaction rate. It is important to use for characteristic not only one parameter but interaction between quantity of lymphocytes and segmented neutrophils L/N [5]. Leucogram analysis of peripheral blood after correction allowed to find out that 41,7 % of students in subgroup No1 have reaction of high arousal, 33,3 % - training reaction and 25 % - reaction of low arousal, in subgroup No2 after correction the reaction character hasn't changed – predomination of high arousal remained, in subgroup No3, 50 % of students had low arousal, 25 % - high arousal and 25 % - training arousal

Progress analysis showed that after correction students' progress in subgroup No1 increased on 11,1 %, in subgroup No2 – on 16,7 % and in subgroup No3 - on 17,6 %.

Thus, in the results of carried out researches was established that for students with low level of physical health characterized melancholical type, high anxiety, considerable tension of adaptive mechanisms, predomination of sympathicotonia. and discrepancy in cardiovascular system's work, higher values of blood pressure parameters, heart beats frequency in comparison with students with physical health level below average and average. These students compound risk group towards neuropsychic and

somatic diseases and need pedagogical, psychological and medical correction. It was established that correction work allowed to low tension level, positively influenced on psychophysiological characteristics of students of disadaptive group and their progress.

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CHARAKTERISTIKA DISADAPTIVNÍCH PODMÍNEK VYSOKOŠKOLSKÝCH STUDENTŮ A MOŽNOSTI JEJICH KOREKCE

Abstrakt: Autoři studovali funkční možnosti organismu, antropometrické parametry studentů prvního ročníku, úroveň fyzického vývoje, dynamiku parametrů kardiovaskulárního systému, krevní parametry studentů, typy adaptivních reakcí a charakteristické adaptivní rysy studentů prvního ročníku. Charakterizovali disadaptivní podmínky universitních studentů, přičemž brali v úvahu stav jejich tělesného zdraví. Byla provedena komplexní korekce, po níž se zvýšil počet úspěšně se adaptujících studentů, zlepšil se jejich psycho-emoční stav a dělali větší pokroky. U studentů s nízkou úrovní tělesného zdraví byla zjištěna predominance vyšších aktivačních reakcí ve srovnání s klidovou aktivací před korekcí.

Klíčová slova: zdraví studentů, adaptace, disadaptivní podmínky, komplexní korekce

THE CONSERVATION OF SOCIAL HEALTH OF HIGH SCHOOL STUDENTS. THE EXPERIENCE OF RUSSIAN SCHOOLS

Veronike EFIMENKO

Abstract: *The problem of the formation and conservation of social health of pupils in secondary schools by means of Children's service of reconciliation is shown in this article. The Reconciliation Services in secondary schools include cooperation among administration, coordination, implementation of programmes and methodological work. This paper introduces the possibilities of such programmes, which allow to organize the constructive dialogue among the conflicting parties, facilitate social adaptation and eventually improve school climate. The experience of the work of Children's service of reconciliation about the settlement of school conflicts is also presented in the article.*

Keywords: *social health, secondary school, Children's service of reconciliation, school conflicts*

The tendency of pupils' health decline both in Russia and Kamchatsky region determined the necessity of implementation of health conservation technologies into the educational process of school as an important means of health conservation.

According to modern approaches to health that are fixed in the WHO's definition, health is treated as the state of full physical, mental and social welfare, but not only as the absence of diseases or physical defects.

The new conception of health reinforces the social component of health and implies sharing responsibility for health protection by the society, an individual and specialists in the medical, social and psychological, pedagogical spheres.

In accordance with the new conception, social health is viewed as social behaviour of an individual in the community, their social well-being, social comfort, social security, life activity level.

Social health is determined by the behaviour of an individual, their way of life and way of thinking. A socially healthy person has personality qualities allowing him or her to adjust to the conditions of modern life, to arrange self-education and self-accomplishment, to find the means of overcoming and solving various kinds of problems, to implement their life plans.

Social health is formed in optimal and appropriate social environment conditions

that impede the appearance of socially determined diseases, social deadadaptation and determine the state of social immune system and harmonic development of the personality in the social structure of the society.

As is seen from the work experience of some Russian schools, “Children’s service of reconciliation” (hereafter referred to as Reconciliation Service) can appear to become one of facilities for maintaining pupils’ social health.

We have already stated above that social health of a person is directly connected with successful adaptation of the child in the community, with the ability to find appropriate solutions for various kinds of problems, with social welfare of the child etc. It is worthy of note that school conflicts often interfere with successful adaptation of the child and the child’s social welfare. School appears to be not only educational process but the interaction of different people united within the scope of one space and participating in various kinds of activities. In the course of such interaction a number of conflict situations may occur.

A conflict is characterized by the confrontation of two positions and facilitates neither pupils’ nor teachers’ social health formation. Meanwhile, the school is very reluctant to give publicity to these situations, on the one hand, and, on the other hand, it is not always able to find effective ways of settling the conflict.

The following mechanisms of dealing with conflict and criminal situations in school are employed most frequently:

- an administrative decision is taken immediately in class, in the director’s office or at the pedagogic council. The main task of the administration is to find the guilty one and to punish them. Very often the injured party is accused of the provocation of the offender, after that a kind of “formal reconciliation” takes place when the pupils are compelled to shake hands and make peace;
- adolescent “bumps” (conflict appointments accompanied with fights) that take place outside school and about which teachers even do not know anything. The aim of such “bumps” is the demonstration of power and establishing the status within an adolescent group;
- the offender is sent to a psychologist, specialist in social pedagogics for reformation;
- the situation is dealt with by the parents of the offender and the injured party. The parents make telephone calls or arrange a meeting but strong negative emotions and preconceived opinions of the parties involved impede conflict settling;
- the conflict situation is transferred to a group of senior students in the framework of student government, but the method of their work practically duplicates the handling of the situation at the pedagogic council, since they do not know any other methods of conflict settling (A.Konovalov).

All the above enumerated methods impose a certain position upon the child instead of rendering responsibility for the handling of the situation, in this case we treat responsibility not as an adolescent’s obedient acceptance of punishment but as his or her dynamic actions aimed at “reparation” for the damage made and taking measures in order to prevent the similar cases from occurring.

If we consider conflict resolution with regard to the interests of all the parties

involved – the injured party, the offender, the community, – we shall face the following situation:

- the injured party feels pain, suffers and longs for dealing with the situation in some way (revenge, termination of contacts). For the injured party it is important to express himself or herself, to compensate the damage, to avoid recurring of the situation;
- the offender tries to justify himself or herself, sometimes regrets about the matter, but more often blames the injured party and expresses aggression. He or she wants to escape punishment, revelation, it is important to deal with the situation confidentially;
- the community expects the offender's regret, admittance of committing an offence, wants him or her to avoid such behaviour in the future.
- The parties will really be able to satisfy their needs if the participants of the conflict have a straight conversation in which both the injured party and the offender can speak about their emotions and complaints to each other as well as make a decision about the urgent settling the situation and the measures preventing it in the future.

But one should ask the following question: can the parties themselves hold such a conversation, being overcome with emotions and distrust? What can one do in order such an appointment does not turn into fight? This situation demands for a conciliator who could help in settling the long-term conflict and control the abidance by rules during the appointment. It is the function that the school Reconciliation Service could perform.

Reconciliation Service appears to be a voluntary union of volunteer children, the 7-11-formers the aim of which is the following:

- involvement of the schoolchildren into reconciliation activities;
- support of children's rights for initiative, active position in life;
- creation of conditions for developing the skills of holding constructive dialogue between pupils, pupils and teachers in partner interaction;
- preventive measures against delinquency and social rehabilitation of the underage youths taking part in the conflict and criminal situations.

Reconciliation Service functions in the interaction with the participants of the educational process:

- school administration supports the activity of Reconciliation Service, fosters the creation of a well-arranged mechanism of applying to the Service for handling conflict situations, enlarging the legal space of the school (drawing up reconciliation agreements on the settled conflict situation);
- interacting with the Service pedagogic collective supports children's initiative in reconciliation activity, facilitates the formation of partnership communication skills and constructive dialogue, demonstrates the example of tolerant relationships;
- organs of student government in the interaction with the Service develop the programme of reconstructive justice by means of the system of out-of-school activities with civil and legal orientation.

Such Reconciliation Services are created in secondary schools. The main activities of the Service are:

- arranging conversations, training, classes for volunteers among children in order to prepare them for the reconciliation activities;
- promotion of the idea of recreational justice;
- finding out conflicts, preparation and organization of reconciliation procedures;
- the organization of outreach activities among pupils, parents and teachers with the aim of forming tolerant beliefs in the school space
- accumulating the experience and its transfer.

Each member of the Service is vested rights and responsibilities. Members of the Service may include pupils of the 7th-11th form, who accept the idea of reconciliation and recreational justice. The members should be tested, should pass through preselection on the basis of their character features, which volunteers from Children's Reconciliation Service should have. Thus, for instance, the right and the duty of the Service member may be the following:

- to make suggestions on the issues connected with the Service's activity;
- to get information about the planned events;
- to participate in the implementation of the programmes and events conducted by the Service;
- to participate intensively in the Service's activity, to make one's own contribution into the work;
- not to spread information that could discredit the Service and its members;
- observe the rules of confidentiality;
- observe the rules of holding preliminary meetings and reconciliation procedures.

The work experience of Reconciliation Services in secondary schools (Moscow, Volgograd, Velikiy Novgorod, Petrozavodsk) shows that the Service's work is to be oriented to several directions: administration, coordination, implementation of programmes and methodological work.

The Service prepares adolescents as leading reconciliation programmes, works at creating an adolescent community around the Service – a support group. These are children who do not themselves implement the programmes, but accept the ideas of reconstructive justice. That is why discovering a conflict at school they are able to orientate themselves correctly and direct the parties to the reconciliation service. As a result the service will not exist “in vacuum”, but will always be aware of the situation. The enlargement of the “support group” is provided by the collective of associates, who exert a positive influence on the emotional and cultural background in the school. It is really important whether two school poles – administration and pupils – will have a site on which they will be able to work together at changing the relationships and improving the quality of life in the school. The Reconciliation Service provides an opportunity to express one's opinion without any fear and to hear the opponent's opinion. The creation of a constant site of such kind is one of the Service's objectives.

For the resolution of a wide range of conflicts the programme of reconciling the injured party and the offender (or conflicting parties) is applied. The given program-

me in the organizational plane presents a voluntary meeting of the wrongdoer (offender) and the injured party (victim). The meeting takes place in the presence of an efficient leader of the programme (children leaders), who organizes the constructive dialogue of the parties. The presence of parents, psychologists, social pedagogics specialists is admitted.

At the reconciliation meeting three main questions are discussed:

- 1) “What consequences does the criminal or conflict situation produce for the parties involved and what do the parties feel with regard to this situation?” As a rule, the consequences are destructive for both parties. And at the meeting they begin (often for the first time) to view each other as people, not enemies. So, if the parties admit that unfair and traumatic event has occurred, it seems logical to pass on to the next question.
- 2) “How can the given situation be resolved?” There are a number of solutions varying from apologizing to damage compensation in terms of money, finding an opportunity to earn money for the damage compensation, remedying the caused harm by the offender themselves and so on. We think that fairness occurs only when the parties themselves have found the solution that suits them both.
- 3) “What should be done in order such situation would never occur again?” The deeper causes and motives of the wrongdoer’s behaviour and the necessity to work with them as well as the necessity of consulting a psychologist or social pedagogics specialist are considered. To this effect a rehabilitation programme is developed.

The results of the programme implementation are fixed in the reconciliation agreement, if necessary, and may be presented at the sitting of the pedagogic council, the commission on juvenile affairs (CJA) and at the court trial during the process of decision-making.

Another programme – “Circles of care” – is used when there is such a dramatic degradation of social network that it is necessary to search for some substitution for the social ties in the community surrounding an adolescent.

The programme is implemented in case the family of a child does not perform their functions in regard to the child’s upbringing or in case of family disruption (for example, caused by alcoholism or drug addiction of the parents) when it becomes necessary to create a community of people who can support the child. It is necessary to find such people and discuss with them who is ready to share responsibility for the child and what kind of assistance they can render. Among these people may be relatives, teachers, neighbours, instructors of children clubs and so on. The question of responsibility is also discussed with the child himself or herself. The results of the meeting form the basis for a rehabilitation programme which can be presented to the commission on juvenile affairs, militia and other organs for arranging the complex process of rehabilitation. Psychologists, social pedagogics specialists and other professionals take part in the meetings (“circles”).

The third programme includes school conferences that support the work on overcoming conflict relationships in the school collective.

This programme of reconstructive justice is designed for normalization of group

relationships. School conferences can be used for reducing the level of aggressiveness in a group or for raising the status of an adolescent outsider. The programme is implemented by means of conducting a discussion in class concerning the current conflict situation and finding the way of its resolution by the class. As a rule, pupils themselves, school administration, teachers, parents take part in the programme. The programme allows to mobilize the group for solving the problem (basing upon the “reliable nucleus of the class”). In order to “balance” the parties during the discussion, it is possible to arrange the support for the outsider on the part of a psychologist, the child’s friends or relatives. The meeting can take place in a narrow circle of people who are interested in the resolution of the situation. A teacher who is not accepted by the pupils can also perform the role of the outsider at such a meeting. In this case we observe the formation of a site for organized dialogue between teachers and pupils, on which both parties get appropriate feedback and solve problems concerning the further interaction.

Thus the work of Reconciliation Services in secondary schools creates an opportunity to react to pupils’ antisocial actions that have not yet caused wrongdoing and law breaking. The Service’s work with adolescent aggressiveness and bullying that in the future may transform into wrongdoing appears urgent as well. The work of the Reconciliation Service is also effective for the relaxation of tension and normalization of mutual understanding in the collective.

Summing up all mentioned above, we can draw a conclusion, that the introduction of Reconciliation Services into the secondary school structure will allow to solve numerous problems that emerge in the school environment, to prevent deviant and delinquent behaviour of adolescents, to maintain the favourable psychological climate in the school collective and, finally, facilitate successful adaptation of pupils, their social health preservation and maintenance.

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<http://www.sprc.ru>

OCHRANA SOCIÁLNÍHO ZDRAVÍ STUDENTŮ STŘEDNÍCH ŠKOL¹. ZKUŠENOSTI RUSKÝCH ŠKOL

Abstrakt: Tento příspěvek se soustřeďuje na problematiku formování a ochrany sociálního zdraví žáků středních škol za účasti institutu „dětské smírčí služby“. Smírčí služby na středních školách se věnují spolupráci s administrativou, koordinaci, implementaci programů a metodologické práci. V příspěvku jsou představeny možnosti tako-

¹ Pozn. překl.: termín střední školy používaný v příspěvku odpovídá v českém systému školství přibližně druhému stupni základních škol a nižším ročníkům víceletých gymnázií.

vých programů, které umožňují organizovat konstruktivní dialog mezi stranami sporu, usnadňují sociální adaptaci a případně zlepšují i školní klima. Dále jsou zde uvedeny zkušenosti z práce smírčích služeb pro děti v oblasti řešení školních konfliktů.

Klíčová slova: sociální zdraví, střední škola, dětská smírčí služba, konflikty ve škole

SOCIAL HEALTH IN TERMS OF STUDENTS OF EDUCATIONAL COURSES

Božena JIŘINCOVÁ, Michal SVOBODA

Abstract: *Developing student personality to enhance key competences and positive interpersonal relationships among classmates can still be a serious problem in present-day schools. The article gives a general analysis of the concept of social health. It gives a detailed account of social health characteristics from the point of view of the development of students' social skills and optimum interpersonal relationships between individual players in school education. The issues are approached from the viewpoint of perceptions and opinions of social health of students from primary and secondary schools. Students' opinions were ascertained using a questionnaire survey.*

Keywords: *social health, interpersonal relationships in the classroom*

1. Basic Characteristics of a Social Health Concept

One of the areas of current health care approaches concerns Social Health undoubtedly. Along with physical and mental health, it forms one of the three pillars of most definitions of health. This could be substantiated by the general definition of health by the World Health Organization (WHO): “*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*”¹

The issues of social health can be seen from several areas; one of them is related to socio-economic aspects. These aspects are based on the belief that coping with high morbidity and mortality it is necessary to systematically exploit the elements of social control, such as law and legislation, education, economic instruments, mass media, etc. From that point of view, the concept of social health can be characterized as a condition in which people live with the ability to care for their health, including the use of the health system.

Another view of the social health concept may be approximated by the idea of W. A. Russell, who believes that “*human health is subject to not only personality-physiological factors but also how the man can relate to other people and cope with social institutions.*”²

Quoted concept of social health contains conditions which relate not only to the socio-health system but mainly to the personality of man as a social being. This implies that an individual needs optimal interpersonal relationships, managed by their own so-

¹ <http://cs.wikipedia.org/wiki/Zdrav%C3%AD>. N.p., 20 Sept. Web. 20 Sept. 2010.

² <http://www.answers.com/topic/social-health>. N.p., 20 Sept. Web. 20 Sept. 2010.

cial skills, in order to maintain his/her well being. Many authors, e.g. R. Kohoutek, approach the social health in similar manner.

From this perspective, the social health is most frequently defined as: peace in the family, at work, in society; the optimal social communication, peaceful social relationships, etc.³ In global point of view, the concept of social health can be understood as the ability of man to be happy and make others happy. This means interacting and communicating with other people, stand up in society and work at it. It is also the ability to relax and experience life for all it's worth.⁴

Health problems and stress are closely intertwined. In relation to issues of social health, it is necessary to mention that social stress and social stressors significantly affect individual life satisfaction and mental health, but also affect physical health. A man is a product and a creator of social relationships, as well as a contact point for people surrounding him/her from birth to death. The quality of interpersonal relationships as well as the level of individual communication skills, and the possibility of its positive influence, is unquestionably part of the key factors of addressing social health issues.

In relation to issues of social stress in workplace, we need to recall the European guide to work related stress, issued in 2000. At that time, the annual economic cost of work related stress in EU countries was estimated at €20 billion Euros. Worker stress considerably contributed to that sum. Therefore, the European Commission itself encourages corporations within the EU to realize the impact of the situation and call to act. Every one of the EU countries stepped up to the recommendations of the Framework Directive 89/391/EEC their own way. Some countries are paying increased attention to prevention of psychosocial risks. E.g. in Belgium, Germany, and the Netherlands, employers are responsible for the overall psychosocial effect of stressors on their employees, and mitigation of their negative impact on mental health.⁵

Whether we regard the school environment as a type of work environment for students and teachers, we can conclude that social health is a current topic of educational activities in terms of primary and secondary schools. Based on changes in education curriculum, it is necessary to consider a school as a place where social skills of students are developed and the optimum conditions for full-fledged development of interpersonal relationships are made.

In the next part of this contribution we will focus on the characteristics of social health in terms of development of student social skills and optimal interpersonal relationships among single factors within school education.

1.1 The Development of Students' Social Skills as Part of the Promotion of Social Health in Terms of School

Social skills are an important element of competent behaviour in social situations. As mentioned in the introduction, a good relationship with others is one of many important aspects of social well-being. For this reason, social skill development should be considered a part of essential education goals in primary and secondary schools.

³ <http://slovník-cizích-slov.abz.cz/web.php/slovo/socialni-zdravi>

⁴ <http://www.joga.cz/system/4-druhy-zdravi/>

⁵ Sapirs, M. Stres přípravě. Praha : Českomoravská konfederace odborových svazů, 2003.

In short, we will focus on the definition of social skills. Social skills are usually understood as readiness through experience and training to act correctly in certain social situations.

V. Švec understands social skills as a *“the most complex competence of subjects that interact within a spectrum of difficult social situations, i.e. to comprehend situations and be able to solve problems in the most optimal way (optimal in terms of individual, also in terms of co-participants, and partners in a social situation).”*⁶

Social skills are defined by J. Praško and H. Prašková more specifically. This author couple describe social skills as *“human capability to express one’s needs in a natural way, to talk about his/her feelings and intentions, and to take into account the needs of others... Social skills are needed in working activities: We need to be able to settle matters with the authorities; to find a job; to get along with superiors and subordinates... We need them also in our personal life. Essentially, for example, to be able to notify a close person of how we feel about him/her, what we need from him/her, to be able to listen to him/her when he/she suffers, to encourage him/her when we feel he/she needs it.”*⁷ From definitions given, it is clear that social skills are related to many areas of human social behaviour.

Komárková R., I. Salměnik, J. Výrost assign a list of social skills that can be classified as socio-competent behaviour of individuals.⁸ According to these authors, among social skills are ranked: social perception (intuition, self-reflection), social communication (verbal communication, communication between people, individual communication skills, active listening), social interaction in a group (cooperation and competence in pairs, teamwork), conflicts and its management (understanding of the process of conflict, behavioural styles in interpersonal conflict), assertive behaviour (compliments, receiving criticism and criticising, management of affective attack, rejection and assessment of requirements, compromises), coping with stressful situations in a group setting (strategies of coping with stress, strategies of coping with deprivation and frustration), development of social creativity (development of social creativity in interpersonal relationships). We can conclude that the results of the survey constitute for a competent basis for students to achieve social well being.

*The requirement for student social skills development in terms of primary and secondary education is embedded in the Framework Educational Programmes. Health Education falls into the fields of education where student social skills are expected to evolve the most. In the educational field, the following anticipated outcomes are formulated: “he/she respects the acceptable rules of coexistence among peers and partners: he/she contributes to creation of good interpersonal relationships through positive communication and cooperation; he/she uses own...social skills for regeneration of organism; he/she is polite to the opposite sex; he/she applies learned social skills and behavior patterns during contact with social-pathological phenomena in school and beyond ...; he/she evaluates the potential **manipulative influence of peers** based on his/her knowledge*

⁶ Švec, Vlastimil. *Klíčové dovednosti ve vyučování a výcviku*. Brno : Masarykova univerzita, 1998. Chapter

⁶ Sociální dovednosti a jejich rozvíjení, p. 77.

⁷ Praško, Ján. and Prašková, Hana. *Aservitivou proti stresu*. Praha : Grada Publishing, 1996. Chapter 2, Komunikace, stres a sociální zdatnost, p. 13.

⁸ Komárková, Růžena., Slaměnik, Ivan., and Výrost, Jozef.; ed. *Aplikovaná sociální psychologie III*. Praha : Grada 2001. Chapter

and experience..., etc. ⁹ *Based on the list of expected results above, we can conclude that social health in primary and secondary schools is supported by the curriculum point of view. A question remains: what is the extent of fulfilment of expected results on quantitative and qualitative terms in real-world school conditions?*

1.2 Optimal Development of Interpersonal Relationships in the Classroom as Part of the Maintenance of Social Health

Optimal relationships in the classroom are some of important assumptions for effective teaching of students, in regards to **relationships among students, and among teachers and students**. Quality relationships are part of so called social environment in the classroom. According to J. Mares, the notion of social environment in the classroom indicates „*a long term phenomena, typical of a certain grade and a certain teacher for several months or years. Their creators are: students from the entire class room, groups of students from a particular class room, individual students, as well as a group of teachers teaching in the classroom, and finally, teachers as individuals.*” ¹⁰

Based on the diagnostic questionnaire “Our Classroom”, V. Holeček¹¹ outlines the social environment in the classroom under the following views:

1. Satisfaction in the classroom – student relationships to their class, degree of satisfaction, well-being in the classroom.
2. Conflicts among students – so called squabble, from tension over disputes, fights to bullying.
3. Competition in the classroom - a competitive relationship, level of effort to stand out, an experience of failure.
4. Difficulty learning - experience of school demands, how hard, difficult, or uninteresting the subject is.
5. Class cohesion - friendly or hostile relationships between children, the level of class community.
6. Order in the classroom - classroom discipline, the degree of cooperative behavior.

*Development of optimal social climate in the classroom as a social well being of students in school is aptly characterized in Programme of Health Support at School. In the chapter „Social Welfare“ means were given by which the desired order in the classroom could be achieved. The chapter states: „An important way to create a comfortable social environment is the development of humanistic attitudes as part of education and the teachers’ and children’s personal development. These attitudes include, especially: respect, trust, and tolerance; recognition, participation and empathy; openness (willingness), and will to cooperate and assist.”*¹²

⁹ Rámcový vzdělávací program pro základní vzdělávání. Praha : VÚP. Chapter 4, Klíčové kompetence, p. 14.

¹⁰ Čáp, Jan., and Mareš, Jiří. Psychologie pro učitele. Praha : Portál, 2001. Chapter 19, Klima školní třídy, p. 568.

¹¹ Holeček, Václav. Applikovaná psychologie pro učitele II. Plzeň : ZČU, 2001. Chapter 1, Sociální interakce ve škole, p. 12.

¹² Havlíčková, Miluše., es. Program podpory zdraví ve škole. Praha : Portál, 1998. Chapter II. Obsah programu podpory zdraví ve škole, p. 94.

Development of humanistic attitudes in interpersonal relations in a classroom is a long and sometimes very difficult matter. For example, cooperative learning belongs to the organizational form of education that can aid this project. In addition to these organizational forms of education, a direct systematic work with a class group is employed to the development of humanistic attitudes among students. For this purpose, so-called introductory courses are currently widely implemented. This is a tutorial that is aimed at creating optimal conditions for creation of interaction in the group, induction, and support of these interactions. Through this program, students have the opportunity to get more information about others, understand some of motives for behavior of others, use incentives to achieve the optimal level of mutual communication and cooperation. At the same time there is the development of students' social skills that are necessary for full integration into peer and social groups.¹³

In conclusion to this issue, we can say that a systematic and continuous work with a class group is an important prerequisite for the optimal development of relationships in the classroom as a part of the promotion of social health. It is this assumption that is neglected in a school practice, often under the influence of other „important“ learning tasks.

2. Social Health from the Standpoint of Teaching and Education Students - Research Investigation

Basic characteristics of the research:

The undertaken investigation is only an orientation. Its significance lies in the views of students of the teaching and education field who view the concepts of social well being in terms of school. The results of the survey should be seen as an impetus for further reflection and discussion.

A description of the research investigation:

Students of The Pedagogical Faculty of University of Western Bohemia in Pilsen, who are studying Teacher Training for Basic Schools and Practical Training Teaching / Vocational Education should respond in writing to the question relating to issues of social health in terms of school. For the research, students of the aforementioned subjects were selected on the grounds that they studied using a combined study mode; therefore, all respondents were practicing teachers in primary or secondary schools.

The research investigation took place at the beginning of the Summer Semester of 2009/10 during the initial lecture of Psychology of Health class. After the question was given, students were allowed time to compose their written answers. Criteria for grading written responses were laid down on the basis of described features of social health in the previous chapter.

¹³ Svoboda, Michal. Využití sociálně psychologických technik ve školní praxi. Praha : UK (diploma paper) 2002. Chapter 6, Specifické využití strukturovaných programu založených na sociálně psychologických technikách ve školní praxi, p. 126.

Basic data from the undertaken investigation:

Number of respondents: 42 (Practical Training Teaching / Vocational Subjects Teaching) – average length of teaching experience: 6 years
46 (Teacher Training for First Grade) - an average length of teaching experience: 4 years

Formulation of questions: *“How do you envision the concept of social well being and how can it be developed in terms of school?”*
Time to formulate the answer: about 30 minutes.

Criteria for analysis of the responses:

- the range of responses - maximum, minimum, and average number of rows of size A4;
- text contains a response that does not correspond to any concept of social health;
- text contains responses relating to the development of students’ social skills at a general level, for example, the word social skill occurs without further description;
- text contains responses relating to the development of students’ social skills at a particular level, for example, there are words that describe social skills in detail;
- text contains methods and forms of developing students’ social skills;
- text contains responses relating to the optimal development of interpersonal relationships in a classroom at a general level, for example, the phrase interpersonal relationships in the classroom occurs without further description;
- text contains responses relating to the optimal development of interpersonal relationships in a classroom at a specific level, for example, words that describe the interpersonal relationships in the classroom occur in detail;
- text contains methods and forms of developing interpersonal relationships in the classroom.

The results of the research investigation

The Basic Question:
“How do you envision the concept of social health and how can it be developed in terms of school?”

Criterion: the range of responses - the maximum, minimum, and average number of rows of size A4		
<i>the maximum number of rows</i>	<i>the minimum number of rows</i>	<i>the average number of rows</i>
<i>Field: Teacher Training for Basic School</i>		
52	14	28
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>		
38	9	22

Criterion: text contains the responses that does not correspond to any conception of social health			
<i>The number of respondents in total:</i>	<i>The response contains only informatik that corresponds to the concept of social health</i>	<i>The response contains only information that do not meet the concept of social health</i>	<i>The response contains information that both correspond and do not correspond the concept of social health</i>
<i>Field: Teacher Training for Basic School</i>			
46	43	1	2
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>			
42	36	3	3

Criterion: text contains responses relating to the development of students' social skills at a general or particular level			
<i>The number of respondents in total:</i>	<i>Response relating to the development of students' social skills - at a general level</i>	<i>Response relating to the development of students' social skills - at a particular level</i>	<i>Response that do not relate to the development of students' social</i>
<i>Field: Teacher Training for Basic School</i>			
46	26	17	3
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>			
42	27	10	5

Criterion: text contains methods and forms of developing students' social skills		
<i>The number of respondents in total:</i>	<i>Response that contains methods and forms of developing students' social skills</i>	<i>Response that does not contain methods and forms of developing students' social skills</i>
<i>Field: Teacher Training for Basic School</i>		
46	21	25
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>		
42	12	30

Criterion: text contains responses relating to the development of interpersonal relationships in a classroom at a general or particular level			
<i>The number of respondents in total:</i>	<i>Response relating to the development of interpersonal relationships in a classroom - at a general level</i>	<i>Response relating to the development of interpersonal relationships in a classroom - at a particular level</i>	<i>Response that does not relate to the development of interpersonal relationships in a classroom</i>
<i>Field: Teacher Training for Basic School</i>			
46	23	19	2
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>			
42	26	12	4

Criterion: text contains methods and forms of developing interpersonal relationships in the classroom		
<i>The number of respondents in total:</i>	<i>Response that contains methods and forms of developing interpersonal relationships in the classroom</i>	<i>Response that does not contain methods and forms of developing interpersonal relationships in the classroom</i>
<i>Field: Teacher Training for Basic School</i>		
46	22	24
<i>Field: Practical Training Teaching / Vocational Subjects Teaching</i>		
42	13	29

Conclusion of the research

Based on the survey results we can conclude that most of the students - teachers have a basic understanding of the concept of social health in terms of school. On the other hand, it must be pointed out that the student teachers mostly formulated their response without any clarification or deeper understanding of the problem. The reason could be the reluctance of student teachers to respond in writing to a specific question or lack of awareness of social health.

The results of the survey show that those student teachers who described issues of social health in more detail were able to describe the methods and forms that lead to the promotion of social health in terms of school. The results of the survey are only the first step of the implementation of detailed research in primary and secondary school. It can be expected that teachers out of training will describe social health in a similar way as our respondents did, which means, without any deeper connection to real world teaching situations. Many experts believe that the implementation of methods of developing students' personality and positive interpersonal relationships in the class may still be a major problem in today's schools.

Finally, we can say that a man was born among humans, he lives among people, and he will live. If a man has more effective social skills, he will derive more satisfaction from interpersonal relationships, he will feel good among people, and his social dimensions of health will be filled.

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SOCIÁLNÍ ZDRAVÍ Z POHLEDU STUDENTŮ UČITELSKÝCH OBORŮ

Abstrakt: Rozvíjení osobnosti žáka ve smyslu klíčových kompetencí a pozitivních interpersonálních vztahů v třídním kolektivu, může být v současné škole stále velkým problémem. V příspěvku je obecně analyzován pojem sociální zdraví. Článek se podrobněji zabývá charakteristikou sociálního zdraví z hlediska rozvoje sociálních dovedností žáků a rozvoje optimálních mezilidských vztahů mezi jednotlivými aktéry školního vzdělávání. Problematika je zpracována z pohledů a názorů studentů na pojetí sociálního zdraví na základních a středních školách. Názory studentů byly zjišťovány prostřednictvím orientačního dotazníkového šetření.

Klíčová slova: sociální zdraví, interpersonální vztahy ve školní třídě

FAMILY RELATIONS: INDIVIDUAL IDENTIFICATION

Yulia Y. NEYASKINA

Abstract: *The article studies the variability of the identification processes in the marital dyad correlated with the character of inner relations in the wedded pair, psychological distance between the partners, emotional involvement into relations and other parameters. It describes the in-marriage individuality identity types: pseudo-social identity, pseudo-personal identity, “we”-identity. It also represents the outcomes of empirical research confirming the theoretical assumptions on the interrelation between the identity type and subjective marriage prosperity model. The article proves that the types of marriage identification processes impact the marriage partners’ subjective conceptions of marriage prosperity makings.*

Keywords: *subjective marriage prosperity, identifications, in-marriage individuality, identity types, identity in wedded pairs, “we”-identity, pseudo-personal identity*

Recently increased interest to the investigation of identification and identity problems has caused significant enlargement and conceptual sophistication of knowledge in the given sphere. The investigation of identity has acquired special relevancy under conditions of modern society that is characterized by the high-level dynamism of arising change. The family as a social institute, presenting a model of social relationships appears to be the reflection of the individual’s current historical state (A. I. Antonova, L. F. Burlachuk, A. D. Gradovskiy, L. V. Kartseva, L. A. Korostyleva, T. D. Martsinkovskaya, V. M. Rozin, E. V. Titova, I. G. Yakovenko; J.-P. Vernan, H. Delacroix, P. Jane, K. Manngem, I. Meyerson, N. Elias). Thus, treating the questions of identity in reference to the family seems to be justified.

The analysis of research works on the problem of matrimonial relations showed that in this context identification as a process and as a result is not often paid attention to. It is frequently presented as the concretization of social identification on the basis of the fact that the family is traditionally viewed as a small group (W. James, F. Znanetskiy, Ch. Kuli, J. Piaget, W. Thomas, Z. Freud.; Y. E. Aleshina, A. N. Volkova, L. Y. Gozman, A. N. Elizarov, A. I. Zakharov, M. Zemaska, E. V. Kirichenko, O. B. Panenko, A. I. Tatscheva, V. A. Terekhin, N. F. Fedotova and others). It is possible to come across only single references concerning identification with the family as a community (N. Akkerman, L. A. Korostyleva, E. A. Kronik, N. F. Fedotova, E. G.

Eidemiller and others), thereby the question about possible variability of identification processes is not touched upon.

Nowadays married couples defined as “happy” (“trouble-free”) appear in the focus of researchers’ attention rather seldom. Emphasizing the search for causes of the disruptiveness of matrimonial relations many authors give a sketchy definition of the “happiness” concept, they do not pinpoint the possible variants and levels of the latter. We suggest that the unification of matrimonial success causes rather formal division of marriages into “happy” and “unhappy”, leads to superficial and simplified investigating successful and constructive interaction of partners in marriage, brings to conservatism and stereotype in searching the ways of overcoming matrimonial ill-being.

Investigating the specificity of identification mechanisms in a married couple will allow, in our opinion, to reveal factors that give an opportunity to differentiate subjective successful relationships of the partners in a family, to show their variability.

As a result of a theoretical analysis of psychological investigation on the problem of identification (N. N. Avdeeva, V. S. Ageev, G. M. Andreeva, E. Z. Basina, E. P. Belinskaya, E. M. Dubovskaya, R. L. Krichevskiy, V. N. Pavlenko, A. V. Petrovskiy, V. A. Yadov, G. Brakewell, A. Vaterman, W. James, J. Marsia, J. Meed, J. Turner, H. Tejfel, S. Freud, E. Erikson and others) we have drawn up the typology of identification processes in the married couple. The generalized characteristics of main types are presented below.

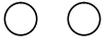
The first variant appears to be the identification of the subject of the conjugal interaction with the family role. The given type was named as “pseudo-social identification” (PS hereafter) on the basis of a combination of formal similarity and content difference with social (group) role. PS-type identification suggests that a personality sort of hides behind the family role identifying with it for getting an opportunity to achieve subjectively significant goals. Pseudo-social identification is characteristic of the relationships, built on the basis of mutual agreement, even associate relationships based on mutual advantage of the family members. An individual is oriented to the optimal role interaction, defines himself or herself as a member of the married couple, implements in the family different needs, is able to explain the causes and consequences of his or her group solidarity. As a result of such identification the spouses act as a community in certain circumstances, make “We” actual as necessary, but in fact they exist as independent subjects.

The next variant of identity in a married couple is the identification with the personality of the partner. Such identification transforming into dependence is accompanied by the feeling of beneficence on the part of one member of the conjugal dyad, his or her voluntary “dissolution” in the personality of the partner, denying their own “I” in favour of the “I” of the partner, undifferentiated inner borders of the personality. In this case the purposefulness and meaningfulness of an individual’s life as well as his or her time prospect are fully determined by the identification of his or her own personality and the personality of the spouse (“Other-centering”). The given type has acquired the name of “pseudo-personal identification” (PP hereafter) on the basis of self-identification with the personality of the partner.

Finally, the third among the revealed variants of identification in marriage appears to be conscious partial identification of one’s personality with the conjugal com-

munity, accompanied with creating the new formation “We” in the semantic space of each member of the conjugal dyad. The given type of identity is formed against the background of interlocutory communication and characterized by an optimal psychological distance of the partners, which, on the one hand, facilitates the formation of the community and, on the other hand, does not infringe the autonomy of the personality, its individuality [1,2,4,5]. This variant was named “we-identification”. The generalized characteristics of all types are presented in table 1.

TABLE 1. Characteristics of personality identification types in marriage

Identifi-cation types	The type of relationships in the couple, directionality of the relationships	Psycho-logical distance	Identity specificity	Scheme of identi-fication
Pseudo-social	Mutual agreement. Attitude to communication with which the interactional aspect of it is ignored, the orientation to business matters prevails, avoiding communication. “I-centering”	Distant	Identifica-tion with fam-ily (conjugal) role rather than with community	I the other 
Pseudo-personal	Alterocentric directionality in communication (according to S.L.Bratchenko). Emotional hiperdependence. “The other-centering”.	Minimal (“nega-tive”)	Conjugal commu-nity = partner. Identification with the “dominating” partner	The other I 
We-identifi-cation	Interlocutory directionality in communication (according to S.L.Bratchenko). Parity relationships. Normal emotional dependence. Authenticity of each partner’s personal-ity. Tendency to mutual self-expression, development and cooperative creative work; developed reflection. “I-the other centering”	Close, but not breaking the authenti-city of the persona-lity.	Identification with the family commu-nity “We”, fully de-veloped “feeling of We”. The partners’ possessing common semantic space.	I the other 

In segmental descriptions of successful relationships in marriage it seems possible to pinpoint several components: 1) objective (from the viewpoint of social norms) success providing the satisfaction of the basic needs of individuals; 2) subjective sensation of relationship success, which does not depend on their objective characteristics; 3) subjective sensation that one has an opportunity of self-actualization in marriage. It is obvious that in this plane success (as well as identity) is viewed not as a group parameter, but as an individual one: it does not cover the marriage in the whole, but characterizes the subjective assessment of the situation by the definite participant of the interaction.

We suppose that models of subjective well-being will be characterized by the prevalence of different components of conjugal success for spouses with different types of identity in marriage.

Pseudo-social identity implies that an individual finds opportunities to satisfy certain psychological needs in the family: demand for security, belonging to a group,

self-affirmation etc. Marriages in which the spouses are characterized by pseudo-social identification, are remarkable for a high degree of cooperation (through role mutual complementation) and cognitive agreement. In our opinion, among the revealed components of well-being it is objective indicators of success that correspond to pseudo-social type of identification processes most of all. At the same time, cooperation and cognitive agreement indispensably suggest mutual subjective satisfaction with the relationships. Thus, the first among the identification types concerned is accompanied by the combination of subjective and objective criteria of success in the subjective model of conjugal well-being, the objective criteria being emphasized.

Pseudo-personal identification determines somewhat different combination of success components. K.A.Abulkhanova-Slavskaya notes that self-expression by means of self-sacrifice often leads to a failure, because the significant Other is often far from reciprocating [quot. 3, p.45]. Indeed, the wish to be voluntarily dependent, concentration of one's all life expectations on the other, full absence of the need for autonomy and other components of pseudo-personal identification may appear a collateral of subjective satisfaction with marriage only in case its stability is guaranteed, i.e. if the second partner also finds an opportunity of satisfying his or her needs in marriage. Thus, in case of pseudo-personal identification the subjective model of well-being indispensably and sufficiently combines in itself subjective (as dominating) and objective (as attendant) signs of relationship success.

Spouses with we-identification are characterized by the emergence of the "I-feeling" and identification of their own "I" with this new formation. Speaking about the formation of common psychological space, "We-space", which presents the result of the interaction of spouses as authentic personalities – equal partners, the researchers traditionally distinguish among other necessary conditions of such formation the urge to mutual self-expression, development and cooperative creative work (S.L.Bratchenko, E.L.Dotsenko, A.A.Kronik and others). It affords ground for suggesting that the subjective model of spouses' well-being with we-identification indispensably contains objective-subjective sign of relationship success – the possibility of self-implementation in marriage.

It is important to underline that two afore-mentioned identification types by definition do not suggest such a possibility. L.A.Korostyleva notes that rigidity of matrimonial relations, their excessive normalization and rigid fixing of family roles (which are largely characteristic of pseudo-social identity), causing resistance to change, impede a person's self-implementation. Moreover, a family with rigid unchangeable structure is considered pathogenic by family psychotherapists; the process of self-implementation in such family is considerably complicated.

Emotional blending, a person's dissolution in the family, inability to get conscious of oneself, to get aware of one's interests and needs, to see them in correlation with other family members' interests and needs also impede the process of self-implementation, as well as rigidity [6]. Researchers share the opinion that self-implementation is impossible if there is some violation of a certain degree of autonomy, authenticity of each partner.

If self-implementation of the partners in marriage is possible only in the case of "we-identification", separate subjective and objective indicators appear to be the criteria of well-being and in this case alongside with the two afore-mentioned.

Summing up the above-said, we should emphasize it once more that well-being in marriage seems to be an integrative characteristic, which presents on the whole the combination of three components: objective, subjective, objective-subjective indicators of relationship success, meanwhile the dominating signs of well-being are different for every time (cf. Table 2).

TABLE 2. The interrelation of identity type and subjective model of a person’s well-being in marriage.

Identity type	Signs of well-being	
	Dominating	Attendant
Pseudo-social identity	objective	subjective
Pseudo-personal identity	subjective	objective
We-identity	Objective- subjective	Objective, subjective

To check the construed theoretical model we made empiric research aimed at revealing the character of interaction between the type of a person’s identity in marriage and his or her subjective model of family well-being. Sample collection consisted of 200 testees aging from 30 to 50, being officially married (100 married couples). The investigation included several stages: 1) specifying the presence of identity in the couple; 2) qualifying the type of identity, 3) revealing the peculiarities of subjective models of conjugal well-being with different types of identity.

On the basis criteria distinguished for each type of identity three experimental groups: spouses with pseudo-social and we-identity. As a result of summing up the experimental data within the groups at the first stage of the investigation basic psychological peculiarities of respondents with different types of identity.

For pseudo-social type the classification features are indicators showing the social basis of relationships – orientation to optimal role interaction and also the absence of emotional unity “We”. The lists produced by the respondents in the process of self-description of their conjugal community most often contained role characteristics (“spouses”, “couple”, “parents”, “sexual partners”, “citizens”, “electors” and others), and also included the evidence of partners’ isolation in marriage (“strangers”, “separated leisure-time”, “different views”...) and emotional segregation (“rivals”, “constant fight”, “not a very happy couple”).

For the type of “We-identity” the classification features were the presence of the semantic unity “We” and optimal psychological distance with the partner, which facilitates the formation of the unity but does not break the autonomy of a person, his or her individuality. Descriptions of the family union by the spouses of such kind contained utterances pointing out at “co-being” (“compatibility”, “empathy”, “agreement of opinions”, “common breathing”...), the presence of the community and realization of its advantages (“one unit”, “team”, “power”, “what is stronger than each of us”...), significance of emotional connection between the partners (“feel each other”, “we’ll overcome everything”...), maintenance of one’s own individuality and the importance of one’s own “I” (“individualities”, “equal partners”, “do not restrict the other’s freedom” and others).

Respondents with pseudo-personal identity are characterized by the medium degree of identity with the conjugal union in view of the fact that for them the identity directly with the leading partner is more usual. Among the definitions given by the testees when describing the unity “We” there were rather typical assertions that either directly or indirectly pointed at one’s dependence on the partner (“we depend on each other”, “head and neck”, “bound with one tie”, “thread following the needle” and so on). Thereby the spouses admit positive emotional background of relationships, confidence, understanding, support.

The next step of the investigation was finding the specificity of family well-being apprehensions among spouses with different types of identity. The results of Marriage Satisfaction Questionnaire (V.V.Stolin, T.L.Romanova, G.P.Butenko) allowed us to assert that the spouses of all the three groups admit full or partial satisfaction with marriage relationships (group PS – 84%, group PP – 90%, group WI – 98%). Thus, the subjective component of well-being in marriage turned out to be not depending on the type of identity. The analysis of the investigation results on the basis of objective indexes of success (conjugal term, having children in marriage, income level, living conditions, harmony in sexual relationships and others) also didn’t show any differences in the groups. It gives us an opportunity to state the presence of subjective success in marriage for the representatives of all types of identity.

For distinguishing the subjective-objective component of well-being we formed a complex methodology that can be used for finding the ideas of self-implementation in the family at the level of values, abilities, role aspects. Together with the subjective assessments of marriage success the observed results give evidence that, as concerns the respondents with We-identification and pseudo-personal identity, their satisfaction with the relationships almost always correlates with self-implementation in the family at the level of values. As concerns spouses with pseudo-social identity, here, alternatively, this or that variant of satisfaction with the relationships is often accompanied by non-implementation of individually significant values in the family. Besides, in the picture of subjective ideas of the respondents concerning the implementation of values in the family space the following regularities are observed: 1) spouses with pseudo-social identity see the level of implementation of the most family values being lower than the level of the demand for them; 2) spouses with we-identity highly estimate the implementation of most values in the family; 3) spouses with pseudo-personal identity tend to admit partial implementation of family values in one’s family, thereby the demand for such values, as “love (Platonic)”, “sense of security”, “common sense”, is estimated much higher than their non-implementation (the authenticity of all differences was confirmed by the formula φ - Fisher’s criterion of angular transformation, $p \leq 0.01$).

Also it was revealed that spouses with we-identification in marriage admit a larger demand for their skills and abilities in the family space than respondent with pseudo-social and pseudo-personal identity (the latter assess the demand for the abilities very low indeed).

According to the opinion of all groups’ representatives, the family facilitates rather than impedes the implementation of most roles preferred by the spouses. However, the number of roles the family helps or can help to implement as well as the number of roles implemented in the family space by the current moment was larger in the group

of testees with we-identity. Probably, they feel the support of the family in the plane of implementing desirable and priority roles to a larger degree than the others. At the same time the spouses with pseudo-social identity's average number of roles the implementation of which is impeded by the family has exceeded the similar index of WI respondents. Role implementation of the spouses with pseudo- personal identity appears to be the intermediate variant (in regard to the other two): its degree is higher than in PS group and lower than in WI group.

Comparing the data on the presence of well-being signs in each group we are coming up to the following conclusions. Probably, for the subjective feeling of well-being in the relationships the spouses with pseudo-social type of identity are comfortable with the awareness of the fact that the family as a social institution performs its basic functions successfully providing the members of the conjugal dyad with an opportunity to implement parents' beliefs, economical well-being, social status, stability, protection, confidence in the future and so on. For the spouses with pseudo-personal identity the following concepts are of great importance: stability of the family, acceptance of the family unity by the partner and an opportunity to implement their personal values in the family space. As for the spouses constructing their relationships in the couple by means of we-identification, the feeling of their own well-being in marriage is likely to be formed against the background of implementing various combinations of possible components of self-implementation in the family space (these components are value component and operational). Thereby the family's performing social functions is also a necessary condition.

Conclusions

Personal identity in a conjugal dyad has its own specificity and suggests differentiating into pseudo-social identity, pseudo-personal identity, we-identity.

The types of identification processes in marriage influence the subjective ideas of spouses concerning the necessary components of the family well-being. Objective, subjective and objective-subjective components of family success in the well-being subjective model of respondents with different types of conjugal identity are presented in different proportion.

Revealed as a result of an empirical investigation peculiarities of assessing family well-being by respondents with different types of identity accord with the subjective models of conjugal well-being of each identification type which we have described on the theoretical level.

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RODINNÉ VZTAHY: INDIVIDUÁLNÍ IDENTIFIKACE

Abstrakt: Tento příspěvek zkoumá variabilitu procesů identifikace v manželské dvojici v korelaci s charakterem vnitřních vztahů v manželském páru, duševní odstup mezi partnery, emoční angažovanost ve vztazích a další parametry. Popisuje typy identit osobnosti v manželství: pseudo-sociální identitu, pseudo-osobní identitu, „my“-identitu. Rovněž uvádí výsledky empirického výzkumu, který potvrzuje teoretické předpoklady, které se týkají souvislosti mezi typem identity a modelem subjektivní prosperity manželství. Příspěvek dokládá, že typy procesů identifikace v manželství ovlivňují subjektivní pojetí utváření manželské prosperity manželských partnerů. Popisuje proměnlivou kombinaci objektivního, subjektivního a objektivního-subjektivního utváření úspěšného manželství v subjektivním modelu prosperity mezi respondenty s různými typy manželské identity rozlišenými v rámci této studie, které odpovídají teoretickým předpokladům modelů subjektivního úspěchu manželství pro každý typ identifikace v manželství.

Klíčová slova: subjektivní prosperita/pohoda v manželství, identifikace, osobnost v manželství, typy identity, identita v manželských párech, „My“-identita, pseudo-osobní identita

HEALTH AND GENDER

M^a del Pilar SÁNCHEZ-LÓPEZ

Abstract: *Why is it necessary to talk about gender and health? Are there differences between men and women in health? Does gender affect health? This article offers evidence which reveals a close association between health and gender. Biological and biomedical models neither explain why the distribution of the diseases in the population follows the contours of poverty (pattern associated with economic and social structure of society), nor they explain health differences between women and men. There is a clear association between health and gender: Gender is one of the determinants of health.*

Keywords: *health in the view of gender; bio-psycho-social model of health, mortality and illness according to the gender; inequality of approaches to the health*

Why do we need to talk about gender and health? Are there differences in health between men and women? Does gender influence health? We shall see whether we are able to answer this question. Let us look through the information available to us. For example, let us mention a news item which appeared recently in a European newspaper (El País, 2007).

“A professor claims that having a wife at home prevents heart attacks”. The Director of The Chair of Cardiovascular Risk in the Universidad Católica San Antonio, Murcia, José Abellán, claimed at a press conference that the best protection against cardiovascular risks is to be married to a woman with money, a certain educational level and one not working outside the home. Abellán explained-in a press conference held to introduce a lecture on cardiovascular risk- that this datum appears in a study to be read in the near future in the UCAM.

There is a specialist, who holds a university chair in a private university, of “Cardiovascular Risk”, who when presenting a study, which we assume is a study carried out by people related to this chair, centres on men. It is a study evaluating cardiovascular risk in men. It is true that women appear in the text, not in relation to a possible evaluation of their own cardiovascular risk but as people making men’s cardiovascular health better or worse. So, we can assume that this is due to the fact that cardiovascular risk is to be found in men, and therefore, study of this topic centres on them. In order to check this, let us review the statistical data we have and which are accessible for everyone to see if this is really the case. To avoid making this explanation too complicated we centre upon data stemming from real life in Spain, while being fully aware that they are similar to those of any other developed European country. For example, we have a work by R. Boix, S. Cañellas, J.Almazán, E Cerrato, C.M. Meseguer, M.J. Medrano, of the Cardio-

vascular Epidemiology Service (Centro Nacional de Epidemiología, Instituto de Salud Carlos III), published in 2003. The text quotation is rather long, but it is worthwhile reproducing it in its entirety, although we will comment on each section.

“Death rates from cardiovascular diseases. The group of illnesses occurring in the cardiovascular system was the number one cause of death in 2000 among the Spanish population. Of the nearly 360,000 deaths recorded in our country, 124,610 were a result of cardiovascular diseases with 35 % of all deaths (30 % in men and 40 % in women). The relative weight, however, has shown a marked fall since 1980, when the figures were 40.9 % and 51.3 %, respectively” (p 242). That is, if we consider the death rate from cardiovascular diseases as a whole, in 2000 more women than men died from this cause. Though the death rate has fallen on the whole, in 1980 there were also more female than male deaths from this cause. We continue with the quotation:

“The accumulated decline has led to a situation in which, from 1999 onwards, death rates from diseases of the circulatory system have become the second cause of death behind the group of tumours” (p 242).

But in women it remains the primary cause of death in 2000.

And, with regard to the relative importance of cardiovascular diseases as a cause of death within each of the two groups, men and women: “Due to their frequency the main cardiovascular diseases are ischemic cardiopathy, cerebrovascular disease and cardiac insufficiency. The first two are fundamentally artereosclerotic in origin, and lead to 20 % of deaths among men and 25 % in women. Thus, they are the main cause of death in our country” (p. 242).

That is, as a whole, both because of their relative importance when men are compared with women and their relative importance as a cause of death in the group of women, cardiovascular diseases are also, unfortunately, found mainly in women.

Similar data appear in statistics for other years. For example, in 2002 (Table 1).

Table 1 Death rate from cardiovascular disease according to age and sex. Spain 2002

AGE	MEN		WOMEN	
	DEATH	RATE	DEATH	RATE
0-4	14	1,38	15	1,58
5-9	5	0,50	8	0,86
10-14	19	1,85	7	0,72
15-19	28	2,37	19	1,69
20-24	59	3,97	29	2,04
25-29	89	5,29	49	3,01
30-34	197	11,90	68	4,23
35-39	376	23,63	132	8,41
40-44	646	44,31	172	11,78
45-49	993	77,76	279	21,58
50-54	1447	122,92	382	31,64
55-59	2000	185,70	627	55,28
60-64	2691	304,03	933	95,93
65-69	5064	558,51	2311	217,41
70-74	7657	954,13	4766	468,35

75-79	10243	1749,65	8863	1052,87
80-84	10201	3117,18	13969	2427,09
85+	14573	7194,48	35775	7546,07
TOTAL	56302	291,35	68404	338,02

DEATH: Number of deaths by Cardiovascular RATE. Specific rates by age and sex per 100,000. Taken from the Centro Nacional de Epidemiología, Instituto de Salud Carlos III, Spain. http://www.iscii.es/centros/epidemiologia/epi_encfcardio_tabla.isp

Or in 1996 (Table 2):

Table 2 Mortality rates in total and by different causes per 100,000 inhabitants. Spain 1996.

	Males	Females
	All ages ¹	All ages ¹
All causes	973	820
Circulatory system	316	363
Ischemic Cardiopathy	116	83
Acute myocardial infarction (heart attack)	82	51
Other ischemic heart diseases	34	32
Cerebrovascular disease	83	114
Rest of circulatory system	116	166
Hypertensive disease	7	15

1 Gross rate

Taken from Sans, S & Paluzie, G. (2000). Evolution of morbidity-mortality by Cardiovascular Rate in Spain 1970-1996. Cuadernos latinoamericanos de hipertensión, 5 13-23

Similar data to the above appear systematically in statistics for different years, in different countries: and based on them, TIME magazine put on its front cover and devoted an edition to cardiovascular diseases in women. The front cover is reproduced in Figure 1.

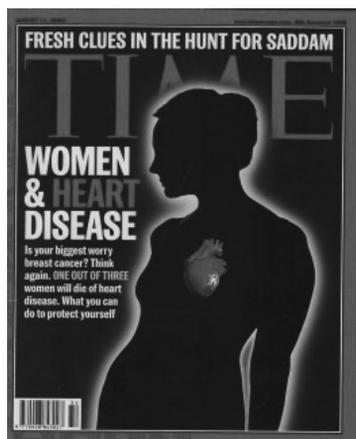


Figure 1: The front cover of Time magazine's edition for August 11, 2003, in which it warns women that they are more likely to die of cardiovascular diseases than they are of cancer.

Why, therefore, are cardiovascular risks still all too often only related to men, as was the case in the study with which we began this chapter?

But let us move another step forward. If, as already appears patently clear, women are more frequently victims of the whole group of cardiovascular diseases, they could be expected to be more often hospitalised for this reason. Let us put it to the test. Let us take a year at random, for example 2002.

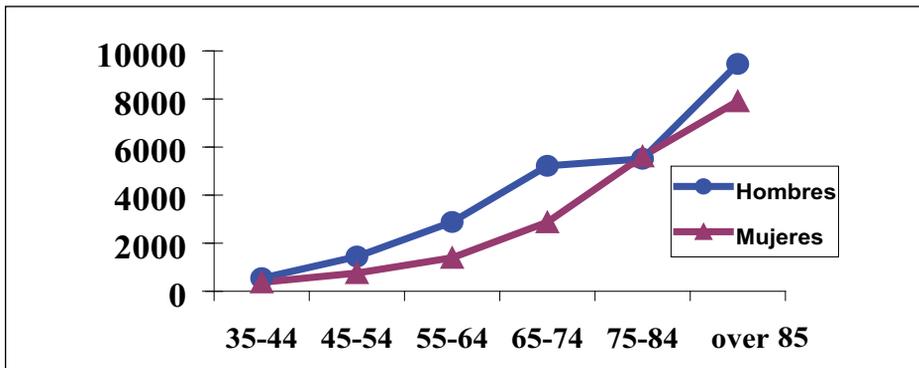


Figure 2: Rates of hospital admission for cardiovascular diseases. Spain, 2002
Source: INE (National Institute of Statistics. Spain)

In fact, this is not the case, women are not the ones most often admitted to hospital for cardiovascular disease.

We began to suspect that something was afoot...And to give substance to this suspicion, based on the example of data relating to cardiovascular diseases, we raised three general questions concerning health, which we shall attempt to answer in the rest of the chapter. They are as follows:

- Are men's and women's health the same?
- Are women's and men's health given equal treatment? Or do biases exist?
- If there are differences, when we refer to men's and women's health, are we merely talking of differences between the sexes or are we also talking of gender differences?

Before trying to answer these questions, in order to begin to find an answer to the question we started this chapter with, it is necessary to remember that the definition of what constitutes health and illness is not necessarily the same at different times throughout history or in different cultures. Therefore, we must choose a definition as a common reference point for the questions we are going to pose. Since 1948, the definition presented by the WHO (World Health Organisation) is usually accepted as a basic reference. "Health is a state of complete physical, mental and social welfare, and not merely the absence of afflictions or illnesses." (<http://www.who.int/es/>). The quotation comes from the Preface to the Constitution of the World Health Organisation, adopted by the International Health Conference, and signed on July 22, 1946 by

the representatives of 61 States (Official Records of the World Health Organisation, N° 2, p.100). This came into force on April 7, 1948, and since that time has not been substantially modified.

So, within this reference framework, generally accepted by every group dealing with topics of health, let us attempt to answer the first question raised above.

Are men’s and women’s health the same?

To deal with this question some more statistics will have to be studied again, for example, those referring to Death Rate/Life Expectancy. These appear in a highly visible form in Figure 3.

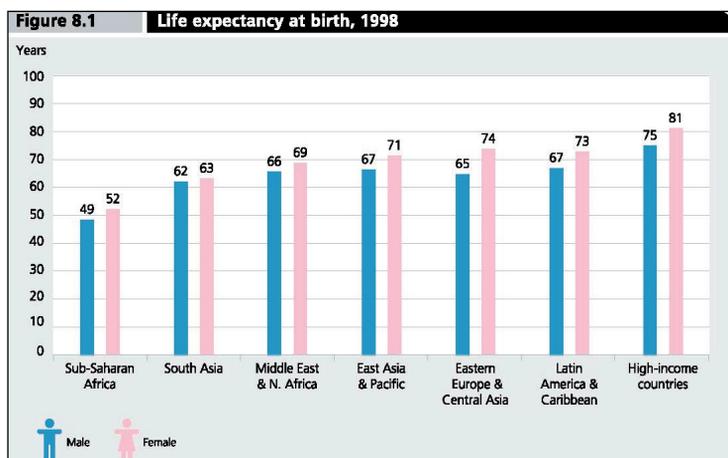


Figure 3. Life expectancy at birth 1995

Taken from Soubbotina, T. P. (2004). Beyond Economic Growth to Sustainable Development. Second Edition World Bank

In more recent years the position is similar. In all cases, women’s life expectancy is greater than men’s, though the distance in average years between the two groups varies in accordance with social conditions. In those countries and areas where in general health conditions are worse and especially those related to women’s death rates when giving birth, the differences between men and women show a decrease.

There is, therefore an initial difference with regard to mortality. What happens with regard to morbidity? That is, do women become ill as much as men? Let us consult any report, for example, that of health worldwide, by the WHO in 2003 (Table 3).

Table 3. Main causes of the percentage of morbidity (AVAD) for men and women (older than 15), throughout the world, in 2002.

MEN		% AVAD	WOMEN		% AVAD
1)	VIH/SIDA	7,4	1.	Unipolar depressive problems	8,4
2)	Ischemic cardiopathy	6,8	2.	VIH/SIDA	7,2
3)	Cerebrovascular illnesses	5,0	3.	Ischemic Cardiopathy	5,3
4)	Unipolar depressive problems	4,8	4.	Cerebrovascular illnesses	5,2
5)	Traumatisms from traffic accidents	4,3	5.	Cataracts	3,1
6)	Tuberculosis	4,2	6.	Loss of hearing	2,8
7)	Problems from alcohol consumption	3,4	7.	EPOC	2,7
8)	Violence	3,3	8.	Tuberculosis	2,6
9)	EPOC	3,1	9.	Osteoarthritis	2,0
10)	Loss of hearing	2,7	10.	Mellitus diabetes	1,9

Taken from the Report on health worldwide, 2003. Let us build the future. WHO.

Or this other one (Figure 4).

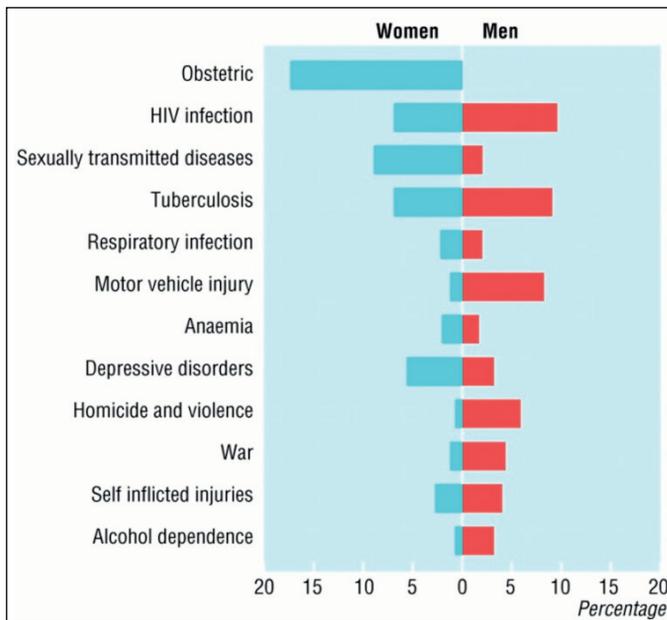


Figure 4. Percentage of type of illness in adult men and women aged 15-44 in developing countries, 2000

Adapted from World Development Report, 2004, p282.

We can also use more refined indexes, but the table remains the same, that is, there are differences in morbidity between men and women. From this starting point, we can make the comment that, in reality, the increasing lifespan in developed countries

does not necessarily translate into an increase in the number of years lived in a good state of health. The Spanish Ministry of Health, from 2002 onwards, had already put forward the idea that in order to evaluate a population's state of health it becomes essential to measure, not just mortality and morbidity, but also the consequences of illness. With this end in mind, other useful indicators have begun to be used to evaluate quality of life or state of health among those living an increased lifespan.

Life expectancy without disabilities (MSC, 2000) .This indicates the average number of disability-free years that a person of a particular age has in front of him/her. It is calculated by means of death and disability rates and presents information not only on how long the life will be but also on its quality. In Spain, at birth it is 69 years for men and 72.4 for women, and on a rising curve, while in both cases being above average for European Union countries (Health and Gender Report, 2005).

Life Expectancy without Chronic Illness (MSC, 2002). This indicates the number of years with no chronic illness that remain for a particular individual at that age until he/she dies. In Spain, at birth, men have 41 years compared to 38 for women. (Health and Gender Report, 2005).

Life Expectancy while Enjoying Good Health (MSC, 2002). It indicates the average number of years a person has to live in good health from a particular age till death. The years of life are weighted by the subjective perception of people's health. In Spain in 2002, at birth it is 56.3 years for men and 53.9 years for women. (Health and Gender Report, 2005).

The analysis of all the above leads us to the conclusion that, in fact there is differential mortality and morbidity for women and men, if differential morbidity is understood as the group of pathologies, risk factors and reasons for medical consultation which require specific or different attention in the cases of women and men.

It also shows the existence of what has been called **the mortality/morbidity paradox: women live longer, but have worse health** (see, for example, Sánchez-López, M.P., 2004), which we will do no more than mention here to avoid making this chapter excessively long, although a large amount of ink has been spilt in texts concerning the introduction of the gender approach in health.

Just as an example, and using the text of an international body, we can indicate some examples of differential morbidity (Table 4).

Table 4. Examples of Differential morbidity

WOMEN	
They live longer	Larger number of medical problems
More depression	Higher hospitalisation rates
Greater stress overload (family/work)	They use more prescribed medicines
More chronic conditions such as arthritis and osteoporosis	They report worse health
More injuries and deaths from domestic violence	They have more days of restricted activity

Taken from the Annual Report, 2005 of the International Women's Health Coalition

This is a rapid table of differences prepared in a rough fashion. A lot of nuances would have to be introduced with regard to some of the differences appearing here. For

example, on the higher rates of depression appearing for women, (see, for example, Valls, 2003).

Naturally, even if it may appear that we are talking of women as though they made up a monolithic group, we must never lose sight of the fact that there are intragroup differences which may be greater than intergroup ones. That is, there are differences among women (and of course among men), with regard to race, ethnic group, socio-economic level, education, geographical habitat, sexual orientation... and a long etc.

Likewise, neither must it be forgotten that when comparing men with women, if we do not match both groups through other basic variables (e.g., age, employment situation, etc...) we are not making a correct evaluation of possible differences between them. This is a basic principle of any intergroup comparison which, mysteriously, is forgotten quite often when the two groups we are comparing are those of men and those of women. The basic general principle is that there is always interaction between the fact of being a woman/man and other variables. These are for example, age, culture and a long etc.

Let us deal with the next question.

Is there equal (and fair) treatment of the health of men and women? Or are there biases?

If we return to the newspaper article we started with and compare it with the reality of the importance of cardiovascular illness in women, we are tempted to come to the conclusion that, at least in this respect, women seem to be invisible. As Valentín Fuster, an internationally renowned cardiologist, director of the Centro Nacional de Investigaciones Cardiovasculares, in Spain and the Cardiovascular Institute of the Mount Sinai Medical Center, in New York, said this year, when presenting his foundation for health education: “The foundation is called **She**- initials of science, health and education in English-because women have not been regarded with the importance that they should have been in terms of cardiovascular health; much remains to be done in this field”: And in many others: reviewing several health-related aspects leads us to the conclusion that quite often women have been invisible (Compare. for example, Valls, 2006). Only very recently have the differences between the sexes with regard to being ill and dying begun to be looked at and even till a short time ago and still today, health statistics did not so much as give information divided according to sex. Traditionally, women’s invisibility has been most seen in:

- a) Health research; for example, in clinical tests, where the absence of women has been and still is notorious, albeit on many occasions it was assumed that the findings could be extrapolated both to men and women. As late as 1977, the American Food and Drug Administration published a guide which specifically excluded tests on women of childbearing age. This has led to a gap existing in knowledge of how women are affected by many medicines and treatments. Since 1993, legislation in the United States compels clinical studies financed by the National Institutes of Health (NIH) to include in populations studied both men and women (as well as people from different ethnic minorities). The NIH has published a guide to studying and evaluating differences in trials on the basis of sex, promoting the inclusion of women in order to detect possible clinically

significant differences in responses to pharmaceutical products, and applying a gender approach in planning the studies.

- b) The training of health professionals, who suffer from the almost total dearth of specific training from the gender viewpoint in a central, regulated way. (compare Colmer Revuelta and Sánchez-López , 2007).
- c) Medical care. Sometimes medical care is not the same, as in illnesses. Later on we will return to the example of cardiovascular diseases.

Thus, it does not appear that there is any real equity between sexes in questions of health. Rather it seems we can talk of the existence of bias. But, to make things more complicated, with just a cursory examination of the subject, we shall see that there are different ways in which this biased view of health is shown. Traditionally, three different manifestations of this biased view are to be seen.

- Equality between the sexes is assumed when it is non-existent. The classic example normally cited in this respect is that of aspirin. Very often, until quite recently and even today, patients are advised to take acetylsalicylic acid to avoid heart attacks. The problem is that the studies on which this recommendation is based, for the most part have only used men for their clinical trials. We quote the results of the study by Ridker et al. (2005) as an example of how little is known from the basis of the few works which have researched the topic with women. The summary of the results is as follows:
 - Acetylsalicylic acid (100 grams every other day) has no effect on the prevention of heart attacks in women.
 - It has no effect in preventing cardiovascular accidents.
 - Gastrointestinal bleeding is more common among women
 - Preventive effects in women >65

At the very least, these findings lead us to use caution when giving widespread recommendations to men and women to take a dose of aspirin, at least, until there are more specific results stemming from research carried out on women.

- Differences are assumed when there is equality. A paradigmatic example is the treatment given for cardiovascular disease. They were deemed to be “men’s diseases” no more than 30 years ago, but, since then of course present day experience indicates that this assumption is false or incomplete. Not only do they affect both women and men, they affect women in a different way. There are differences in symptomatology, diagnosis, treatment and rehabilitation. Bias is shown when it is not appreciated that the latter disease is the primary cause of death among women. Moreover, national and international studies show that with equal cases of coronary pathology women do not receive the same medical and surgical treatment (for example, Ayanian and Epstein) 1991) and data indicate that mortality after an attack is noticeably higher among women (68 % against 33 %, for example, Marrugat et al, 1998. For an overview, Sans, 2007).
- Limitation to an area; that of reproduction. As pointed out by Barbara Rahder and Rebecca Peterson (2006), researching only on differences between sexes cannot be the cornerstone. If it were, we would reach the point (it has happened) of stressing needs of women merely as a result of biology: that is, those related to reproduction, by identifying Women’s Health exclusively with sexual and re-

productive health. This limits the interest in women's health to a period of her life, that linked to maternity, and this is dangerous in the sense of what it means in identifying a woman as simply a reproducer/carer. And, to end, the third question.

When we talk of men and women (in this case with regard to health), are we talking merely of differences between the sexes or also of gender?

It becomes increasingly clear with data from the research works in our hands, that there is a need to introduce analysis of sex and gender as variables in health-related research and practice. If under the term "sex" biological differences between men and women are included and under the term "gender, social and cultural differences experienced by women and men, the data show us that both realities profoundly impact on determination of health status. In fact, sex may determine a differential propensity to certain conditions of health or illness, varying risk factors and different treatment needs. What is more, gender may determine different exposure to certain risks, different patterns of seeking treatment or differential impacts of the social and economic determinants of health (see, for example, Sánchez-López, 2003). The idea which is becoming more and more prevalent is that the complex Gender construct, interacting with sexual, biological or immunological differences creates health-related conditions, situations and problems which are different for women and for men, as individuals and as groups.

There is, therefore a close association between Health and Gender. Just as biological and biomedical models cannot explain the way illness is distributed among the population in accordance with the poverty contours (a pattern associated with the economic and social structure of society), nor are they able to explain differences in health between men and women. What is true is that there is an association between health and gender, insofar as gender is one of the determinants of health.

Naturally, not every difference in health in women and men involves gender inequality. This concept is reserved for those differences considered to be unnecessary, avoidable and, also unfair. Therefore, achieving full equity in health would not lead, necessarily, to equal mortality and morbidity rates in women and men, but, rather, to the elimination of preventable differences in opportunities of enjoying health and not being ill, suffering disability or dying of diseases which can be dealt with. Nor should it inevitably lead to equal quotas of resources and services for men and women, but instead, there should be differential allocation and reception of the resources, according to the particular needs of each person and each socioeconomic context.

Having briefly seen what we have hitherto seen, it seems in no way outlandish to insist that we have to talk of gender and health (or health with a gender perspective).

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ZDRAVÍ A GENDER

Abstrakt: Proč je nezbytné hovořit o genderu zdraví? Existuje rozdíl mezi muži a ženami a jejich zdravím? Má gender vliv na zdravotní stránku člověka? V uvedeném článku je názorně vysvětlena zjevná závislost mezi zdravím a genderem. Stejně tak jako biologické a biomedicínské přístupy ke zdraví nevysvětlují, proč rozdělení nemocí v populaci kopíruje hranici chudoby (model spojený s ekonomickou a společenskou strukturou společnosti), taktéž nevysvětlují rozdíly ve zdravotním stavu mezi muži a ženami. Existuje však zcela zřejmá souvislost mezi zdravím a genderem: gender je jednou z determinant zdraví.

Klíčová slova: zdraví, gender, bio-psycho-sociální model zdraví, úmrtnost a nemocnost v závislosti na pohlaví, genderová nerovnost v přístupu ke zdraví

IS CREATIVITY A MODULATING VARIABLE OF THE RELATIONSHIP BETWEEN HEALTH AND GENDER?

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Abstract: *Relationships between gender and health are becoming increasingly better established. Moreover, creativity, considered as a cognitive variable, probably impinges on the optimisation of personal resources when one is faced with illness. In this work we study how creativity modulates relationships between health and gender, by making it possible for individuals to optimise the way in which they tackle pathogenic situations and facilitate their salutogenic behaviour. The results indicate differences in occurrence of illnesses in men (N42) and women (N48) in connection with their conformity with gender norms of femininity and masculinity. The creativity potential seems to be linked to greater conformity to these norms as well.*

Keywords: *sex roles, masculinity norms, feminine norms, sex differences, gender differences, creativity*

Introduction

Researches on relationships between sex differences and health clearly show that being a man or woman has a serious impact on health, and it determines some aspects such as propensity to certain health conditions or illnesses, different risk factors or different treatments or operations for an illness, traumatism or injury.

In addition to sex, gender also has a profound effect upon the determination of health status, because it conditions individuals' risks or vulnerabilities, different patterns in the search for treatment or differential impacts made by social and economic determinants of health. This relationship will also partly depend on which type of health indicator is used (Matud and Aguilera, 2009).

Gender is defined as a concept constructed on sexual role, as a consequence of an evolutionary process by which social expectations and norms are interiorised. Measuring it has been traditionally dealt with by evaluation of Masculinity/Femininity, conceived as how closely people correspond to social stereotypes related to how each sex behaves. From works in the 70s the Masculinity/Femininity construct has been

conceived either as opposing poles of one particular dimension of personality, interests and behaviour related to the sexual role, or fundamentally, following the works by Bem (1977, 1981), as a bipolar construct. In addition to Bem's inventory, other classic scales such as the Masculinity/Femininity scales of MMPI-2, or the Californian Psychological Inventory were developed and used, basically, till the nineties.

The most recent works, however, cast doubt on some of the key aspects of measures such as the Bem Sex Role Inventory (Bem, 1974), since the data indicate that it is an instrument that evaluates instrumental, characteristic personality traits rather than sexual roles in themselves. Thus, an up-to-date, valid instrument has been chosen, "Conformity to Masculine Norms Inventory" (CMNI-Mahalik, 2003) and Conformity to Feminine Norms Inventory" (CFNI –Mahalik, 2005), adapted by our research group to the Spanish population.

Mahalik (2000) and Mahalik et al. 2003, 2005) propose the use of the concept of social gender norm to make sexual roles operative; the latter can be defined as a rule that guides and prescribes what men and women should do, think or feel, when having the same properties as social norms, (for a definition of social norm, see Cialdini & Trost, 1999, p. 152) Many gender norms would exist, depending on culture and social context, and they are transmitted in the same way as social norms, that is by means of models and social agents (such as parents, classmates, mass media, etc.), who transmit what is and is not expected from the boys and girls and who bestow rewards or punishments for such behaviors (Mahalik et al., 2003). However, after an individual understands what society expects of her or him, she or he may not conform to those normative messages as a function of a host of contextual and individual variables.

Frequently, however, when research is carried out into relationships between gender and health, the gender perspective is introduced into the discussion, in the conclusions and the explanation given for the findings, but not previously, that is, when health conduct is evaluated sex differences are worked with (evaluation in men/women, boys/girls), but no measure is made of their conformity to social norms established for each sex, something which constitutes the core of gender. In this study the gender variable will be directly borne in mind from the beginning of the research, by means of the introduction of measures of conformity to social gender norms for men and women proposed by Mahalik (2000, 2003, 2005).

In this relationship between gender and health creativity has been regarded as a cognitive variable which impinges on the optimisation of personal resources when dealing with illness and nuances differences both of sex and gender between men and women. From the viewpoint of cognitive Psychology creativity is considered to be a cognitive style, a macroprocess (Hayes, 1989; Corbolan and col., 2003). From this paradigm, including the gender viewpoint in research work means improving the study of differences between men and women, which hitherto have not produced significant results (Matud, Rodriguez and Grande, 2007).

Several studies have recently examined the personality of creative men and women (Helson, 1996; Subotnik and Arnol, 1993; Russ, 2002). Findings reveal significant differences in gender and show how both men and women express and manifest their creative potential in very different ways. There is evidence that social expectations at least determine the importance men and women give to creativity (Charyton and Snel-

becker, 2007). Women do not regard creativity as satisfying social expectations; perhaps this deprives them of opportunities and makes it more difficult for their creations to be rated as “creative” (Runco, Cramond and Pagnani, 2010).

To sum up, the concept of social gender norm has been defined as a rule or guide which prescribes what men and women ought to do, think or feel (Mahalik, 2000). From this viewpoint we consider the question of researching whether the health of men and women and their conformity to gender norms may be modulated by creativity. The aims of the study are, therefore, to analyse, in the first place, differences between men and women in the health and creativity variables, secondly, gender-modulated differences in health and creativity, and, finally, to identify the relationships between health and creativity and feminine and masculine gender norms.

Method

Participants

Those taking part in this study were 90 people, 3rd course university students of the Graduate Course in Psychology (31.1 %) and the first year of the Psychology Degree course (studies adapted to the common European norm, in accordance with the Bologna Plan) (68.9 %), of which 42 are men and 48 women. All of them are Spanish, except for one person who comes from Colombia, but has been living in Spain for 15 years. The average age is 21.08 (*S.D.* is 6.18), and the ages range from 17 to 49. The average age for the men is 21.17 (*S.D.* = 5.3) and that of the women 21 (*S.D.* = 6.92), with the ages ranging from 17 to 38 for the men and 17 to 49 for the women. The predominant socioeconomic level is the medium, with differentiation between medium-high (54.4 %) and medium-low (45.6 %). More than half (67.8) are not employed, with 17.8 % working sporadically and 14.4 % of the sample being so on a regular basis. 84.4 % of the sample are unmarried and 6.7 % married, with 8.9 % having a de facto partner.

Instruments

- Conformity to Feminine Norms Inventory (CFNI-Mahalik et al., 2005). This questionnaire has 84 items, which enable the degree of conformity shown by people to a series of gender norms traditionally associated with women, (specifically 8 norms) to be evaluated: They are Nice in Relationships, Care for children, Thinness, Sexual Fidelity, Modesty, Involvement in Romantic Relationships and Domestic and Invest in Appearance). It uses a Likert type 4-point scale (0 completely disagree, 1=disagree, 2=agree, 3=totally agree, 4=totally agree). The inventory has been adapted to the Spanish population with satisfactory results in its psychometric characteristics, and an internally consistent average value has been obtained for all Cronbach alpha subscales .74 (Sánchez-López, Cuéllar-Flores, Dresch and Aparicio-Garcia, 2009).
- The CMNI (Mahalik et al., 2003) contains statements which have been designed to measure attitudes, beliefs and behaviour reflecting conformity or disconformity with eleven messages associated with masculine gender roles: Winning, Emotional Control, Risk Taking, Violence, Power over Women, Dominance, Playboy,

Self-Reliance, Primacy of Work, Disdain for Homosexuality and Pursuit of Status. It contains 94 items to be answered on a 4-point Likert scale (0=completely disagree, 1=disagree, 2=agree, 3=totally agree). The inventory has been adapted to the Spanish population with satisfactory results in its psychometric characteristics (Cuéllar, Sánchez-López and Dresch, in press).

- CREA Creative Intelligence. A cognitive measure of creativity (Corbalán, Martínez, Alonso, Donolo, Tejerina and Limiñana, 2003). This test is aimed at recognising creative intelligence by means of a cognitive evaluation of individual creativity according to the indicator for question generation, in the theoretical context of problem searching and solving. It has three strips (two of them for adults) from which the subject has to generate all types of questions as suggested to him/her by the drawings. CREA meets the basic reliability and validity standards that can be required of a psychological test (the estimated reliability for forms A and B is .87). For this sample two strips have been used: the A and B CREA for adults.
- Psychological Health Questionnaire GHQ-12 (Goldberg and Williams, 1988) an adapted version for the Spanish population made by Sánchez-López and Dresch (2008), with a .76 Cronbach alpha (.75 in the women's group and .76 in the men's).
- Moreover, they were requested to complete sociodemographic information (age, employment situation and socioeconomic level), a self-perceived health scale (scale of 1 to 5, the lower the value, the higher the self perception of health) and a *physical health questionnaire* (number of illnesses, pains and self-perceived health).

Procedure

The questionnaires were given out to university students in several classes of students of Psychology in the University of Murcia, Spain. All the participants in our study gave their informed consent after we explained the purpose of the investigation, provided a description of the procedures of the study and alternatives to participation, guaranteed their freedom to withdraw from any part of the study without any consequences, and described the risks and benefits of participating in the study. We also guaranteed the anonymity of their data. In addition they were asked to be as candid as possible. Then the participants received the questionnaires, which took about 30 minutes to fill in. All those participating in the study completed the personal, sociodemographic and health data, did the CREA test, and answered the CFNI, in the case of the women and the CMNI in that of the men.

Data analyses

Differences between men and women in Health and Creativity have been discovered through the Student *t*. Calculation was also made of the indices of the size of the effect by means of the statistical *d* proposed by Cohen (1977, 1988).

Differences between men and women in Health and Creativity modulated by gender have been found from the scores of men and women in the CMNI and CFNI respectively. The group of men and that of women have been divided into two subgroups with roughly the same number of subjects; men and women who obtained high scores in conformity with masculine or feminine norms would make up the first two subgroups

(HCMN/HCFNI) and those men and women obtaining low scores (LCMN/LCFNI) the last two. The cutoff point (percentile 50) for men was 121.5 and for women 147.5. The two groups of men have been compared through *Anova*. The object of these comparisons is to analyse the modulating influence exerted by gender (made operative via a measure of individual conformity with masculine and feminine norms) on differences found in health and creativity, according to sex.

To identify the health and creativity variables directly related to conformity with gender norms, linear relationships between the variables have been analysed by means of Pearson's correlation coefficient. Following Cohen's (1988) effect size guidelines for the values of the Pearson correlations (and interpreting the point-biserial correlations in the same way as Pearson's), $r = .10$ is low, $r = .30$ is moderate, and $r = .50$ is high.

Results

Before making comparisons between men and women and between the subgroups, based on gender, an analysis was made to ascertain whether differences existed in sociodemographic characteristics between groups and subgroups of men and women. As for sex-based differences, the results indicate that there are no statistically significant differences between men and women in age ($t(88) = 0.127; p = .899$), socioeconomic level ($\chi^2(1) = 0.627; p = .0428$), in present employment situation ($\chi^2(2) = 0.73; p = .693$) or in marital state ($\chi^2(2) = 4.12; p = .128$).

Neither are differences according to subgroup in gender conformity statistically significant for age ($F(3.85) = 1.89; p = .137$), socioeconomic level ($\chi^2(3) = 2.41; p = .492$), present employment situation ($\chi^2(6) = 4.597; p = .596$) nor for marital status ($\chi^2(6) = 8.07; p = .233$).

Differences between men and women in health and creativity variables

The results obtained by men and women on the health scales and on the CREA test have been compared by means of the Student *t*. Moreover, the appropriate sizes of the effect have been calculated by Cohen's *d*.

The results of the differences in means from the student *t* between men and women (see Table 1) indicate that women in the group of participants score significantly higher in number of pains and in creativity (Crea A).

Table 1. Means, standard deviations, Student *t* and Cohen's *d* for women and men

Variables	Men (n=42) <i>M (SD)</i>	Women (n=48) <i>M (SD)</i>	<i>t</i> (88)	<i>d</i>
1. Self-perceived health	1.86 (0.61)	1.90 (0.52)	-.327	-0.07
2. Illnesses	0.52 (0.92)	1.87 (2.28)	-3.73***	-0.79
4. GHQ-12	10.20 (4.73)	11.25 (4.66)	-1.06	-0.22
5. Crea A	12.26 (5.05)	12.67 (4.45)	-.40	-0.09
6. Crea B	10.86 (3.98)	13.04 (3.81)	-2.65**	-0.27

Gender modulated differences in health and creativity

Based on the scores of the women in the CFNI and the men in the CMNI, each group has been divided into two subgroups. In the case of the women, those obtaining high scores in conformity with female norms make up the HCFN group and those with low scores, the LCFN group (the cutoff point was 147). In the case of the men, those achieving high scores in conformity with masculine norms are the HCMN group and those obtaining low scores, the LCMN group (the cutoff point was 121.5).

The results for health and creativity have been compared among the four groups; descriptive statistics by groups and the Anova results are shown in Table 2. Statistically significant results have been found only in the case of Number of illnesses or pains and in creativity (Strip B).

The results from the multiple comparisons (Bonferron test) show no statistically significant differences in men with high or low conformity, nor between men with high or low conformity, only between women with high conformity with female gender norms and men with high conformity with male ones ($p=.025$). In creativity the statistically significant differences occur in Crea B, and between women with high conformity with female gender norms and men with low conformity with male gender norms ($p=.012$).

Table 2. Means, standard deviations and Anovas for groups according to conformity with gender norms.

Variables	LCMN Men (n=21) M (SD)	HCMN Men (n=20) M (SD)	LCFN Women (n=24) M (SD)	HCFN Women (n=24) M (SD)	F(88)
1.	1.86 (0.57)	1.90 (0.64)	1.96 (0.46)	1.96 (0.52)	0.23
2.	0.76 (1.09)	0.30 (0.66)	1.74 (2.40)	2.00 (2.21)	4.35**
3.	10.95 (5.63)	9.42 (3.64)	11.25 (3.92)	11.25 (5.39)	0.69
4.	12.00 (4.07)	12.55 (6.12)	13.25 (4.83)	12.08 (4.06)	0.33
5.	9.90 (3.02)	11.95 (4.71)	12.50 (3.75)	13.58 (3.88)	3.52*

Note: * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

1= Self-perceived health, 2= Number of illnesses 3= GHQ-12; 4=CREA, 5=Crea B

Significant linear relationships between variables for health, creativity and those for conformity with male and female gender norms.

For men statistically significant relationships have been obtained between *self-perceived Health* (the lower the mark, the higher the self-perceived health) and the *Dominant CMNI scale* ($r= .33, p=.032$); and between *Number of illnesses* and the *Playboy scale* ($r=.39, p=.010$). That is, the higher the conformity with the male gender norm to wish to have personal control over situations (Dominance), the lower the level of self-perceived health; and the higher the conformity with the male norm to want multiple or non-committed sexual relationships and emotional distance from sex partners (Playboy), the lower the number of pains or illnesses.

As far as creativity is concerned, we did not obtain any statistically significant

relationships with the health variables, but we did with some CMNI and CFNI scales which could nuance the differences found between men and women in health. Significantly statistical relationships have been found between creativity (Crea A) and the *Emotional control* scale ($r=-.31, p=.048$), *Power over women* ($r=.44, p=.003$) and that of *Playboy* ($r=.32, p=.039$). That is the greater conformity with the male gender Emotional control norm (emotional restriction and suppression) is related to lower creative performance, greater conformity with that of having perceived control over women at both personal and social levels (Power Over Women) is related to higher creativity, and greater conformity with the male gender norm of being a playboy, as well as with having a smaller number of pains and illnesses, with higher creativity.

For women statistically significant relationships have been obtained only between *Self-perceived Health* and the CFNI Romantic relationship scale ($r=-.33, p=.022$), that is, greater conformity with the female norm of investing self in romantic relationship (Romantic relationship), the better the self-perceived health. In creativity, statistically significant relationships have been discovered between creativity (Crea A) and the *Thinness* scales ($r=-.31, p=.030$) and *Domestic* ($r=.32, p=.025$), with higher creativity in Crea B. That is, the greater the conformity with the female norm of pursuing a thin body ideal (Thinness), the lower the creativity and greater conformity with the female norm of maintaining the home (Domestic), the higher the creativity.

Discussion and conclusions

The results obtained in the present study, even when the very limitations to be expected from the sample size and the age of the participants are taken into account, may indicate the tendencies in how the variables taken into consideration are related. As a whole, they could be synthesized in the following way.

Firstly, there are differences of sex, according to which, women tend to suffer a higher number of pains and at the same time tend to be more creative.

Secondly, gender differences exist, according to which, women with high conformity with gender norms tend to suffer significantly more illnesses than men with high conformity with gender norms. Nevertheless, these women with high conformity with gender norms have significantly higher creative potential than men with lower conformity with gender norms.

Thus, in terms of health, women fare worse, having a higher number of illnesses than men. This fact tends to become accentuated when the women show greater conformity with female gender norms and, nonetheless, tend to diminish among men with a higher conformity with male gender norms.

Regarding creativity, women are globally more creative than men, even more so if they have higher conformity with female gender norms. Men less in agreement with male gender norms show a lower creative potential.

Thirdly, when relationships between the health, gender and creativity variables are observed, it is seen that:

Regarding health, there is better self-perception among men showing conformity with the male being dominant gender norm and the lower number of pains is related to conformity with the male being a playboy norm. Among women, on the other hand,

better self-perceived health is obtained among those showing greater conformity with the female gender norm of having romantic relationships.

As for creativity, it is seen that, in men, a higher creativity level is related to greater conformity with the male norms of having power over women and being a playboy; and a lower creativity level in men is associated with conformity with the emotional control norm.

Among women, however, a higher creativity level is related to greater conformity with the female gender norm of being more orientated towards domestic matters; and a lower level of creativity in women is associated with conformity with the female thinness gender norm.

Global consideration of the data obtained throws up the following interpretations:

1. With regard to a global appreciation on health and gender norms:

Globally, these results show that men and women differ with regard to the illnesses they suffer, with women suffering the most pains. When the fact of being a woman is compounded by a greater conformity with female gender norms, the relationship becomes more serious. Only the specific conformity with the Romantic relationships female norm improves, not the number of their pains, but there is greater self-perception of their health.

Men show a lesser number of illnesses, a number which is significantly lower in the group showing the highest conformity with male gender norms. In particular, conformity with the norm of valuing being a playboy produces an even greater reduction in the number of pains. What is more, conformity with being dominant, though not reducing the number of pains, does improve self-perceived health.

2. With regard to the global appreciation on creativity and gender norms:

Likewise, these results show in a global manner that men and women differ in their creative potential, as evaluated by the CREA-B test. Women are shown to be significantly more creative than men and in a greater proportion in the case of those showing conformity with female gender norms. In particular, conformity with the gender norm of Orientation to domestic topics is associated with higher creativity, whereas women conforming with the Thinness norm would be the least creative.

Men are potentially less creative than women, a tendency that grows among men not in agreement with male gender norms. Among them the most creative are those in agreement with the gender norms of Power over women and Playboy, the least creative being those conforming with the Emotional control norm.

As can be seen, gender factors impinge upon health, in a more favourable way for men than for women. But whilst in questions of health, male gender factors “improve” health and female ones “worsen” it, Creativity, on the contrary, would seem to be more favoured by female gender factors. Men are healthier, but women more creative.

In creativity, women are more creative, even more so if they have greater conformity with female gender norms, but men are more creative if they have greater conformity with male ones.

Therefore, regarding health, gender norms would affect both sexes unidirectionally.

nally. The greater the level of female conformity, the worse the level of health and the higher the conformity with male gender norms, the better the health. On the other hand, for creativity, male or female gender norms behave differently in men and women, the female ones favouring creativity in women and the male ones that of the men.

In this manner, albeit in the study it has not been possible to prove the existence of a direct link between creativity, health and conformity, it can be indirectly inferred that creativity is manifested as one of the resources women possess innately, and since they are potentially favoured by their gender norms, it may be relatively available for them, as an indirect help for their health. There are a large number of studies which have clearly shown the importance of creativity as one of the most favourable means, along with good temper, optimism and others, of creating mental health in persons (Webster, 2008; Evans, 2007; Munt, D., & Hargreaves, 2009) and, in this sense, the present data make clear the female “advantage” in accessing this “favouring element” of better health which, starting from its psychological side, finally also achieves the plane of physical health.

Perhaps, what the data also show up is how, despite having this available to them, women probably do not make massive use of it. This may be due to interferences provoked in the psychology of women, particularly when recent studies clearly show that the light and shade of the complex relationship between health and creativity may invert their direction, creating vulnerability in more creative persons (De Manzano, Cervenka, Karabanov, Farde & Ullen, 2010). As a whole this vulnerability throws its weight in the direction of increasing illnesses suffered, except for Romanticism, which in fact does not improve health, but, rather, in harmony with the idealised thought it proposes, improves the perception held regarding the situation of women.

Considering that the creativity dimension assessed is not the one related to creative achievements, but, instead, to the potential available for achieving it (Corbalán et al., 2003), perhaps it is more comprehensible to glimpse how certain gender norms express to us the difficulties faced by women when using the creative capacity they possess in a direction favouring their health. Thus, conformity with thinness appears to be linked to lower creativity in women, which gives proof of the limitations that a gender norm such as this can impose on a woman’s life, simultaneously restricting a cognitive capacity like creativity while jeopardising her health by forcing her into pursuit of an ideal of thinness contrary to female morphology, something which merely satisfies social idealisation. This is one more piece of evidence of how women trivialise creativity in order to meet social expectations (Runco, Cramond and Pagnini, 2010).

Only the valuing of domestic matters norm is related to greater presence of creative resources, which may be related to greater accessibility to this resource among women who have managed to maintain an identity less obsessed with stress, competitiveness and masculinisation in so many jobs, designed to need rigidity of thought, submissiveness or routine in contexts offering little scope for creativity and, on occasions, even health.

In the case of men, male gender norms show themselves to be more favourable both for their health and their creative potential, which, even if they may have it to a lesser extent than women, on the other hand, it gives greater reinforcement by the social beliefs expressed in their gender norms. Therefore, creativity would become

a health resource which is more easily available for men who have a gender “advantage” which women do not have.

As turns out to be so evident in many researches (Munt & Hargreaves, 2009), emotional control contravenes a favourable disposition towards creative potentiality. And this is the gender norm which is so clearly contrary both to health and creative development in men. However, other gender norms such as power over women or the evaluation of behaving like a playboy are associated with creative potential, which, in turn, reinforces the greater tendency towards health in men. In this sense, traditional gender norms, despite the limits they may impose, appear as enablers of certain “advantages” for men.

Both men and women suffer from highly restrictive aspects stemming from certain gender norms promoted by every culture. Nonetheless, in the present day women continue to suffer most from these norms which burden them with extra antagonists for their health (Labouvie-Bief, 1994), to add to their higher rates of illness.

Creativity, for its part, is a resource that may turn out to be important as an enabler of mental and physical health. More available in women, it is probably less used to improve states of health, than appears to be the case in men. Once more this is because gender norms are more ambiguous than that of the former to promote it.

In the search for evidence as to, whether, in some way, this dimension modulates relationships between gender and health, it could be stated that creative potential, evaluated through the CREA, constitutes, in accordance with the data found, a dimension which gives clear evidence of how the already established relationships between gender and health can be nuanced by the intervention of a factor, apparently unrelated to them, but which in general optimises people’s positive resources.

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JE KREATIVITA PROMĚNNOU HODNOTOU MODULUJÍCÍ VZTAH MEZI ZDRAVÍM A POHLAVÍM ČLOVĚKA?

Abstrakt: V současné době se stále více potvrzují vztahy mezi genderem a zdravím. Na optimalizaci osobních zdrojů v době, když jedinec čelí onemocnění, má pravděpodobně také vliv kreativita, která je považována za kognitivní proměnnou. V předkládané studii jsme zjišťovali, jak kreativita ovlivňuje vztah mezi zdravím a genderem tím, že jedinci umožňuje optimalizovat způsob, jakým řeší svoje situace v době nemoci, a také usnadňuje chování vedoucí k uzdravení. Výsledky naznačují, že existují rozdíly ve výskytu onemocnění mezi muži (N42) a ženami (N48) v souvislosti s tím, do jaké míry jsou tito konformní s genderovými normami feminity a maskulinity. Kreativní potenciál je patrně také spojen s větší konformitou s těmito normami.

Klíčová slova: role pohlaví, mužské genderové normy, ženské genderové normy, rozdíly mezi pohlavími, tvůrčí schopnosti

FORMING OF CHILDREN'S HEALTH BY FACILITIES OF EXTRACURRICULAR WORK

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Abstract: *The children's health can be formed not only during lessons at school but also by facilities of extracurricular work. There can be the one of perspective types of this work - employments in valeological groups. Such groups can exist both at school and in the special establishments of extracurricular work – palaces of child's and youth creation. The programs of employments of valeological groups were developed by us in the flow of many years and their efficiency was estimated on the base of the Kharkov regional palace of child's and youth creation. Over the last years these programs were introduced in ordinary schools. In this work influence of employments is analyzed in the groups of the valeological sending to the physical and psychical health of students of 1st and 11th classes of schools of the Kharkov. Positive influence of employments is routined in a groups on the physical health, including functional possibilities of organism. Job performances allow giving further recommendations for the improvement of the programs of employments in valeological groups.*

Keywords: *extracurricular work, valeological groups, physical health, functional possibilities of organism*

Presently there is a process of reformation of education in Ukraine. Maintenance and strengthening of health of participants of educational process must one of priority tasks of reform of the system of education become, forming for them of steady motivation on a requirement in a health and healthy way of life, that education of culture of health.

The valeological system of education, from one side, includes the receipt of the system of knowledge about maintenance and strengthening of health and forming of high culture of health, valeologisation of educational environment by introduction of technologies, which strength of health.

One of methods of re- of organization of education process in establishments of education there is introduction of the special courses of valeological ; lead through of trainings on forming of skills of healthy way of life and warning of deviant conduct.

The health of children can be formed not only during lessons at school but also by facilities of extracurricular work There can one of perspective types of this work be employments in valeological groups. Such groups can exist both at school and in the special establishments of extracurricular work – houses and palaces of child's and youth creation.

On the extents of last years by valeologists of the Karazin Kharkov national university the programs of valeological groups were developed and their efficiency was estimated on the base of the Kharkov regional palace of child's and youth creation. It is showed that attending of valeological groups improves both the state of physical health (blood system, adaptation possibilities) and indexes of cognitive processes (memory, attention).

Last years these programs were in ordinary schools.

The purpose of this work was an analysis of influence of attending of valeological groups to the state of physical and psychical health of pupils from A-ones and 11th classes of schools of the Kharkov region.

The schoolboys of A-ones already began to study the discipline «Basis of health», however these lessons is not enough in the first year of the school teaching, when the process of adaptation to the school environment is negatively reflected on a health first-class pupils.

The schoolboys of A-ones already began to study the discipline «Basis of health», however these lessons is not enough in the first year of the school teaching, when the process of adaptation to the school environment is negatively reflected on a health first-class pupils.

The followings methods and methods are used:

- express-estimation of physical health level,
- determination of index of functional possibilities;
- estimation of intensity of stress and coefficient of vegetation of Shiposhi by the method of M. Lusher;

Statistical treatment of results was conducted by the calculation of t-criteria by Student and d-criteria by Somers, through the program «SPSS 17.0».

The pupils of A-ones of Lyubotin's school №3 and school of settlement Berezovka, and also pupils of 11th classes of gymnasium of the Kharkov national university of building and architecture **were inspected.**

Schoolboys of set. Berezovka and 11=A class of gymnasium of the Kharkov national university of building and architecture **got attending of valeological group**, a pupils from Lyubotin and 11-M class of gymnasium of the Kharkov national university of building and architecture served as **a control group**

Schoolboys of set. Berezovka got attending in a valeological group “**Healthy traditions of the Ukrainian people**” (the author of program – Naboka I. E.).

Age of children: 5-7 years. Employments are a group (to 20 persons) and conducted for 2 hours twice in a week.

The program of valeological group in set. Berezovka, included such methods, as art-therapy, tale-therapy, relaxation and dynamic physical exercises for eyes, hands, spine. In the program of valeological group of Berezovka's school the reception of multicomponent addition was also plugged children – syrup “Valeoton” during a month in February in a dosage, proper age of children (2 tea-spoons twice in a day).

Schoolboys 11-a class of gymnasium got attending in the group of development of personality. The author program of this group was developed in 2003 by Kabatskaya

E.V. Two years the program passed approbation in Kharkov regional Palace of child's and youth creation.

By the order of Main administration of education and science of Kharkov regional state administration № 607 from 07.10.2005 the program was ratified for introduction in out-of-school work of educational establishments of Kharkov and Kharkov area.

The program is counted on teenagers 16-18 years, employments are a group (to 20 persons) and conducted for 2 hours twice in a week, 144 hours in a year.

Program purpose: comprehensive harmonious development of teenager (unity physical, psychical, spiritual and social; education of personality).

Tasks of the program: forming: knowledge about the culture of health, motivations on a health, skills of healthy way of life, relaxation for the removal of fatigue; increase of level of knowledge about the psycho-physiological features of organism of teenager, about the different types of interpersonal relations, about the methods of exit from conflict situations; education of aesthetic taste; capture skills of modern business intercourse and etiquette; development of position sure socially to active personality.

Forms and teaching methods: valeo-pedagogical and psychological trainings, business and role games, briefings, discussions, art-therapy, testing, questionnaire. The program is foresee a lead through on every employment of the valeological unloading under weakening music: exercises – relaxation (for the removal of fatigue from the muscles of body), respiratory, for eyes and spine; selfmassage, joint gymnastics, anti-stress complex

The program is foreseeing employments on fresh air, and also lead through of evenings of rest, holidays, actions of healthy way of life, days of health

Upon termination of teaching teenagers must get **knowledge:** about a physical, psychical, spiritual and social health (to the culture of health); about a correct feed, about the psychophysiological features of organism of teenager, about the different types of interpersonality relations, about the methods of exit from conflict situations, tolerance, about harmonious development of personality

To capture **abilities:** making healthy of the organism (complexes of different exercises, massage, selfmassage), tolerant conduct

To get **skills:** healthy way of life, correct breathing, weakening, development of attention, memory, intellect, creative thought, business etiquette, selfmanagement/

Curriculum of the author program of valeological group of development of personality

№	Sections	Types of employments (in a clock)			
		In all	Theoretical	Practical	Individual work
1.	Valeology as science.	8	2	6	–
2.	Nature in life of man	8	2	4	2
3.	Physical health	54	14	32	8
4.	Psychical health	24	4	16	4
5.	Social health	28	8	16	4
6.	Spiritual health	22	10	8	4
	In all	144	40	82	22

The schoolboys of experimental groups inspected before and after the lead through of all program of employments of the proper groups. Pupils of control groups inspected in those terms.

As a result of testing of indexes of physical health of first-class boys the following results were (fig. 1):

On the indexes of index express-estimation a positive dynamics is exposed for the children of A-ones of Berezovka, getting busy in a valeological group. The first inspection (at the beginning of school year) exposed in a class 12,5 % children with the low level of physicalhealth, 25 % with a level below the average, 25 % with middleand only 31 % with a level above average and 6 % - with a high physical health level. An inspection, conducted at year's end, exposed the considerable improvement of physical health of children. An amount of children with a health level above average was 87,5 %, 12,5 % had a middle level. At the same time indexes of physical health level student control group from Lyubotin's school №3 on the endof year (8 % children with the low level of physical health, 4 % with a level below the average, 44 % with middle, 32 % with a level higher formiddle and 12 % with high) were worse than indexes of schoolboys of Berezovka on the end of year. Information is statistically reliable ($p < 0,05$).

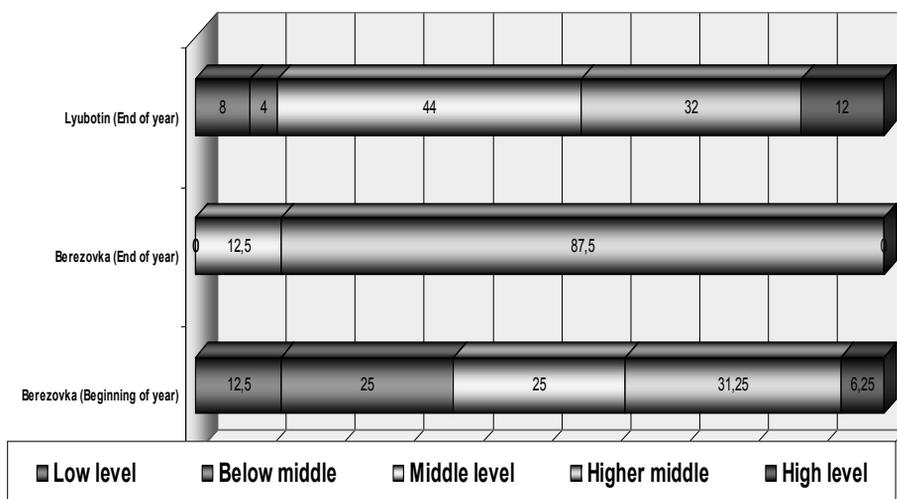


Fig. 1. Physical health level of children of A-ones at the beginning and at the end of school year, %.

Determination of index of functional possibilities (IFP) of schoolboys s of A-one of school of settlement Berezovka demonstrated the dynamics of improvement of indexes of adaptation by the end of school year as compared to his beginning. If at the beginning 31 % schoolboys had a satisfactory level of adaptation only, then after the stake of such schoolboys was increased to 44 %. At the same time, as in the case of physical health level, indexes of adaptation possibilities of schoolboys of A-ones of Lyubotin's school at the end of school year were on 8 % below than indexes of schoolboys of Berezovka (fig. 2.). Information is statistically reliable ($p < 0,05$).

The noted distinctions of indexes of health of first-class boys can be explained the features of the program of valeological group of Berezovska, namely by the lead through of complex valeological strengthening of health inspections passed pupils of 11 classes. Monitoring of physical health level through an index express-estimation exposed the dynamics of improvement of these indexes for schoolboys from 11 A class of gymnasium of the Kharkov national university of building and architecture, getting busy in a valeological group. First exposed inspections (to beginning of employments in a group) in a class a 6 % pupils with the low level of physical health, 24 % with a level below the average, 41 % with middle and 29 % – with a level above average. An inspection, conducted at year's end, exposed the improvement of physical health of schoolboys. At year's end there were not pupils with the low level of health, and also the percent of children was increased with a health level above average – from 29 to 41 % (fig. 3.). Information is statistically reliable ($p < 0,05$).

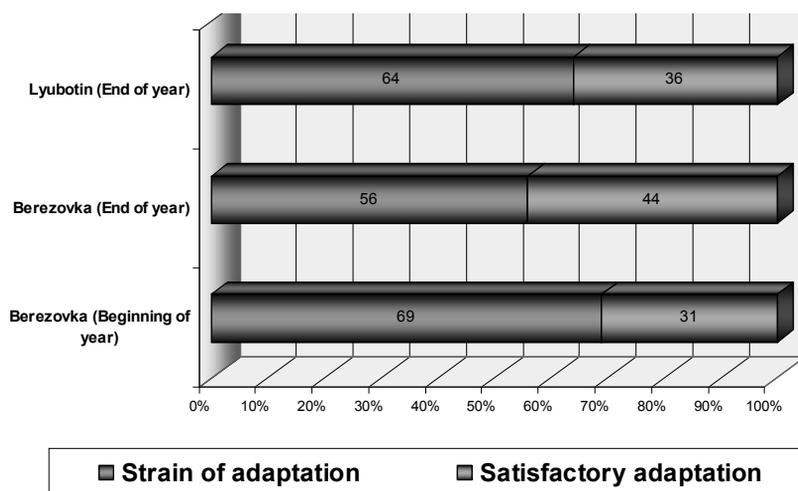


Fig. 2. Dynamics of IFP indexes change of pupils of A-ones at the beginning and at the end of school year, %

Determination of functional possibilities of pupils of the eleventh classes demonstrated only an insignificant positive dynamics in an experimental group as compared to control. The indexes of control group from beginning to the end of scientific year did not change, while in experimental the increase of amount of students happened with the satisfactory indexes of adaptation from 35 at the beginning of scientific year to 41 % in the end. There is a tendency to the change, but information was not statistically reliable ($p > 0,05$).

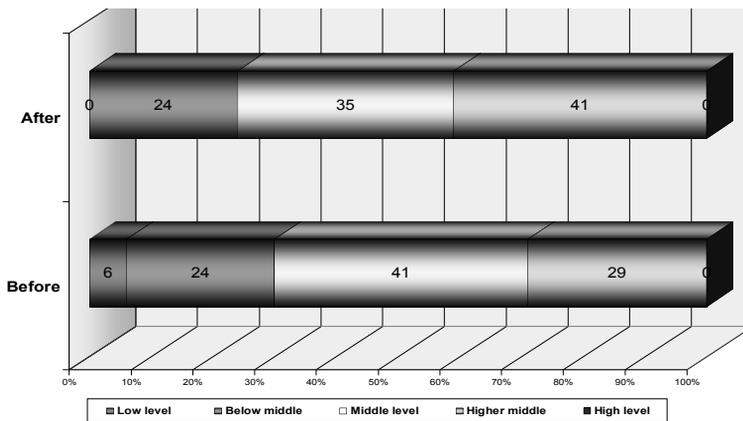


Fig. 3. Physical health level of pupils of 11A class at the beginning and at the end of employments in a valeological group, %

Such difference as compared to analogical indexes for first-class boys can be explained that the program of group junior schoolboys got in which busy included making healthy syrup of «Valeoton», which amber acid, vitamins, antioxidants and other bioactive matters, positively influencing on functioning blood, nervous systems and adaptation possibilities of organism on the whole.

For research of psychosomatic compound of health the color test of M Lyusher was used.

At determination of intensity of stress on the test of Lusher looked after the increase of of children with normal intensity of stress among pupil of school of sat. Berezovka. (Fig. 4.). Taking to account that repeatedly the test of M. Lusher was conducted at the end of school year, during the increase of teaching intensity at school, the dynamics of results can be considered positive, some increase of children with the high level of stress.

On this index a complex valeological correction in a groups appeared more effective, than there is the school program in Lyubotin.

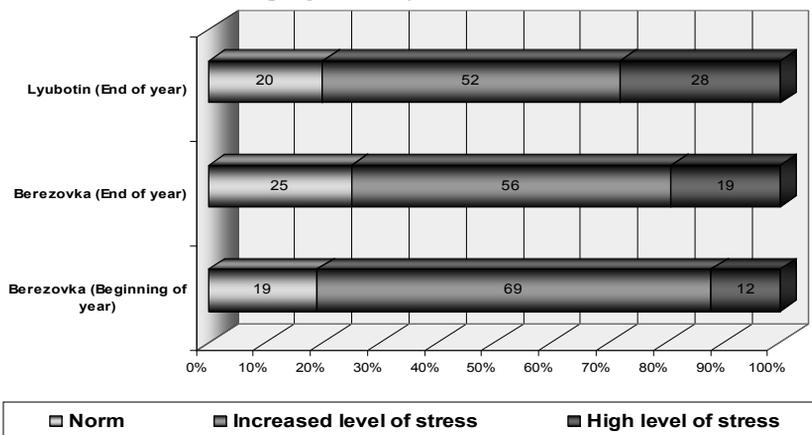


Fig. 4. Indicators of stress level of A-ones children at the beginning and at the end of school year, %

It is possible also to the general positive dynamics of 'of stress' level in the experimental group (11-A class) of gymnasium of the Kharkov university of building and architecture as compared to a control group (fig. 5.). Information was statistically reliable ($p < 0,05$).

Determination of features of functioning of the vegetative nervous system was conducted on the index of coefficient of vegetation of K. Shiposhi (which settles accounts from information of Lusher test). For pupils of Berezovka's school this index after the course of studies in valeological groups aspires to the norm, or the vegetative balance, that subjectively testifies to absence of the expressed excitation of the sympatic or parasympatic nervous system (fig 6).

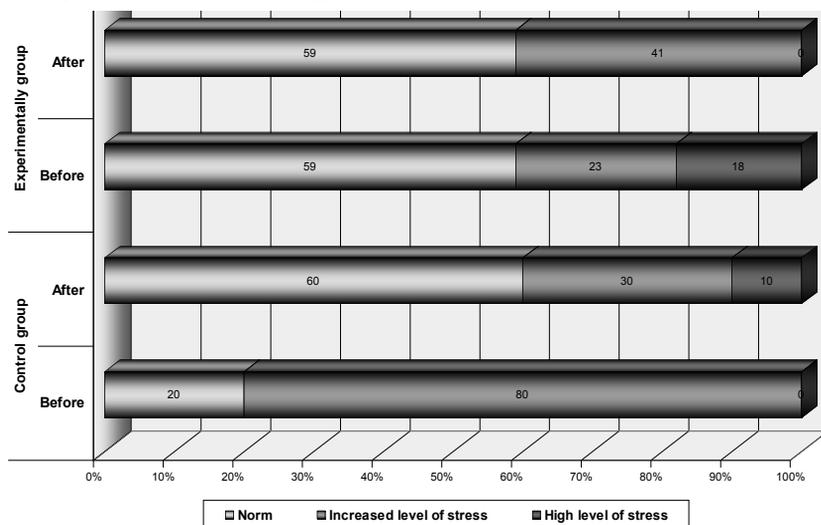


Fig. 5. Indicators of stress level of pupils of the eleventh classes of the Kharkov lyceum of architecture and building, %

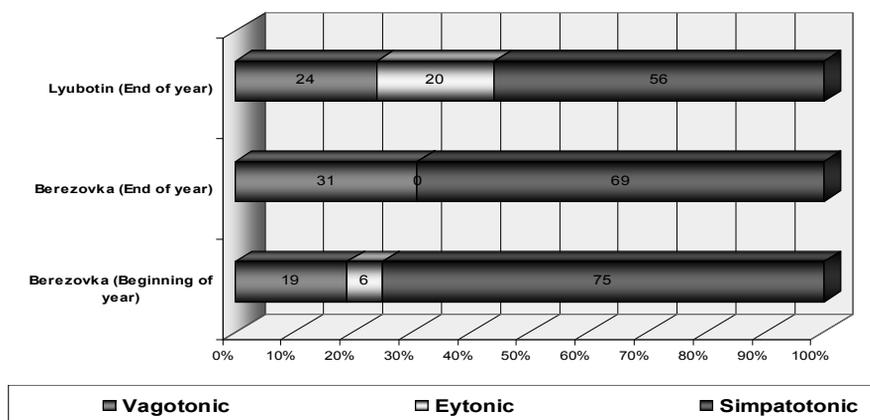


Fig. 6. Type of the vegetative adjusting of children of A-ones at the beginning and at the end of school year according to the coefficient of vegetation, %

For pupils of 11 classes the increase of amount of sympatotonics happened both in control and in experimental groups (fig. 7).

That subjective excitation of the sympatic nervous system happened for senior pupils. Objectively for these pupils a health level gets better, but subjectively children are in a state of tension, that can be caused the effect of «senior class» and requires bringing of additional changes in the program of valeological group

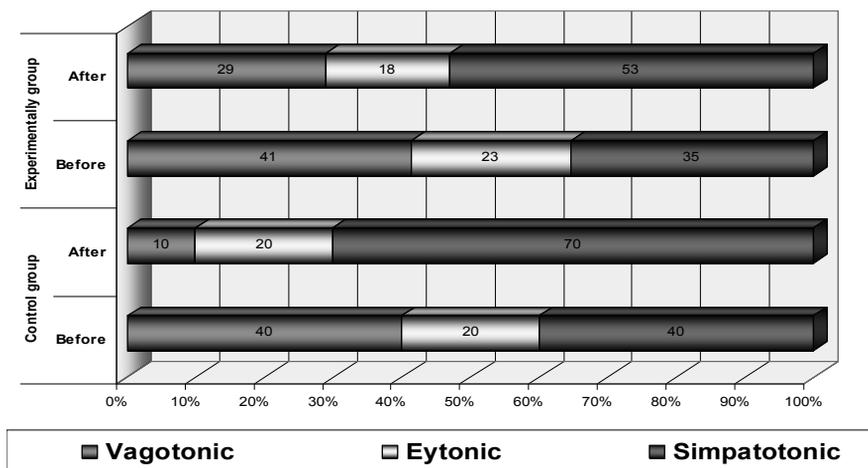


Fig. 7. Type of the vegetative adjusting of pupils of 11A and 11M classes according to the coefficient of vegetation, %

Conclusions

1. Monitoring of physical health level by system of indexes exposed the positive dynamics of the state of physical health and functional possibilities of pupils of A-one of Berezovka's school and pupils of 11 class of gymnasium of the Kharkov university building and architectures which got busy in valeological groups.
2. Intensity of stress and coefficient of vegetation for schoolboys, attending studies in valeological groups, by the end of school year nearer to the norm, what at pupils from control groups
3. On the whole general positive influence is on consisting of health of children of attending of valeological groups.
4. The most considerable positive influence of attending of valeological groups on the state of health is in that group, where the program of group includes complex valeological procedure with the use of phytosyrup (Berezovka's school).
5. Valeological groups are a perspective method of extracurricular work, recommended for the use for all schools taking into account age of pupils.

UTVÁŘENÍ ZDRAVÍ DĚTÍ PROSTŘEDNICTVÍM ZAŘÍZENÍ PRO MIMOŠKOLNÍ AKTIVITII

Abstrakt: Zdraví dětí je možné utvářet nejen během hodin ve škole, ale rovněž v zařízeních pro mimoškolní aktivity. Jedním z perspektivních typů takových aktivit může být práce ve valeologických skupinách. Tyto skupiny mohou existovat jak ve škole, tak i ve speciálních zařízeních pro mimoškolní aktivity – domovy dětí a mládeže. Programy zaměstnání ve valeologických skupinách byly vyvíjeny během mnoha let a jejich účinnost byla očekávána na základě zkušeností z Charkovského okresního domu dětí a mládeže. V posledních letech byly tyto programy zavedeny v běžných školách. Jejich dopad je analyzován ve valeologických skupinách, sledováním fyzického a psychického zdraví studentů 1. a 11. třídy školy v Charkově. Pozitivní vliv této činnosti je v těchto skupinách patrný na fyzickém zdraví, a to včetně funkčních možností organismu. Pracovní výkonnost umožňuje vyvinout další doporučení pro zlepšení programu činnosti ve valeologických skupinách.

Klíčová slova: mimoškolní práce, valeologické skupiny, fyzické zdraví, funkční možnosti organismu

ARTIFICIAL INFORMATION, NATURAL INFORMATION AND A HEALTHY INNER LIFE CRISES OF PERCEPTION TODAY

Gabriela OAKLANDOVÁ

Abstract: *The project aims to make evolutionary ontology a part of environmental studies at schools. One of its starting points is the issue of artificial and natural information. The text addresses artificial and natural information in the context of a healthy inner life. Also discussed are the connections between artificial information, natural information and the crisis of perception that our society is experiencing today. A clear link is identified between overpowering amounts of artificial information and a crisis of perception. Inner life is filled unnecessarily by artificial information and could be reconstituted in a way more conducive to health if the artificial information accumulated could at least in part be cleared away. It is in his/her inner nature that a person's connection to the outside natural world dwells. Once this reconstitution is achieved, humanity might wish to create a different type of culture, which will differ from that of today and will be of a biophile nature. In this way, through the nature inside of each of us, humanity in general could embark on a path to a healthier inner life.*

Keywords: *artificial information, natural information, environmental studies, crises of perception*

Introduction – biophile education, vision

In my study I mainly deal with the transfer of evolutionary ontology to a practical level of ecological education. One of the starting points of my work concerns artificial and natural information¹. In this context I concern myself with the relation between the information and the healthy inner life.

The difficult tasks of education should also encompass work with the term information. If the teachers, pupils and students could reflect on the type of information, for which the human body was constituted, and the type of information obtained in the present world, the ecological education could look for ways of favouring the human ability to perceive natural information as essential, and cultural information as information

¹ Šmajš, J.

necessary to keep culture but still subject to the natural information. Education would also contribute to the ability of the person to select, sort out and process information in a suitable way. Thus, we would step towards biophile culture through biophile education, towards a healthier inner life and therefore a healthier lifestyle that would also be healthier for the environment.

Education would also focus on working with pupils and students in the field of information selectivity. Thus, it would become one of the ways to close ourselves from unnecessary and useless information and open up to natural and important information, not only to keep a healthy inner life but also to renew the balance of our society².

The person should then be able to proceed towards the next and healthier transformation of his/her ecological behaviour. S/he would learn how to distinguish essential information. He would learn how to work with it. S/he would let them infuse its shapes into him/her (in-formed him/her), or as David Abram says, leave an echo inside³. The person could thus come again closer to the status s/he used to be a long time ago – at the time when s/he did not stride with an unbearable burden of artificial information on his/her back – mankind has done.

The quality of inner life could be recovered, the sediments of matters from the outside filling uselessly the inner side would be cleared off. Inside the individual there is not only his/her inner nature, but also his/her spiritual affinity with the surrounding natural world. As soon as s/he approaches it, s/he will want to create a different culture, different from the present⁴, the culture of biophile character. And thus, through the healthy inner life, through the nature inside, we will stride towards a healthier culture and healthier world.⁴

*We have no privileged position from which we could view the world and thus grasp its entire plan as we are a part of it; we are situated inside of it, through being physical beings. We are embedded in the thickness of things. Our life is associated with the life of the world that surrounds us on all sides. And thus to ask people to speak about the world as living means to simply ask them to notice that they are inside of it.*⁵

Crisis of perception, natural and artificial information

In his book *Awakening to Nature*, David Abram speaks also about the fact that the present environmental crisis is a great crisis of perception⁶. It is about the inability of a „too civilised person“ to perceive the nature in a sufficiently clear way. Thus, the reciprocity is disturbed i.e. the two-way floating between the man and nature. This then results in the inability of a person to return what s/he took but often also in the inability to perceive and decode what the nature has to say.

Therefore, there is a loss and misinterpretation and mis-storage of information in the communication between the person and nature, but there is also useless information

2 The term society is used according to David Abram, who considers it as a whole ecosystem, not only a human being.

3 Abram, D. *Procitnutí do živé země*. Nymburk: OPS, 2008.

4 The concept of culture is used in terms of evolutionary ontology.

5 Abram, D. *Strážce hranice - Rozhovor Jeremy Haywarda s Davidem Abramem*. Pražské brány – 3. Ročník multiculturalního festivalu. 2009. www: <http://www.prazskebrany.cz/cz/osobnosti/david-abram-cv-cz/david-abram-rozhovor>.

6 Abram, D. *Procitnutí do živé země*. Nymburk: OPS, 2008. str. 139

buzz. One of the problems entailed by the present crisis of perception is the crisis of information: both the natural information and artificial information (Šmajš).

The person is struggling more and more with his/her inability to decipher correctly the natural information. No only the information stored in the outside world, coming from the outside, but also those coming from the inside. What also greatly contributes to this state of things is the present surplus of artificial cultural information, to the pressure of which the person is exposed.

In this context one should ponder about what is actually understood by the term information. Information is not only the contents of the message related to the natural or cultural world of a person. In line with the evolutionary ontology, information is understood in a broader sense. Information is not only a verbal or visual incentive related to the human culture. The term information is related not only to the human perception and understanding of the world, but also the exchange of messages between structures inside of nature, i.e. inside the natural order.

Here we are drawing upon the concept of information proposed by Josef Šmajš and we consider the natural information as an abiotic and biotic arrangement of reality. It is also important to know that the human nature does not originate from the natural information contained in the structures (memory) of living systems. In order to establish and maintain a culture, a different type of information was needed, i.e. cultural constitutive information (artificial information). When interpreting the term information J. Šmajš describes the so-called „triple reading of the reality by a person“ (living systems): through the first reading the information stored in the genome of the living systems is obtained; in the second reading the sensually neuronal information is obtained and stored by the person in the central nervous system (CNS); the third reading related to the human ability to decode the information by language creates the cultural information (artificial). The cultural information is stored not only in the human CNS, but also in other forms of artificial social memory. And it is this information that is embodied in the present anti-nature culture. The third reading thus „reads“ and „translates“ the natural reality inadequately, with a minimum human sensual and physical involvement.⁷

If the mankind in the interest of preserving its own kind should strive after a healthier biophile culture, one of the ways towards the biophile education could lead through reinforcing the tasks of senses and physical contacts between people and the world. It is therefore a certain „return“ to the „second reading“. If the mankind manages to start understanding the information as something that is not strictly associated with its mental activity and culture, but also as something that is associated with its physical, chemical and biological structures, the physical world of the nature and the people, the meaning of the what the mankind understands as information will shift in a biophile direction, but also the mankind itself will move on its ways to the biophile culture.

Information and in-formation

We are building on the fact that the human capacity is set to process a certain amount of a information and if there is too much information, the person closes himself/

⁷ Šmajš, J. *Filosofie – obrat k Zemi*, Praha: Academia 2008.

herself and simply does not accept any new information for some time. To illustrate the point, let us recall a feeling we had when we are, for example, overworked. We can remember the inability we had at that time to perceive anything „additional“ and deal with anything „additional“. Such a closing away from information is a certain top element of our defence system. Most people probably oscillate somewhere inside a wide spectrum, with the critical points being on the one side freshness and ability to receive new information, and a certain defensive reaction and failure to accept anything on the other side. Thus, people are located in a certain meantime. They are flooded with information, but not fully closed off yet. However, they have to a certain extent lost their ability to recognise, save and associate essential information.

Information forms the person, introduces its shapes, and the person adopts them, as part of himself/herself. Either the information or its echoes. The quality of such information then logically influences what is inside the person.

If we consider as information everything that forms us or in-forms us, and if such information or in-information is what turns us into a society we are now, we must necessarily ask ourselves a question what information a person must resist and what information is needed for the life, what information is vital for the full-value life, what information is useless and what information endangers the person.

Healthier ecological education

... with the establishment of phonetic alphabet the letters started referring exclusively to human sounds, which gradually left behind the more than human origin of their shapes. The rest of nature was not anymore an essentials part of reading and thinking practise as it was before when reading Maya hieroglyphs or Chinese ideographical writing.

This subtle shift has resulted in all these differences – reflexive thinking is now starting to experience itself as an exclusively human ability ... We are just rambling inside a collective nervous system of the mankind.⁸

Ecological education is currently slowly spreading to schools and what is particularly promising from our point of view is the project of ecological coordinators promoting ecological education and its penetration to all subjects and activities of the relevant school. We are not sure whether what we are now about to propose is within the power of a single coordinator. But is such a coordinator was supported by a certain philosophical base, a wider and united active group the coordinator could get support from, then s/he would feel the support of the Ministry of Education, s/he could work on gaining importance for the ecological education, making it a part of all subjects and becoming a notable part of the education.

In this, from our point of view, ideal case, such a coordinator would work on shifting the education in the biophile direction. This means from the present prevalence of artificial information towards natural information. Education would extend the scope of its competence, it would not only deal with the mind, but it would spread to the whole

⁸ Abram, D. *Strážce hranice - Rozhovor Jeremy Haywarda s Davidem Abramem*. Pražské brány – 3. Ročník multiculturalního festivalu. 2009. www: <http://www.prazskebrany.cz/cz/osobnosti/david-abram-cv-cz/david-abram-rozhovor>.

body, and become a part of the upbringing. And the priorities would change, too. They would also leave the prison of the head and take positions throughout the body. Education would thus become more balanced. The intellectual component would not be favoured. It would put it to the same level as the affective and psychometrics components.

We propose three basic steps that could mark the beginning of such a transformation of education:

1. greater emphasis on 3D space, smaller emphasis on 2D space
2. transfer from education focused on the head towards education focused on the body and its unity with the surrounding world; development of the relationships with the local world, the work on the renewal of the oral culture of the place⁹
3. recognising an equal position of the surrounding world to the people, development of respect to the surrounding world

I speak about stories told face to face, not about reading to children from books. To simply tell a story of what happened at full moon on the side of a forest or whose footsteps run across the dried up river bed. What are the stories of your place? Why is there such a high and strangely shaped boulder sticking out from that hill side? Or the story of that street corner with intermittent buzzing of a street lamp – what can be happening there?

Children need stories that take place in the country, stories from the physical world because unlike other forms of our discourse we inhabit stories with our the physical imagination. Before we start conceiving the language as a non-physical sphere of abstractions, we need to experience it physically. We should prefer improvised narrating so that the child grows up in fabulous country and is aware of the language as of something that does not belong only to people but to the world as a whole. A child that is growing up inside the world of stories has a feeling of being, plunged into a meaningful cosmos, a world where meanings penetrate from each and every branch and blades of grass and beak that happens to open.

This is the basis that is vitally needed by a cultivated literary intellect, and perhaps also even computerised mind to be able to accept any type of ethical limitation. And they can only do it if they are rooted in the physical realisation of being plunged into a world inhabited not only by people but also by other beings and other bodies.¹⁰

The current anti-natural culture is unsustainable. It is time the mankind started getting ready for the unavoidable way towards sustainable recess¹¹. It is time to face the division of the reality into a thinking entity and a non-thinking mass. Simply speaking, these two worlds inside the person should be unified again. The point is that the mind should get reconnected with the body, his/her physical senses, which would re-open for the acceptance of natural information.

⁹ Abram, D. *Strážce hranice - Rozhovor Jeremy Haywarda s Davidem Abramem*. Pražské brány – 3. Ročník multiculturalního festivalu. 2009. www: <http://www.prazskebrany.cz/cz/osobnosti/david-abram-cv-cz/david-abram-rozhovor>.

¹⁰ Abram, D. *Strážce hranice - Rozhovor Jeremy Haywarda s Davidem Abramem*. Pražské brány – 3. Ročník multiculturalního festivalu. 2009. www: <http://www.prazskebrany.cz/cz/osobnosti/david-abram-cv-cz/david-abram-rozhovor>.

¹¹ Lovelock, J. *The Revenge of Gaia*.

*What we need to do is to slow down for a while, quiet down the incessant twittering in our brains and give room to our eyes and ears so that they can start perceiving all the other voices that surround us. All these gestures are very important and still they do not suffice as we also need to communicate with each other. It is necessary to return from this silence to the world of expressions, and find such manners of speaking that will be faithful to our immediate sensual experience with the world, our animal kinship with the rest of the living world.*¹²

If everything we meet leaves a certain echo inside it is necessary not only for us but also for the generations to come to make sure that the present ecological education deals with what is in conformity with natural information, but it should also create and revive a feeling in children to be inclined towards the natural information and their natural¹³ creativity and to make sure that the ecological education participates in ensuring that children manage to keep their healthy inner lives, the health of which consists, besides others, in the close and apparent bond with the surrounding natural world.

Conclusion

If the mankind manages to restrict the intake and output of artificial information to an acceptable level, there is a chance that a new and vast scope will open up for it to be able to receive and issue natural information in a better way.

However, the question remains whether the mankind is capable of restricting the amount of its cultural information before managing to reinforce its ability in the field of cultural information. If this is not managed, the man will find himself in a viscous circle from where he can perhaps be only helped out by God, or the power of optimism¹⁴.

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¹² Abram, D. *Strážce hranice - Rozhovor Jeremy Haywarda s Davidem Abramem*. Pražské brány – 3. Ročník multikulturního festivalu. 2009. www: <http://www.prazskebrany.cz/cz/osobnosti/david-abram-cv-cz/david-abram-rozhovor>.

¹³ The term “natural” is used in sense of evolutionary ontology.

¹⁴ Winter, D. D. N. a Koger, S. M. *Psychologie environmentálních problémů*. Praha : Portál, 2009.

UMĚLÁ A PŘIROZENÁ INFORMACE A ZDRAVÝ VNITŘNÍ ŽIVOT ČLOVĚKA ANEB SOUČASNÁ KRIZE VNÍMÁNÍ

Abstrakt: Náš projekt se zabývá převedením problematiky evoluční ontologie na praktickou úroveň ekologické výchovy. Jedním z našich východisek se stává problematika umělé a přirozené informace, jejichž vztahu ke zdravému vnitřnímu životu člověka se také v tomto textu budeme věnovat. Dále se budeme zabývat souvislostmi mezi umělou a přirozenou informací a současnou krizí vnímání, která je spojena právě s přehrší umělé informace, které jsme každodenně, my lidé, vystavováni. Vnitřní život člověka by se mohl obnovit, byl-li by odklizen nános věcí z vnějšku, které jeho nitro zbytečně zaplňují. Uvnitř člověka se totiž skrývá nejen jeho vnitřní příroda, ale i jeho duševní spřízněnost s okolním přirozeným světem. Jakmile se jí člověk přiblíží, bude chtít vytvářet jinou kulturu, odlišnou od té dnešní, kulturu biofilního charakteru. A tak bude skrze zdravý vnitřní život člověka, skrze přírodu v něm, vykročeno směrem ke zdravější kultuře a společnosti, ke zdravější Zemi.

Klíčová slova: umělá a přirozená informace, ekologická výchova, krize vnímání

ENVIRONMENTAL AND PROENVIRONMENTAL BEHAVIOR

Jan KRAJHANZL

Abstract: *One of important areas of interest in psychology is the so-called environmental or pro-environmental behaviour. The author offers a concept that may facilitate orientation in the many factors that affect our environmental behaviour. He presents a methodological procedure that support environmentally friendly behaviour in practice. He lists five characteristics of personal relationship with nature and explains how important it is to clearly distinguish between them in both professional theory and practice. The author also emphasizes the importance of people forming a personal relationship with nature. In this respect, study of individual personal understanding of general terms of environmental education and the building of a common understanding seem of paramount importance.*

Keywords: *environmental behavior, proenvironmental behavior, environmentally friendly behavior, areas of environmental behavior, characteristics of the relationship to nature, the need for contact with nature, abilities for contact with nature, environmental sensitivity, general attitude to nature, environmental concern*

A walk across a meadow, planting the trees, a ride in a SUV, firing the grass, feeding the gulls or exporting the solvents into the woods... What do all these activities have in common?

They are examples of human behavior which has a certain influence on the environment – greater or smaller, positive or negative. Nevertheless, as people are in an interaction with their environment almost constantly, almost all human behavior could be called **environmental behavior**. That means, that this term would include all activities regardless the fact, how insignificant their impact on the environment is - e. g. A walk, any human movement, even breathing.¹ This overall interpretation of environmental behavior is, from the logical point of view, correct, nevertheless for the needs of disciplinary communication totally useless.

The meaning of the term “environmental behavior” unwinds from the contemporary conditions in which social studies study environmental behavior. In the period when the society registers changes of the environment, ecosystems, biosphere and climate which

¹ Person is by his physical nature connected to the environment. On the microscopic level it can be hard to distinguish where the person ends and where his/her environment begins.

proceed in connection with human activity, the attention of professionals is focused mainly on such environmental behavior which is connected with the usage of energy, raw materials, waste production and pollution.

Environmental behavior therefore is, in narrow sense, such a behavior which has a significant impact on the environment.

In this sense, the term “environmentally-relevant behaviors” is also sometimes used (environmentally-relevant behaviors, Bechtel, Churchman 2002, Stern 2000).

Environmental behavior of an individual may be unintentional and not reflected; in such case the person does not realize the impact of his/her behavior – e.g. many people buy soya products, cut flowers or cigarettes.

In case the person realizes the environmental impact of his/her action, we speak about so called **intentional environmental behavior** or directly about **environmental behavior** – e.g. exporting the waste into the countryside or feeding the titmice in winter (see table Nr. 1).

Proenvironmental behavior

Most cases of environmental behavior can be, based on the knowledge of environmental science or ecology, judged according to their impact on the environment, and labeled as environmentally friendly or unfriendly. Some cases can be judged easily, e.g. a bicycle ride is more positive than the ride in a car, holiday located near home are more favorable than travelling to another continent. Nevertheless, evaluation of certain cases is doubtful (is the attendance on a political meeting about climate change in South Africa where travelling by plane is necessary environmentally positive?) or scientifically demanding (buying a new hybrid car instead of ten year old one?). These factors have to be taken into consideration in the following definition:

Proenvironmental behavior is such behavior which is generally (or according to knowledge of environmental science) judged in the context of the considered society as a protective way of environmental behavior or a tribute to the healthy environment.

Environmentally protective option is to write a letter by handwriting instead of using a computer, vegetarian lunch instead of a pork steak originated from mass breeding; a tribute to the healthy environment is e.g. a disposal of illegal dumping (see table Nr. 1).

The following terms can be used as equivalents for proenvironmental behavior “environment-protective behavior”², “environment-preserving behavior”,³ “environmentally responsible behavior”⁴ (Kaiser et al., 1999), “ecological behavior”⁵ (Axelrod, Lehman 1993, Kaiser et al., 1999), “sustainable behavior” (Clayton, Myers, 2009). The opposite is “environment-destructive behavior”⁶ or Czech “environmentally unfriendly behavior”.

² Geller (Chapter 34: The Challenge of Increasing Proenvironment Behavior) in Bechtel, Churchman (2002).

³ Ibidem (Geller in Bechtel, Churchman 2002).

⁴ Also “responsible environmental behavior” (Hungerford, Volk 1990) and “responsible environmental citizenship” (Činčera, oral statement).

⁵ “Ecological behavior is an action which helps to protect and (or) preserve the environment,” writes Axelrod and Lehman (1993). It includes e.g. recycling, composting, energy and water savings, economical consumerism, political activism, cooperation with ecological organizations, eco-agricultural activities etc. (Kaiser et al., 1999).

⁶ Ibidem (Geller in Bechtel, Churchman 2002).

Table Nr. 1

	environmentally friendly impacts		environmentally unfriendly impacts
environmentally insignificant impacts	environmentally insignificant behavior		
environmentally significant impacts	proenvironmental behavior	controversially labeled proenvironmental behavior	environmentally unfriendly behavior

Areas of environmental behavior

Environmental issues nowadays include a wide range of phenomena which are in the area of environment protection generally considered as negative. Among them, we distinguish four areas of environmental issues (comp. Bell, 2001):⁷

Litter, distortion of natural monuments and abuse of countryside are to a great extent **issues of environmental aesthetics**.

Issue connected with health is the air pollution, toxic material in environment or the level of radiance enhanced by the human activity.

The core of the **natural resources issue** is the excessive exploitation of unsustainable (mineral resources such as coal or petrol) or sustainable (water, soil) resources.

Mass agricultural breeding, testing the cosmetic products on animals, destruction of natural biotopes and creation of migration barriers may be covered in the issue of **life protection and its dignity**.

Certain environmental issues arise in several other areas. As Bell points out (2001), current extent of motor-vehicle traffic is a serious problem from the point of view of health, environmental aesthetics or natural resources, and because the busy roads often cross habitat corridors and are lined with surprising amount of killed animals⁸ it also poses a challenge for the life protection and its dignity.

The mentioned classification of environmental issues can be used in research of human behavior in the environment. According to the structure of behavior linked with different kinds of environmental issues we can distinguish areas of environmental behavior which are analogously connected with health, aesthetics, natural resources and life protection.

⁷ There are also other proenvironmental behavior classifications. Činčera (2008, according to Marcinkowski, 1997; Mony, 2002) mentions categories (1) ecomanagement, (2) consumer behavior, (3) persuasion when people influence other people or groups of people, (4) political action, (5) legal action. See more e.g. term “global environmental issues” on EnviWiki, also Moldan (2003), Braniš (2006).

⁸ Matter of interest: students of the school in nature monitored the number of killed animals on 40 km distance. They counted for example more than 60 run-over ringsnakes (Kateřina Jančaříková, oral statement, 10.6.2008).

What are the influences of human behavior on the environment?

One of the areas of environmental behavior is the traffic. Nowadays, people choose on their way to foreign countries from many different kinds of traffic which differ, apart from price, comfort, speed and safety, also in their impact on the environment. Regarding the CO₂ emission or environmental footprint of different kinds of traffic, it is interesting to ask: what is the reason that some people choose train on their way from Prague to Paris, while the others travel by plane?

Let us consider these particular reasons. Factors which do not surprise anybody can play their role; such as price of petrol or air ticket, plentitude of time (or lack of time) or money, fear of flying, indolence, capacity of German highways, low self-confidence in one's own driving abilities or personal liking in car driving. Nevertheless, everybody can be influenced by more "subjective" influences such as friends' ecological attitude to air traffic, colleagues' stories from German lay-bys, nostalgic memory of the first flight Prague-Paris with parents or TV shots showing a plane which has crashed near Madrid a week ago.

Each person has his/her reasons why they behave the way they do. As we could see on the above example, person's behavior to the environment is influenced by a wide range of influences (factors). Traffic is in this matter only one of the many areas of environmental behavior. If we ask "what are the factors which most influence the overall human behavior to the environment?", we can say: there is no easy answer to such question. Instead of searching the answer, let us try to understand these factors.

The human behavior to the environment is influenced by **external factors** (that means the environment of an individual) and **internal factors** (physical and mental aspects of an individual). Some factors influence wide social groups (ecological tax reform, areal introduction of sorting containers) while the others can have an impact only on a couple of individuals (natural poetry of a South Korean poet). From the point of view of environmental education and enlightenment, it is important to take into consideration that personal motivation to protect the environment is for the final environmental behavior of an individual the key factor only in some cases (in the above mentioned example about the journey to Paris a great deal of other – non-environmental – reasons played their roles).

If it was possible to cover all the factors influencing the behavior of an individual to the environment into one model, the graphics processing of such model would resemble a very wide web: the system of factors would include internal and external factors, past experience of the individual, factors currently in process or expectations for the future. Such a complex model would capture not only personal but also group or all-society factors which influence person's behavior to the environment. To express the real condition, the factors could be graphically interconnected by their mutual relationships according to how they are connected with each other (see picture Nr. 1).

The graphics processing of the environmental behavior model should not be

static, on the contrary – ideally, it should change within the time as the factors and their relations dynamically evolve.⁹

The research of the factors influencing the environmental behavior is, considering the complexity of the whole matter, scientifically rather difficult. It requires cross-disciplinary perspective, analytical capability and methodological awareness of professionals who deal with the studied issue. I, personally, see in the gradual mapping and description of factors which predetermine person's behavior to the environment, one of the significant challenges for conservation psychology (called ecopsychology in Czech Republic). Such research would provide an insight why people cause with their behavior harm to the environment, and it will be a good basis for efficient programs of environmental education and enlightenment (see the end of the chapter). To learn the factors which influence the environmental behavior, it is necessary step-by-step:

- 1) Understand the system of factors which influence the environmental behavior of an individual; that means, at the beginning acquire the concepts which improve the orientation in complex issues. Activities such as publishing of abstracts, creation of cross-disciplinary bibliographies, sorting the professional terminology etc. are useful as well.
- 2) Systematically uncover the system of factors influencing the environmental behavior and their mutual relationships, that means create a complex map of these factors. For example by observing, tracking and results of activities analysis or qualitative interviews we can search the answer to the question: What all can play a role in particular examples of environmental behavior?¹⁰
- 3) Examine qualitatively qualities of the so-called key factors which have a crucial influence on the behavior of wide social groups to the environment, e.g. by using experiments, comparative and correlative studies.

As stated above, the research work starts by the orientation in the issue. Therefore, we outline here the original concept of so-called **orientation map of three areas of factors influencing the environmental behavior of an individual**

⁹ It is said that everything is connected with everything. The question is: how? For example ecological tax reform may influence Václav Novák's behavior to the environment as well as other influences which create his behavior, for example environmental attitudes of his friends (anger with the increase in prices of exploitation intensive products), the amount of income or change of occupation (ecological taxes influence also development or stagnation of production branches). Economical factors influence social and environmental ones and vice versa; all-society the personal ones etc. Although a great deal of such relations between the influences is professionally described, I consider the actual creation of the outlined model a scientific utopia. There are many obstacles: lack of brain trust who would be willing to deal with a synthesis of such extent, humanitarian terminology and paradigms seem to be incompatible, humanitarian knowledge is very plural and the whole area is moreover contaminated with different ideologies.

Nevertheless, the mentioned model is worth imagining: it indicates how infinitely various and inexhaustible the amount of influences which influence people's environmental behavior is. The outlined model in its complexity would not be created by anyone, its more or less valid reductions will nevertheless exist. It is possible to study in more detailed parts of the system influences with silent consciousness that easy answers for the question asked in the chapter's title do not exist.

¹⁰ For more detail see Krajhanzl, Zahradníková, Rut (2010).

which gives us a distinction and short definition of three basic areas from which the factors have an impact on the environmental behavior (see diagram Nr. 1):¹¹

- 1) factors arising from the conditions of the environment (external conditions),
- 2) factors of the personality of an individual,
- 3) factors of the personal relationship of an individual to nature.

As will be mentioned further, each of the areas consists of certain range of topics. **Conservation psychology deals with all three ranges.** Individual questions are dealt with also in other (below mentioned) scientific disciplines.

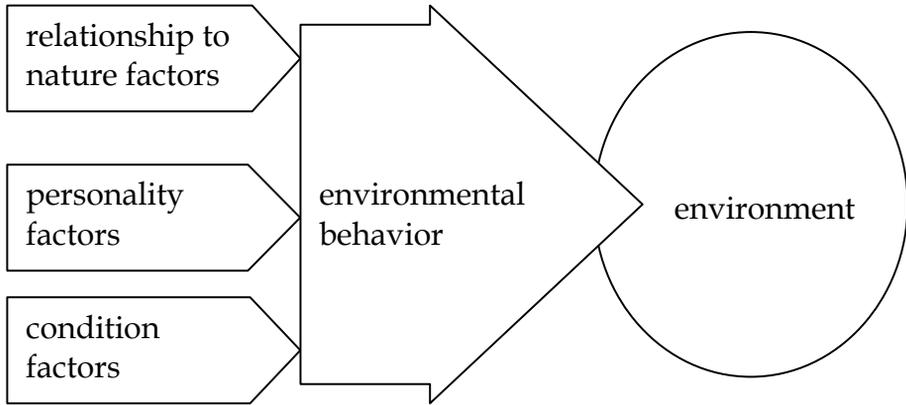
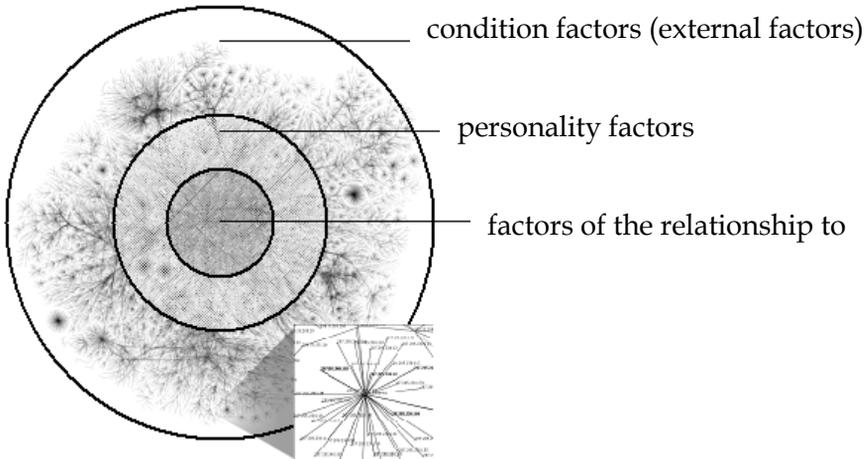


Diagram Nr. 1. What are the influences of human behavior on the environment?



Picture Nr. 1: Orientation map of three factor areas influencing the environmental behavior of an individual¹²

¹¹ Comp.: Messick distinguishes the strategies of environmental behavior support to individual solution “based on individual’s personal choice” (comp. below mentioned areas of personality influences and relationship to nature and the environment) and structural solution “based on design of social arrangement in groups” (comp. conditions of environment mentioned here). (Messick, Brewer 1983).

¹² The picture is illustrative (the diagram used is not connected with the discussed topic). To show the idea, it

The external influences on the environmental behavior

To behave environmentally friendly is easier when the conditions support the sustainable behavior: you have an organic shop with affordable prices nearby your home and you live in a city where everything is at a stone's throw, or the buses go every ten minutes, not only twice a day. On the contrary, sometimes it is very difficult to behave proenvironmentally – e.g. famous difficulties of Prague's cyclists, not to mention the problems of vegetarians living in the environment of rural pig-slaughtering.

Environmental studies, sociology, economy but also legal sciences, culturology, religious studies and other disciplines also deal with (among other things) the matter how external conditions influence environmental behavior of the public. Attention is paid to **economical environment** with prices, product availability and organic products certification, **legal environment** with pollution and construction standards, waste handling and animal abuse, **cultural and social environment** with traditions, moral rules, religious and value systems and influence of organizations, mass media, social groups and authorities, and the **environment (physical)** with the availability and quality of the environment, environmental conditions, traffic infrastructure, civic amenities and waste management.

The external influences on the environmental behavior is possible to understand as an action of **external factors which influence people's behavior to the environment**. According to legal science, it is possible to distinguish social, cultural, environmental, legal, economical and other **conditions of external factors**.

The conditions of external factors are “alive”- they change and influence each other; e.g. economical factors interact not only within themselves, but they also influence social, environmental or cultural environment. The factors encounter, they empower each other or create synergy.¹³ These actions are the domain of study of humanitarian disciplines, whereas the cooperation between the disciplines helps to create complex views on environmental conditions which have an impact on mankind and prognosis of the next development.

While the domain of most psychological disciplines are the factors of the “internal world” to behavior, **social psychology and sociology, economical psychology and economy, environmental psychology and environmental science** have a scientifically uneasy task at the border of “internal” and “external”: they observe how the social, economical and environmental factors influence human experience and behavior – for example:

How does a picture of “the environmentalists” in newspaper or on TV influence the willingness of people to environmentally friendly behavior? Which price for a liter of petrol could change the traffic formula of the most inhabitants? Are the legal

illustrates that in the complex web of factors the borders between the environment – personality – relationship to nature are marked only for the purpose of disciplinary orientation. They do not affect the interaction between the factors. Relationship to nature is part of personality and it is part of the environment. The three bordered spheres nevertheless form thematically autonomous areas which are dealt in different corpora of professional literature. In the research it is possible to pay attention to individual areas (see the detail) and at the same time respect the whole.

¹³ Clash between two influences, for example philosophical groups, can in the internal world (individual) result only in neurosis. In the external (society) in a civil war.

sanctions for plastic waste burning efficient? How does the life in an overpopulated or polluted city influence the environmental behavior?

All these questions are also dealt with by **conservation psychology**, a cross-disciplinary discipline considered as a platform for interconnecting the knowledge and cooperation of professionals from different disciplines who are moving at the border between “internal” and “external”.¹⁴ Many of these researches of this issue are connected with a so-called **behavioral analysis**.¹⁵ Empirically tested are strategies supporting the environmental behavior which change the external conditions so that it would anticipate environmentally friendly behavior.¹⁶

The influence of personality on the environmental behavior

Notice sometimes the connections between a person’s temper, his/her personality traits, abilities, values, attitudes, lifestyle on one hand and the environmental behavior on the other. You will see how the environmental behavior of a person is affected by his/her personality.¹⁷

Is he a dreamer? He might sometimes burn his lunch or turn over a tank with petrol into a ditch. Is he nervous? Maybe he calms down by drinking a cup of coffee or smoking, visiting a sun parlor, speeding, shopping or going on exotic holiday. He does not? Does he meditate and deepen his experience of presence? He will probably then be calmer, while reducing his mental stress he will use less than other people. And is he interested in technical innovations? Maybe he is already installing a heat pump, plastering the interior with clay or constructing solar water heat pump in his cottage.

The personality factors which influence person’s behavior to the environment are so-called internal factors influencing the environmental behavior (see above), as well as person’s relation to nature. Although the relationship with nature is *de facto* a part of personality, for the purpose of Factor orientation map influencing the environmental behavior we distinguish two groups of factors – that means personality factors and factors of the relationship to nature. We do so, because in the research area both groups of factors are studied to a certain degree autonomously (different bibliography, different authors, and different design of research studies). Likely, it is worth to differentiate also the interventions realized in environmental practice which are directed to personality factors and factors of relationship to nature (comp. difference between specific and non-specific anti-drug prevention).

¹⁴ Krajhanzl (2008), Saunders (2003).

¹⁵ Long term and intensive research in this area has been done by Scott E. Geller (in Bechtel, Churchman 2002).

¹⁶ In more details e.g. Gardner, Stern (1997), McKenzie-Mohr, Douglas (1999), Bell (2001), Kušková (2009).

¹⁷ There are many definitions of personality in psychology. Psychological dictionary (Hartl, Harlová 2000: 379) indicates that „most often (personality) is defined as a whole of person’s mental life“. According to Nakonečný (1999: 252) the term personality has a meaning of descriptive or explanatory construct: “it expresses that personality is an interindividually different whole of psycho-physical dispositions of a human individual (descriptive view) and further on, that it is an organized whole of person’s mental life, functionally relatively unified, self-regulating system (explanatory view).” Balcar (1983: 13) writes that psychological term of personality “express internal integrity and structural content of the individual’s mental life, in a given moment and time when the individual is mentally identical with himself in different periods and under different circumstances of his life. Next characteristic of personality is its individual nature, psychological difference of the individual from other members of his race.”

That is why we choose the following definition:

Personality factors influencing the environmental behavior are influences of characteristic qualities, motivational characteristics (attitudes and values), abilities and mental moods of an individual to his behavior to the environment. With regard to the autonomy of the topic relationship to nature in scientific research or environmental practice it is also differentiated in this concept between both areas of factors and it is done with the awareness that both factor areas are closely connected within person's personality¹⁸.

Personality factors often influence the environmental behavior without even being aware of it. They become remarkable mostly in the moment when they get into a conflict with relationship to nature (see further) – for example when an economical environmentalist is possessed by traveler's desire or when an absent-minded plant admirer's pansies fade because of her "constant forgetfulness".

Conservation psychological research deals with the personality factors less than with the environmental conditions and relationship to nature. The attention of empirical studies focuses in their factors study mainly on the fact, how the environmental behavior is affected by **life values** of an individual (value chart,¹⁹ consumerism²⁰), **life style** (voluntary modesty²¹) and **personality qualities** (conformity²², indolence²³, place of control²⁴).²⁵

The influence of relationship to nature on the environmental behavior

The relationship to nature is not an ordinary issue: it plays a major role in the environmental education, education and enlightenment, green philosophers write about it, it is a subject of moralizing appeals and a reason for topical society criticism, it inspires the artists and hopes are placed into the development of relationship to nature as it is one of the keystones of environmental defensibility. Nevertheless, the scientific reflections which describe structure and dynamics of the relationship to nature are rare in the Czech Republic. The foreign professional debate is much greater regarding this topic²⁶ – nevertheless, up to date it is dominated by studies which deal with the relationship to nature putting an emphasis on one of the partial questions, mostly on the environmental attitudes.²⁷ There is a lack of professional thesis which would try to describe the relationship to nature in its complexity.

The relationship to nature cannot be narrowed to a question of the often studied environmental attitudes: the environmental behavior is also influenced by other *mental events, phenomena, person's qualities and conditions which are directly oriented*

¹⁸ Although the border line between the person and the environment can be drawn easily, the person is connected with it inseparably as the relationship with nature with person's personality.

¹⁹ Schwartz (1992).

²⁰ Nickerson (2003).

²¹ Fabiánová (2004).

²² Nickerson (2003).

²³ Leonard, Barton (1981).

²⁴ Nickerson (2003).

²⁵ Pavel Skála (2009) deals with deep reflection of personality character's influence on environmental behavior.

²⁶ Comp. Bell (2001).

²⁷ See e.g. Gardner, Stern (1996), Gifford (1997), Bell (2001), Bechtel, Churchman (2002), Nickerson (2003).

to nature (out of human world) and the environment and which are labeled here as the relationship to nature.²⁸ They are various, e.g. the experience of relief in a natural park, the skill to grow potatoes or skin a rabbit, existential anxiety face to face to ecological crisis, expanded conditions of consciousness related with experience in nature, animistic perception of nature in pre-school age, anger with the originator of clear cutting in the forest or consumer's dilemma connected with ideals of eco-consumerism.

The relationship between people and nature are predicate of the so-called **personal relationship to nature characteristics**: it shows, what are people's attitudes to nature and the environment (environmental needs and attitudes) and what are their mental abilities²⁹ in those attitudes.

The relationship to nature evidently influences the environmental behavior³⁰. But those who believe that "a good relationship to nature" is a guarantee of environmentally friendly behavior are wrong. It is influenced by the already mentioned environmental conditions and personality factors, so the influence of the relationship to nature is not absolute:

When recycling the waste, following aspects can play their role: availability of the rubbish bin (environment), discipline and studiousness of a person (his/her personality) and attitude to recycling the waste (relationship to nature and the environment). When burning the meadow, other things play their role: the neighbor who joyfully grasses the burner at the office (the environment), nostalgic memories of firing the meadow with grandfather (personality) and compassion with meadow insect (relationship to nature).

Interaction in the system

As we already mentioned, the factor system influencing the environmental behavior of an individual is dynamic in its character and therefore undergoes constant development. The factor action on the environmental behavior is possible to characterize as following:³¹

- d) Different intensity of factor action on certain environmental behavior of an individual** – some factors are weaker, other have greater action. The intensity of factor action is then influenced by other factors which are in action in the given moment.

Example: The school teacher of one provincial school knows that animals in the mass breeding often suffer. She would like to take the children to visit the slaughterhouse but because of the tense relationship between the school and the parents she is afraid of what would it bring. Because her anxiety is now greater than her eco-pedagogical belief, she postponed the excursion to sometime later.

- e) Positive or negative action towards environmentally friendly behavior-** the factors are e.g. "added" or "subtracted" ("intensified" or "distracted") and they result in certain kind of behavior.

Example: Mrs. Teacher tells George at school that good children recycle and he likes the colorful bins more than the tinned ones. But at home his Dad keeps

²⁸ In more details about the definition Krajhanzl (2007).

²⁹ For more detail see chapter Brief introduction of characteristics of personal relationship to nature.

³⁰ E.g. Gardner, Stern (1996), Gifford (1997), Nickerson (2003), Clayton, Opatow (2003), Bell (2001).

³¹ Comp. with topological psychology or Kurt Lewin's vector analysis.

repeating that recycling is a nonsense and that he should think about something useful. The result can be that George recycles at school but not at home – nevertheless, his conscience is not clear at either place.

- f) The factors function specifically, that means with certain intensity to certain behavior** – strength and orientation of the factors changes within time, according to the individual or behavior.

Example: Bjørn Lomborg's book The Skeptical Environmentalist was the reason why George's father has picked on everything ecological. For other people getting angry with the author while reading a provocative title can be the moment they decide to actively support ecological organizations. Nevertheless, such book influences one person dramatically, the other a little and the third not at all.

Application: The support of proenvironmental behavior

The mentioned concept *Orientation map of three areas of factors influencing the environmental behavior of an individual* enables complex view on the issue. It can be applied also in programs of environmental practice which deal with support of proenvironmental behavior. Complex view on the factors which influence people's behavior to the environment increases the qualification of decisions in environmental practice and efficiency of support of the proenvironmental behavior, for example:

Buy more recycling containers for the village or start off a pro-recycling campaign? Refresh the school garden or send the classes to an intensive school program in the countryside or environmental education programs? Lob at government subsidy for ecological products, promote organic groceries on billboards or support the cooperation between organic products suppliers to the hypermarkets?

How to use the complex view on the factors which influence this behavior in practical support of proenvironmental behavior? The procedure can be briefly described in four steps (for more details see Krajhanzl, Zahradníková, Rut, 2010):³²

1) The choice of environmental behavior on which the program is focus

We choose which environmental behavior the program is going to be focused on – is it going to be grass burning, car driving in a city or buying tomatoes in January? The criterion for behavior determination, on which the program in the chosen aimed group is aimed, may be the overall ecological footprint of such behavior or, more specifically, the CO₂ production.

It is important, not to mix the aims and the methods of the project – distribute three hundred recycling information leaflets into classes is not an aim but a method. The aim may be to increase the amount of recycled waste at the local elementary school.

2) Mapping the factors which influence the environmental behavior

By observing, focus group, inquiry or quantitatively processed questionnaire it is possible to investigate which factors predetermine the environmental

³² Further McKenzie-Mohr, Smith (1999), Schmuck, Schultz (2002: 28-32), Gifford (1997: 54), Bechtel, Churchman (2002: 525).

behavior, that means: what acts FOR (benefits) and AGAINST the chosen proenvironmental behavior (barriers)?³³

In class 8.A, a class with a low amount of recycled waste, the factors AGAINST recycling can be the lack of bins, teachers' opposition affecting the students or wrong labels on the garbage bins as well as students' weak motivation or anti-ecological attitudes to "leaders" of the classes. FOR recycling the factor can be the example of 8.B, the class which recycles "as nothing would happen", local dump case which whirls public meaning, director's willingness to support the recycling and six pupils who are conspicuously interested in the issue and in their free time help in the local environmental centre.

3) Mapping the potential change of environmental behavior

Some factors can be changed easily (easy to understand labels on the dust bins) and some much more difficult (anti environmental attitudes of class leaders). The important step therefore is to consider the potential change of action of the individual factors: in what ways can the proenvironmental behavior be supported?

The general rule is that influencing the behavior by **changing the environmental conditions** is rather easy (adjustment of new dust bins, information boards). Nevertheless, environmentally friendly behavior often disappears³⁴ after the return to the original condition.

Supporting the change of personality factors which influence the environmental behavior is professionally very demanding (systematic work with personality change by the adults resembles the psychotherapy). From the ethical point of view the question is what form of cooperation can bring such intervention, as work with personality change should be done with the consensus of the studied person. Slightly different is the situation in case of children's education when certain formation of child's personality by the educator during his work with children in pre-school or school age is expected by the society.

We can encounter **the activities supporting the change in relationship to nature** mostly in the environmental education and enlightenment. Although these interventions do not reach such a deep level as the personality studies, certain methodological preparedness is necessary here as well. As the personality studies, the activities supporting the change in individual's relationship to nature are a promise of long-term proenvironmental behavior.³⁵

4) Establishing the procedure for the support of proenvironmental program

How to realize the support of proenvironmental behavior? Establishing the efficacious procedure results from the previous steps: the factors which influence chosen environmental behavior the most and which are at the same time most easily influenced are for the program directed to the support of proenvironmental behavior the most interesting.

³³ Comp. Kollmus, Agyeman (2002).

³⁴ Person for example recycles at work where everybody recycles and bins for plastic or paper are in each office. After getting into a new job where bins are only at the reception desk and colleagues' attitude to recycling is much colder, many people stop recycling.

³⁵ Bechtel, Churchman (2002: 525).

For example when the wrong labeled bins from the mentioned class really influence their usage, there is nothing easier than print out clear and attractive labels. When the bin labels are not that important but it will be easy to explain to teachers why recycle also aluminum or organic waste, it will be wise to begin right here.

Summary

Environmental behavior of people is influenced by countless factors. The introduced concept *orientation map of three areas of factors influencing the environmental behavior of an individual* offers basic orientation in complex and dynamically evolving issue. It may serve as a guide which makes the bibliography research easier, enables well-arranged and complex mapping of environmental behavior in different areas and contributes to systematization, efficacious aim and cooperation between the organizations during the environmental educational and enlightenment activities.

Four steps leading to quality preparation of environmental educational program may be summed up in following words: aim, map the condition, map the potential and establish the procedure (for more details see Krajhanzl, Zahradníková, Rut, 2010). Hyperbolically, we can refer to use of general and unwritten principles which are often kept in environmental practice:

Consider the whole. Learn the relations in the (environmental) system.

Act there where it is needed and possible.

Act responsibly and with respect to all who are concerned.

A BRIEF ACCOUNT

Characteristics of personal relationship to nature

Many people enjoy talking about their good relationship with nature. A gardener, tourist, nature scientist, forester, landscape painter, outdoor athlete, ecological activist and a wildlife traveller. It only takes a minute to find out that each of them is talking about something else.³⁶

It is quite surprising that in the Czech Republic there is no technical dictionary in this field that would enable clear communication about the issues associated with the relationship to nature. I consider functional terminology essential for the development of any field and therefore in the course of last seven years I have created a concept of the description of personal relationship to nature which provides terminology for this topic. Using this terminology it is possible to describe and compare personal relationships of people with nature, it includes the original concept of five basic **characteristics of personal relationship to nature**, which reflect various areas of relationship to

³⁶ Krajhanzl (2007).

nature and name them in the following way: the need for contact with nature, abilities for contact with nature, environmental sensitivity, general attitude towards nature and environmental concern.

The need for contact with nature

A person with a greater **need for contact with nature** seeks ways how to spend as much time as possible in the open air. Nature attracts and lures them, from time to time they feel an urge to go to the country. They go out whenever they can, they go on trips, travel and make excursions, they are probably building some kind of a shelter in the country or even moving out of the city.³⁷ There are certain natural objects in their home, topics associated with nature in the books in their library and landscapes on the walls or on the screen of their computer³⁸. If such a person has insufficient contact with nature they tend to lose concentration,³⁹ they become restless and in their plans or fantasies they envision the moments when they will be out again or they remember previous experiences. A person with a greater need for contact with nature might be an owner of a country cottage as well as a hiker, pilgrim of the type of the writer Henry Thoreau as well as a cross-country cyclist, mushroom picker using a car for the trips to the forest, landscape painter or a huntsman.

A person with a lesser need for the contact is indifferent to staying in the open air. Nature does not attract them and if they spend some time there it is merely because of their husband/wife, friends, money or physical condition.

The need for contact with nature is also entailed (among others) in tourist or sport activities in the open air, weekend cottage activities, moving away from cities, hunting or e.g. the Club of Czech tourists.

The abilities for contact with nature

Encountering nature is also associated with certain abilities that people have to a lesser or greater extent. The people with a higher level of **abilities for contact with nature** are able to cope outdoors. They can find their way in a woodland area (which is nowhere near common in people nowadays), they can spend a few days in the open air, set fire, they know what is and what is not edible, how to behave in a storm and where to seek shelter. They are used to various types of weather and common outdoor temperatures. They are equipped for staying outdoors both physically (as concerns skeletal-muscular system, senses, physiology), emotionally and intellectually – by their abilities, skills and knowledge. In the open air they feel adequately calm and relaxed as they are experienced. They can relax there and they know what to look out for. They have mastered the essentials of growing crops and breeding animals.

A person with a lower ability of contact with nature is not adapted to the environment of forests, mountains and meadows. In the open air they are stressed by unreal

³⁷ On psychological benefits of staying in the open air Kaplan, Talbot (1983).

³⁸ Various types of contact with nature see Kahn (1999).

³⁹ Why do people seek contact with the environment? Cp. Theories of overload, theories of “arousal“, theories of exhaustion and recovery, see Bell (2001), Bechtel, Churchman (2002), Gifford (1997).

dangers, feel nauseated by various things and staying outdoors brings on an unpleasant loss of comfort. They can compensate these drawbacks by sophisticated outdoor clothing and other equipment, which helps to cope in common situations that would otherwise be too challenging.

The high level of abilities for contact with nature is ideal for scouting, Woodcraft, outdoor training of military enthusiasts or practical courses and guidebooks of combat bodies on how to survive in wilderness.

Environmental sensitivity

The abilities for contact with nature are focused on performance and associated with abilities and stamina, on the other hand, environmental sensitivity defines the difference among people in the extent of their experience when in contact with nature. This feature expresses the varying extent of human perception of the surrounding environment. A person with a higher **environmental sensitivity**⁴⁰ is attracted by the nature around them, interested in it, sometimes even absorbed by it⁴¹. They can see and hear what the others miss, they can feel and perceive what the others have no idea about. A tree can be simply a tree for an environmentally less sensitive person, while for an environmentally sensitive person it represents a whole range of stimuli and sensations: they notice a number of scientific details, they enjoy the range of colours and lights, they get absorbed by the symphony of trees rustling and the flow of energy gives them the shivers. They are able to feel harmony with nature, it captures their attention and provides them with many experiences – for some they are intellectual, for others aesthetic or spiritual, and the people are able to recall them later. They notice nature in an artificial environment too, e.g. in a city. They perceive the beauty of nature as well as its damage.

A person with a lower environmental sensitivity is able to visualise only few environmental details in their neighbourhood. They have trouble when concentrating on nature – thoughts and feelings distract them.

Environmental sensitivity has prevailed in natural mysticism and art (landscape painting, nature lyric poetry), at present it is expressed in the growing interest in countryside, pilgrims, bioregionalism and geomancy.

Environmental concern

Not all the people who are sensitive to their close environment also behave in an environmentally-friendly way, locally and globally. A person with a **greater concern**⁴² is motivated to preserve nature and the environment. They seek ways how to behave more responsibly towards the environment⁴³ and acquire a whole range of proenvironmental habits – e.g. they separate waste, cut down the consumption of water and ener-

⁴⁰ We can find many different definitions of environmental sensitivity in literature. Here it is defined as the ability of perception and attention to the natural world, which arises from the tendency of an individual to feel attracted to this world.

⁴¹ Cp. Metzger, McEwan (1999).

⁴² Cp. Takala (1991), Bechtel (1997), Schmuck, Schultz (2002).

⁴³ I.e. environmental identity, e.g.. Susan Clayton „Environmental Identity: A conceptual and an Operational Definition“, in Clayton, Opatow (2003).

gy and purchase environment-friendly products. A person with a greater environmental concern probably will not speak disparagingly of the growing environmental damage.⁴⁴ The person is aware of the relationship between their behavior and the state of the environment. They see pollution, extinction of species and the disturbance of the natural cycles of the planet as undesirable. They make effort to contribute to the solution of these problems rather than create them.⁴⁵

Preservation of the environment is not only a question of intellectual interest for a person with a greater environmental concern but it is also an emotional issue⁴⁶ – they feel sadness over the damage of the environment, they feel sympathy with the suffering nature and at the moment they probably experience certain concern about the environmental future. They are willing to reduce their needs for the preservation of the environment. Sometimes they get involved in public activities for environmental preservation or support political programs aiming at greater environmental preservation.⁴⁷

A person with a lesser environmental concern is indifferent towards the preservation of the environment. They have no restraints in environmentally unfriendly activities, they may even be negative towards the issue of environmental preservation.

The environmental concern in public space is expressed in the form of organised environmental preservation, ecological activism and environmentalism.

General attitude towards nature

The fifth basic characteristic in the relationship to nature is more general than the previous ones. It concerns **the general attitude towards nature**, which can be classified as e.g. the one of a master, manager, partner, then as religious, hostile etc.⁴⁸ Each of these types of attitudes to nature can be described by two characteristics – dominance or submission relating to nature, and affiliation or hostility to nature.⁴⁹ The general attitude towards nature is expressed as a general belief about the role of nature in the relationship to humans and the position of a human in the relationship to nature. In the social sphere it is possible to come across the topics of general attitudes towards nature primarily in the academic debate – in the area of environmental philosophy, ethics and sociology. In everyday life such issues are rarely explicitly reflected.

The last characteristic is related to the previous four and the relationship is more complicated than it seems. Certainly there is no direct proportion between the general attitude towards nature and other characteristics – many people feel certain sympathy to nature, however, it is only rarely associated with an increased need for contact with nature or even more rarely with a greater environmental concern. The general attitude towards nature rather expresses how a particular person thinks about nature and how they relate to it in their lives in general.

⁴⁴ Cp. „Human reactions to environmental Hazards: perceptual and cognitive processes“, in: Gardner, Stern (1996).

⁴⁵ I.e. environmental responsibility, see e.g.. Kals, Montada (1994).

⁴⁶ Cp. Kals, Maes „Sustainable Development and Emotions“, in: Schmuck, Schultz, 2002.

⁴⁷ Clayton, Opatow (2003).

⁴⁸ See e.g. Franěk (2003).

⁴⁹ Krajhanzl (2004).

The diversity and contradiction in human relationships to nature

It is obvious at the first sight that among people there exist differences in their relationships to nature. There are two significant conclusions drawn from the five basic characteristics mentioned above:

Firstly, the relationship of a person to nature can not be expressed in a word, using only one dimension, e.g. we can not say that someone is “estranged from nature“ or “is not estranged“ or “has a close relationship to nature“ or “is not close to nature“. The reality is more complicated, but also more interesting – in the description of a relationship of an individual to nature it is necessary to reflect more dimensions, e.g. those mentioned above.

Secondly, it is obvious that not everyone who feels a need to spend their leisure in the open air is also active in the preservation of the environment. So what are the relationships among other characteristics?

To illustrate, let us imagine that people mentioned in the examples of individual characteristics above met:

An owner of a country cottage as an example of a person who wants to spend time in the open air, that is an example of a need for contact with nature.

A soldier trained to survive in challenging physical conditions as an example of a person who is able to survive outdoors, that is an example of abilities for the contact with nature.

A poet writing about nature as an example of a person who experiences nature intensively, that is an example of environmental sensitivity.

A person who preserves the environment, that is an example of environmental concern.⁵⁰

It is apparent that these people differ in their relationship to nature. Therefore, we can ask:

Does each poet writing about nature have abilities for the contact with nature comparable with a trained soldier? Is a soldier trained for survival in wilderness as sensitive to nature as a person who preserves the environment? Does a person who preserves the environment feel a need to spend their time in the open air just as often as an owner of a country cottage? Etc.

The given characteristics of a personal relationship to nature are often in mutual disproportion, on the other hand, extreme cases are rare, that is the cases where all five characteristics are highly developed (a kind of a natural ideal?) or where all of them are on a minimal level. The disproportion among the characteristics of relationship to

⁵⁰ The fifth characteristic is two-dimensional and thus it would be difficult to use it.

nature, which can be defined as the contradiction in the relationship to nature, is very interesting from the point of view of environmental sustainability and environmental education.

To illustrate, we will present several examples created by the students of psychology.⁵¹

Example one⁵²

Composed for the relationship of an individual to nature which can be characterised in this way: a strong need for contact with nature, rather lower abilities for contact with nature, lower environmental sensitivity, middle level of environmental concern.

The person passionately loves nature and often speaks about it, can not do without it, if they are forced to live in a city their flat is full of flowers and other products of nature (that they do not understand very well, therefore from time to time some of these plants wither or rot away), on their desk there is a calendar with landscape photos, they have a pet/pets but it is similar to plants – the pet may die because of lack of food or unsuitable food.

They always go on holiday to the country, but they do not sleep in a tent or rough, they prefer a small hotel or guesthouse with particular services – to be able to enjoy the beauty of nature and not to have to bother with trifles, such as where to dry clothes when they get wet, where to take a shower, what to eat etc.

They travel mostly with travel agencies or book guides as they are not very attentive. If they were not told what to look for and what to see they would not even notice it and would undertake a trip in vain. Therefore, they have others to tell them what to focus on, what is important and beautiful (or what seems important and beautiful to someone else).

As concerns their behaviour outdoors – they behave well unless it restricts them somehow, that is, e.g. they separate waste only unless they have to transport it too far etc., their motivation for the preservation of the environment is rather anthropocentric, i.e. they defend the rights of the environment for humans – to preserve nature's beauty for humans rather than for nature itself.

Example two⁵³

Composed for the relationship of an individual to nature which can be characterised in this way: the need for the contact with nature not so strong, rather better

⁵¹ Students of the department of psychology at the Faculty of Arts Charles University were given an assignment within the course *Personal relationship of a human to nature*. In the assignment they learned about an imaginary person who is described exclusively by a certain level of four basic characteristics of the relationship to nature. For each characteristic there was a five-point scale (high, rather high, middle, rather low and a low level). Subsequently the students made up what kind of a person would correspond with the characteristic of a relationship to nature (see the following three examples).

⁵² By Petra Průchová.

⁵³ By Petr Balous.

abilities for the contact with nature, rather lower environmental sensitivity, high environmental concern.

The screensaver of their PC is a photo of demonstrators in front of a power plant. They do not go to the country – they feel they can do plenty of interesting things in the city too. They are doing a course on survival in wilderness, where they have learned how to use the knife. They have quite a good sense of direction, they would not get lost easily. They have a small survival box on them at all times – it may come in useful. They enjoy indoor bouldering. When they are travelling by train, they notice the landscape and they prefer natural landscapes to those created by humans, however, they are not able to describe a detail they noticed on the way. Somehow it all blends together. They do not travel by car nor by plane, if they have to they go by public transport or train, they enjoy cycling, walking and they often rely on themselves. They separate waste both at home and at work. They go to ecological meetings where they express their support for the actions they find beneficial.

Example three⁵⁴

Composed for the relationship of an individual to nature which can be characterised in this way: rather stronger need for contact with nature, worse abilities for contact with nature, high environmental sensitivity, rather lower environmental concern.

*The third example could be a painter. They need contact with nature, but not excessively. They go to the country when summer is in the air, they want to capture the moment at any price and so they set off. They need very little. They “take a picture“ of the image, the impression and the spirit of the place in their mind and they are off to their painting. If they should stay in the open air without cans, compass or tent they would not cope... simply saying they have never been scouts, they would not be able to set fire without a lighter and they suppose the Sun sets in the west...An absent-minded artist, a combination of Exupery’s Little Prince and a kind of fairy who lives on air. The artist’s soul is able to capture the slightest detail of the scenery. The toadstool is depicted as a polka-dot scarf of a fairy-tale character Ferda the Ant, a cone reminds an armadillo etc. Everything means something, everything has its place. There is not enough space for environmental concern in the stream of associations, images and sudden thoughts. Turpentine wrap should be disposed of for a new idea to end up on canvas. And so, if an ecological effort is successful, they won’t be cross... *Panta rhei.**

The given examples illustrate the diversity of human relationships to nature. Indirectly they demonstrate how distorting a one-dimensional conception of this relationship can be (e.g. closeness vs. alienation). This one-dimensional conception in their generality blur the indicated dimensions in the relationship to nature and pay little regard to the widespread contradiction in many people’s relationship to nature. The principal shortcoming of this conception is that they fail to describe common relationships of people to nature – e.g. many people are motivated to stay in the open air nowadays (a stron-

⁵⁴ By Ivana Rýparová.

ger need of contact with nature) but at the same time they do not take the preservation of the environment into consideration very much (lower environmental concern).⁵⁵ How should we express this contradiction on an axis between closeness and alienation ?

In the technical debate it is necessary to speak about personal relationships of humans to nature particularly – i.e. with specification how the speaker understands general terms such as “positive relationship to nature“ or “alienation“ and what particular attitudes, abilities or characteristics they are talking about. The precise definition and general understanding of key terms is a prerequisite for productive work as well as for meaningful technical communication.

What implies from the above mentioned for environmental education are a few questions:

What methodology, teaching technique or aids develop each of the characteristics?

Will a particular game in the open air develop environmental sensitivity or rather environmental concern?

Is it really the characteristic that the authors of the program aim at that is developed?

How can we evaluate effectivity of the program, how can we judge if it develops what the authors intended?

And finally, what methodology is most efficient for the development of individual characteristics of the relationship to nature?

If we did not ask these questions one day we could find out that the programs aimed at the promotion of environmentally sustainable behaviour actually bring up a different kind of admirers and lovers of nature than we probably intended – families building houses in overspill towns “for the sake of the children“, forest cyclists and fans of outdoor adrenaline, tourists searching for the “real wilderness“ on the other hemisphere.

What we would achieve in this case is in a sense a return to nature, however, it is not likely to lead to environmental sustainability.

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⁵⁵ Cp. *Výzkum odcizování člověka přírodě: Závěrečná zpráva (Research on the alienation of humans from nature. Final report.)* (Strejčková a kol., 2006).

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ENVIRONMENTÁLNÍ A PROENVIRONMENTÁLNÍ CHOVÁNÍ

Abstrakt: Jednou z významných oblastí zájmu psychologie je tzv. environmentální chování a proenvironmentální chování. Autor nabízí koncept, s jehož pomocí se lze snadněji orientovat ve značně širší faktorů, které působí na chování k životnímu prostředí. Představuje metodický postup, který prakticky podporuje chování šetrné k životnímu

prostředí. Předkládá pět charakteristik osobního vztahu k přírodě a objasňuje důležitost jejich rozlišování v oborové teorii i praxi. Autor rovněž zdůrazňuje důležitost budování osobních vztahů lidí k přírodě. Jako nosné se v této souvislosti ukazuje zkoumání individuálního porozumění obecným termínům environmentálního vzdělávání a budování porozumění společného.

Klíčová slova: environmentální chování, proenvironmentální chování, chování šetrné k životnímu prostředí, oblasti environmentálního chování, charakteristiky vztahu k přírodě, potřeba kontaktu s přírodou, schopnosti pro kontakt s přírodou, environmentální senzitivita, obecný postoj k přírodě, environmentální vědomí

ACTIVE LEISURE FOR HEALTH IN CONTEXT OF ENVIRONMENTAL CARE

Hana HORKÁ, Zdeněk HROMÁDKA

Abstract: *The increased number of active leisure - comprising a variety of sports - takes place in variable environments (e.g. extensive sports facilities built in the natural landscape, ski slopes rised at the borders of national parks or ecological impact of motoring to get to sports facilities) are bringing a lot of changes. There has recently been an increased interest in such activities on the other hand the environment is being affected by such events. Thus the care for the health is in a sharp conflict with the care for the environment. The article describes the influence of those activities on the environment. The research investigation is focused on the students' behaviour concerning the above noted activities and their respect for the environment. A potential relationship between the responsible care for the health and the care for the environment is also investigated.*

Keywords: *environmental education, protection of nature, relaxation in the nature, active leisure/ doing sports, care for environment, care for health, education to health*

Starting points

Quality natural environment with cultural monuments represents the source of miscellaneous opportunities for stay, relaxation and active leisure executed usually "for the sake of human health". Rising number of active leisure in non-standard environments (e.g. large sports facilities built in the natural landscape, ski slopes on the borders of national parks or environmental impact of motoring "to get to the sports facilities") bring a lot of changes. On the one hand it leads to increase of the interest in sports activities, on the other hand the natural environment is affected negatively. Care for health is thus in sharp conflict with the environmental care.

With respect to the fact that we are concerned with environmental aspects of education to health, we are interested in impact of the sports activities or another active leisure, executed "for the sake of one's health", on the environment. The empirical part contains results of the investigation focused on establishment to what a degree this fact is considered by the future teachers. Theoretical reflection of empirical data can contribute to a more pregnant determination of the educational curriculum.

Importance of the active leisure is unquestionable for human health, but its impact on the environment is more and more explicit. The teacher asks how can he/she

prevent devastation of our environment from his/her position. The teacher agrees with the claim that impairment of the environment results from permanent „*ignorance of biological factors of the cultural life, from missing arguments against dangerous trends in the lifestyle*“ (ŠMAJSOVÁ BUCHTOVÁ, 2009, p. 80), from ignorance of the real natural values, etc., which facts ultimately highlight the necessity of otherwise oriented education. Mirovský (2003) characterizes the “responsible, intelligent and sensitive tourist, „smart voyager“, as the educated man capable of a more complex perception, environmentally conscious and friendly.¹ Education undoubtedly takes part in creation and development of these desirable qualities. Education leads to prevention and active care for health (and/or for environment) considered important features for improvement of unfavourable indicators. Therefore our intention is to determine the governing tasks of education for balanced cultivation of the inner and external human world from the point of education to health and environmental education.

The theoretical starting points presented in the first part are based on the fact that adequate active leisure together with environmental impacts, nutrition and way of life represent the intervening factors for health remaining uncompensated anyhow.

Clean environment and active lifestyle as regulating mechanisms (determinants) for health

Environment is considered the basic determinant for health. This claim also follows from definition of health as the status of full physical comfort, mental and social wellbeing resulting from the relations between the human organism and between social, economic, physical, chemical and biological factors of the living environment, working environment and the way of life. The lifestyle as the „*individual set of attitudes, values and skills reflected in human activities*“ includes „*interpersonal relationships, nutrition, organization of leisure time, hobbies, interests and also physical activity*“ (HARTL, HARTLOVÁ 2000). The active lifestyle incorporates „*quantitatively and qualitatively valuable exercise programs and satisfaction of interests, leisure time spending as the features determining state of health*“ (LIBA, 2007, p. 64). From carried out identification and quantification of the share of regulatory mechanisms - determinants for health - we have come to a very significant establishment that the lifestyle and personal behaviour of the individual affect health by 40-50 % and living and working environment - by 20-30% (compare ÁGHOVÁ 1993, FOSTER 1994, ROVNÝ 1998, HARTL; HARTLOVÁ 2000 – In LIBA 2007, p. 17-19). Contribution of the active lifestyle accommodates on the one hand improvement of fitness, defence to infections and on the other hand a better mood and self-confidence, psychological performance and resilience, mastering social roles, more joyful and active leisure time, restful and refreshing sleep, etc. (compare COOPER 1990, SLEPIČKOVÁ 2001, KŘIVOHLAVÝ 2001, LIBA 2007). It is important from our point of view that quality of life is improved by the active lifestyle incorporating regular and suitably chosen physical activities.

¹ **Hard tourism** – does not consider impact on the environmental, social and cultural environment; in particular the mass tourism

Soft tourism – tries to behave sparingly and gently to the environment where it is realized and to contribute to the permanently sustainable development of tourism

Active leisure as the instrument for maintaining body and mental balance

The active leisure is understood versatile physical activities saturating health, hygienic, compensating, protective, preventive, regenerative and rehabilitation functions. It contributes to maintaining the body and mental balance, leads to self-fulfilment, increase of fitness, performance, self-confidence, facilitates mental relaxation, emotional experience, reduces psychological stress, anxiety, depressive mood, negative emotions, affects intellectual performance, etc.

Under intensive physical activities we understand rapid cycling, aerobic, swimming, jogging, running, tennis singles or squash. Rapid walking, dancing, gardening, slow cycling represent the medium intensive physical activities. The active leisure is realized in different environments - in the fitness centre, gym, swimming pool, dance studio or at home, in the flat or in the garden (e.g. exercise machines), at school or on the playground. Our attention is focused in particular on the outdoor recreational environment (e.g. lake, hiking trail), park, places close to our home/house (e.g. for running, skating, cycling, rapid walking). In this part we would like to highlight consequences of physical/sports activities on the environment from the consumer recreation point of view.²

Impact of physical/sports activities on the environment

The individual consciously selects stay in the healthy environment not only for housing, but even for spending the leisure time during the walks, trips, weekends and holidays, for different sports activities. Cross-country skiing, skiing on untreated downhill courses and/or winter hiking in the past is nowadays superseded by snowboarding, variant skiing, night skiing, paragliding, surfing on frozen lakes, orienteering, etc. Swimming, diving, canoeing is nowadays not enough in summer, the people are „in“ when river rafting, surfing, water scootering or sports fishing (MOUREK 2002). Development of new modern sports affects flora and fauna negatively. Construction and operation of tourist transport equipment (cableways, ski lifts, snow groomers), downhill course treatment, artificial snowing, creation of bike and walking trails, ports/marinas for yachts and motor boats or construction of sports and recreational resorts (golf courses, amusement parks or sports centres) are considered the most important sources of negative flora and fauna affection. Devastation of the environment is caused in particular by inadequate growth of interested people and related quantities, activities of mass, unrestrained and uncoordinated character (compare for instance DAVID N. COLE, 2001, SNOWDON, P., SLEE, B., FARR, H., 2000, KOLÁŘOVÁ, H. 2006, ZELENKA, J.; PÁSKOVÁ, M. 2002, ZELENKA, J.; PÁSKOVÁ, M. 2007, <http://vitejtenazemi.cenia.cz/krajina/index.php?article=111>).

² Inspired by the materials at <http://vitejtenazemi.cenia.cz/krajina/index.php?article=111>, where even the historical, naturalistic, protectionist, prey and numinous attitudes are differentiated.

Based on the chosen literature sources, below you will find impact of physical/sports activities - downhill skiing in our case - on the environment³:

Interventions into environment	Negative impact on the environment (<i>consequences of interventions</i>)
Construction of the downhill course and corridor for the ski lift and cableway, construction of sports facilities and structures and access roads.	Acquisition of agricultural and forest land / deforestation - <i>opening of forest stands (impacts of wind and frost, drying up, windfalls and large area blowdowns), danger of windbreaks. Partial or full restriction of forest functions, e.g. habitat for plants and animals, restriction of erosion, water retention.</i>
Felling in the midst of a large forest stand, fragmentation of the area into two or even more parts.	Landscape fragmentation and creation of obstacles - <i>obstacle for the animals due to bad passability</i>
Extension of mountain paths, release and removal of swards (e.g. when mountain biking outside the paths, intensive operation and movement of the people on the trails - tourists do not observe the defined routes, in particular when cycling).	Linear and area erosion - <i>destruction of vegetation, reduction of porous soil character and thus capability to soak water, damage of herb stands and tree roots. Damage of ground cover and subsequent removal of soil particles when biking in the sloping terrain.</i>
Masts of cableways and ski lifts, downhill course in the midst of a large forest stand, bobsled, hotels and other accompanying investment units (parking places, restaurants, new access roads, etc.). Light pollution, the so called night skiing - more detailed information see http://amper.ped.muni.cz/noc/krap .	Impact on the landscape - <i>impairment of aesthetic landscape appearance and pollution of the landscape by solid waste landfills, creation of black dumps. Great land acquisition, more tree cutting, import of non-original materials (rocks, soil, building materials, technical devices draining miscellaneous operating liquids, etc.). Let us present a short abstract of a complex J. Hollan report for your illustration - available at the address http://amper.ped.muni.cz/noc/krap: „Municipalities and owners of Giant Mountain cottages are not aware that by using strong lamps visible from a great distance they harm the mountains. They take away beauty of the mountains which they certainly had before introduction of electricity and on many place before use of modern discharge light sources. The former week bulbs (electricity was relatively expensive in the past) could not pollute the landscape so much...“</i>
Operation of motor vehicles incl. exhalations, oils, detergents. Noise in ski resorts - systems of cableways and ski lifts, music and high-pressure snow cannons. Presence and unsuitable behaviour of visitors.	Disturbance of animals - <i>the animals do not have peace for reproduction and for food intake; the animals are weak and even die.</i>
Non-observance of approved routes, passing through the forest stands outside the paths, excessive collection of berries and other parts of plants.	Intentional destruction of vegetation

³ Certain ski resorts are located in the mountain regions, mostly in specially protected areas.

Survey of attitude of the students of the Faculty of Education of Masaryk University to the active leisure and care for health in context of the environmental care

It has been proved that different sports or other physical activities executed by the people "for the sake of their health" burden the environment in a different way.

The very objective of our investigation was to establish: 1. the degree the students consider possible impairment of the environment following from certain physical activities; 2. relationship between responsible care for one's own health and between environmental care.

1. Descriptive part of investigation

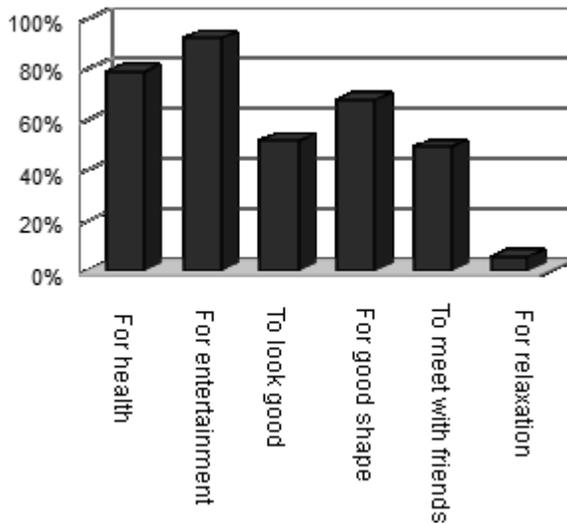
Within the scope of the descriptive part of investigation we present results of the frequency (univariate) analysis of data distribution for those items of the questionnaire that were chosen as decisive for this study.

sex		absolute frequencies	relative frequencies	valid relative frequencies	cumulative relative frequencies
valid	man	5	3.8	3.8	3.8
	woman	128	96.2	96.2	100.0
	Total	133	100.0	100.0	

The research sample contains 133 respondents (students of the Faculty of Education of Masaryk University), 128 women, 5 men. It is the available selection, i.e. results of investigation cannot be generalized to the population and have to be considered as rough ones only.

Item No. 3

„If you find the reason(s) for your active leisure/physical activity in the table below, be so kind and tick it/them (and/or add if your reasons are missing in our offer):“		
Reason for active leisure	absolute frequencies	relative frequencies
for health	105	78.9%
for entertainment	123	92.5%
to look good	69	51.9%
for good shape	90	67.7%
to meet with friends	65	48.9%
for relaxation	7	5.3%



Graph 1; reason for active leisure/physical activity

Modal category : for entertainment

The second most frequent category : for health

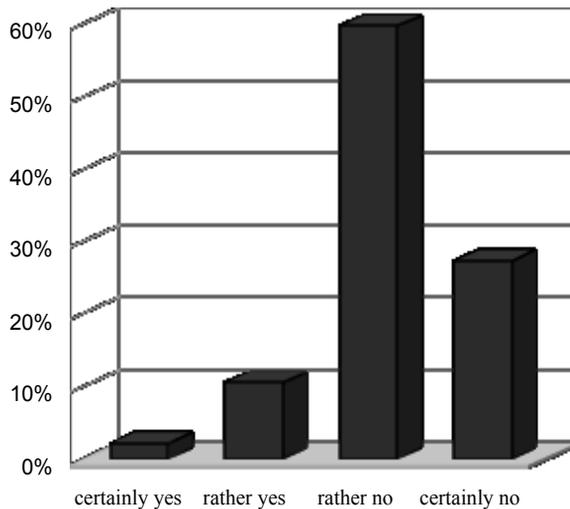
The third most frequent category : for good shape

It means that respondents from our set most frequently do sports or exercise physical activity for entertainment (92.5%). The second most frequent category is “for health”, i.e. 78.9% of respondents spend active leisure as the integral part of the care for their own health.

The item above was semi-closed, i.e. the respondents could add a specific “reason”. The least frequent reason (5.3%) was “for relaxation”.

Item No. 4

degree of consent with the claim: „When exercising a certain physical activity, I think how this activity burdens the environment.“					
		absolute frequencies	relative frequencies	valid relative frequencies	cumulative relative frequencies
valid	certainly yes	3	2.3	2.3	2.3
	rather yes	14	10.5	10.6	12.9
	rather no	79	59.4	59.8	72.7
	certainly no	36	27.1	27.3	100.0
	Total	132	99.2	100.0	
invalid	I do not know	1	,8		
Total		133	100.0		



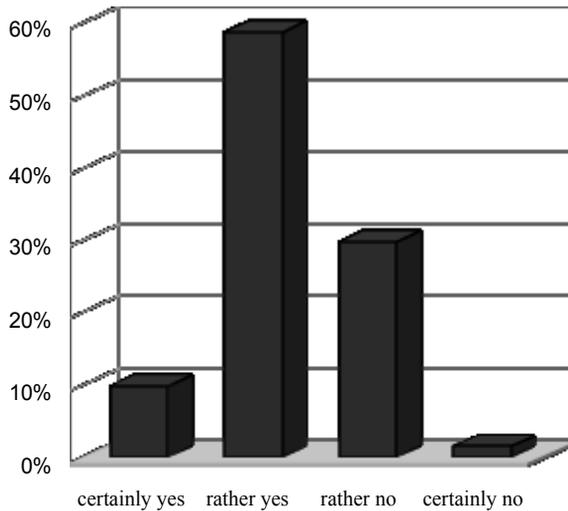
Graf 2; Degree of consent with the claim: „When exercising a certain physical activity, I think how this activity burdens the environment.“

Modal category: rather no

In most cases (87.1%) the students do not think how the exercised physical activities burden the environment. Nevertheless validity of this item is problematic to a certain degree. If somebody only takes walks as his/her active leisure, we cannot await that he/she will consider its environmental burden.

Item No. 5

degree of consent with the claim: „I take care of my health responsibly.“					
		absolute frequencies	relative frequencies	valid relative frequencies	cumulative relative frequencies
valid	certainly yes	13	9.8	9.9	9.9
	rather yes	77	57.9	58.8	68.7
	rather no	39	29.3	29.8	98.5
	certainly no	2	.5	1.5	100.0
Total		131	98.5	100.0	
invalid	I do not know	2	1.5		
Total		133	100.0		



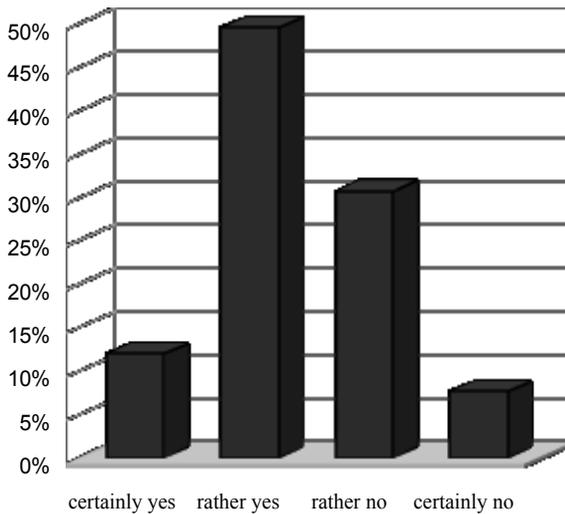
Graph 3; Degree of consent with the claim: „I take care of my health responsibly.“

Modal category: rather yes

The majority of people from our set (68.7% valid) agree with the claim that they take responsible care of their own health.

Item No. 6

degree of consent with the claim: „I take care of my health so to burden the environment to the lowest possible degree.“					
		absolute frequen- cies	relative frequencies	valid relative frequen- cies	cumulative rela- tive frequencies
valid	certainly yes	14	10.5	12.0	12.0
	rather yes	58	43.6	49.6	61.5
	rather no	36	27.1	30.8	92.3
	certainly no	9	6.8	7.7	100.0
	Total	117	88.0	100.0	
invalid	I do not know	16	12.0		
Total		133	100.0		



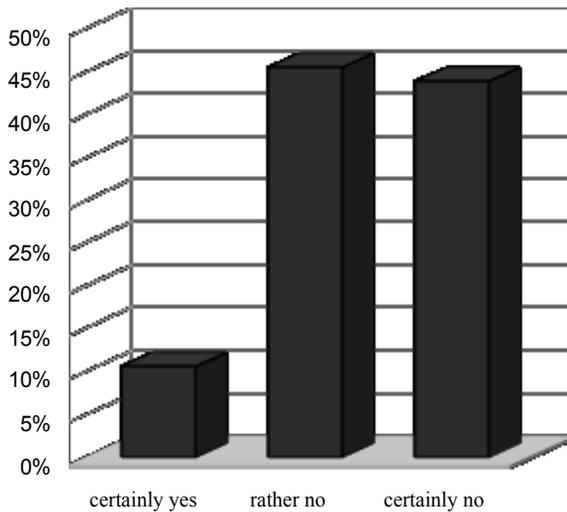
Graph 4; Degree of consent with the claim: „I take care of my health so to burden the environment to the lowest possible degree.“

Modal category: rather yes

The majority of people from our set (61.6% valid) declare that they take care of their health so to burden the environment to the lowest possible degree. This is a relatively surprising result for us. The research assumption was that when taking care of their health, people rather did not consider the environment.

Item No. 7

degree of consent with the claim: „Nature should not stand in the way of the projects serving to the active leisure.“					
		absolute frequencies	relative frequencies	valid relative frequencies	cumulative relative frequencies
valid	rather yes	13	9.8	10.6	10.6
	rather no	56	42.1	45.5	56.1
	certainly no	54	40.6	43.9	100.0
	Total	123	92.5	100.0	
invalid	unanswered	2	1.5		
	I do not know	8	6.0		
	Total	10	7.5		
Total		133	100.0		

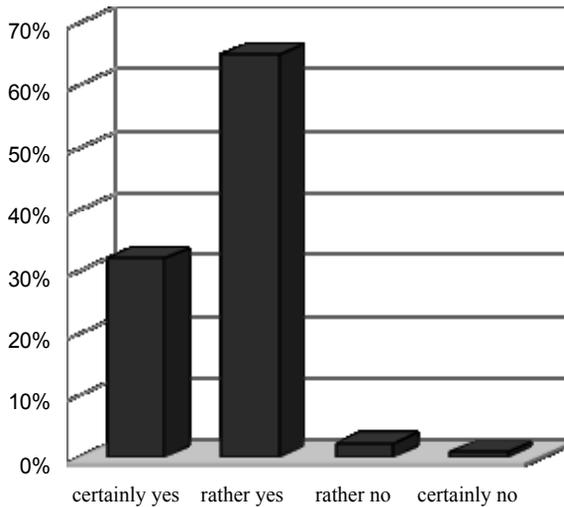


Graph 5; Degree of consent with the claim: „Nature should not stand in the way of the projects serving to the active leisure.“

Modal category: rather no

Strong majority of respondents (82,7% valid) do not agree with the claim that nature should not stand in the way of the projects serving to the active leisure. Our environment is evidently preferred to the “sports complexes“ by the majority of respondents.

degree of consent with the claim: „I try to behave myself gently to the environment.“					
		absolute frequen- cies	relative frequencies	valid relative frequen- cies	cumulative rela- tive frequencies
valid	certainly yes	42	31.6	32.1	32.1
	rather yes	85	63.9	64.9	96.9
	rather no	3	2.3	2.3	99.2
	certainly no	1	.8	.8	100.0
	Total	131	98.5	100.0	
invalid	I do not know	2	1.5		
Total		133	100.0		



Graph 6; Degree of consent with the claim: „I try to behave myself gently to the environment.“

Modal category: rather yes

Like in the preceding investigations, realized with the students of the Faculty of Education of Masaryk University, a strong majority of respondents (97% valid) tries to take care of the environment (compare HORKÁ, HROMÁDKA 2009, p. 39).

Item No. 12

degree of consent with the claim: „Is it possible to take responsible care of one’s own health and to be friendly to the environment at the same time.“					
		absolute frequencies	relative frequencies	valid relative frequencies	cumulative relative frequencies
valid	certainly yes	87	65.4	66.9	66.9
	rather yes	37	27.8	28.5	95.4
	rather no	6	4.5	4.6	100.0
	Total	130	97.7	100.0	
invalid	I do not know	3	2.3		
Total		133	100.0		

Graph 7; Is it possible to take responsible care of one’s own health and to be friendly to the environment at the same time.“

Modal category: certainly yes

Strong majority of respondents (95.4% valid) agree with the claim that it is possible to take care of their own health and to be friendly to the environment at the same time..

2. Relational part of investigation

Main hypothesis

H1: There is a relationship between care for one's own health and between environmental care.

Statistic zero (null) hypotheses:

h_0 : Computed value of the correlation coefficient does not testify dependence between the ordinal variable *degree of consent with the claim: „When exercising a certain physical activity, I think how this activity burdens the environment.“* and between the ordinal variable *degree of consent with the claim: „I take care of my health responsibly“.*

Kendall correlation coefficient $t_b = 0.18$

Correlation is significant at the level of significance 0.01, i.e. we must reject the zero hypothesis, but the dependence, following from the correlation coefficient value, is *very weak*.

h_0 : Computed value of the correlation coefficient does not testify dependence between the ordinal variable *degree of consent with the claim: „I take care of my health responsibly “* and between the ordinal variable *degree of consent with the claim: „I take care of my health so to burden the environment to the lowest possible degree“.*

Kendall correlation coefficient $t_b = 0.33$

Correlation is significant at the level of significance 0.01, i.e. we must reject the zero hypothesis, but the dependence, following from the correlation coefficient value, is *low*.

h_0 : Computed value of the correlation coefficient does not testify dependence between the ordinal variable *degree of consent with the claim: „I take care of my health responsibly “* and between the ordinal variable *degree of consent with the claim: „I try to behave myself gently to the environment“.*

Kendall correlation coefficient $t_b = 0,32$

Correlation is significant at the level of significance 0.01, i.e. we must reject the zero hypothesis, but the dependence, following from the correlation coefficient value, is *low*.

Interpretation of results

The students most frequently exercise sports (and/or another voluntary physical activity) for entertainment, but in 78.9% cases also for health which - as indicated by

certain studies (e.g. HORKÁ, HROMÁDKA 2008 p. 25) - is understood by the students (in the majority of cases) the top item in the list of values. Sport is undisputedly one of the tools of the care for health, but nowadays we more and more often meet the situation, when the active leisure faces the environmental care (e.g. large sports complexes built in the natural landscape, downhill courses on the borders of natural parks, extraordinary resource consuming sports facilities or environmental impact of motoring to get to the sports facilities).

It follows from our investigation that the majority of respondents takes a responsible care of their health (68.7%). Strong majority also agrees with the claim that it tries to behave gently to the environment (97%) and, finally, the majority of respondents declares that it takes care of their health so to burden the environment to the lowest possible degree.

We have tried to establish attitude to the situation, when the active leisure and the environmental care clash, namely by the degree of consent with the claim: „Nature should not stand in the way of the projects serving to the active leisure“. The majority of respondents has disagreed with this claim (82.7%).

We have also succeeded to establish that the majority of respondents thinks that it is possible to take responsible care of one's own health and to be friendly to the environment at the same time.

Results of investigation can be assessed as favourable - the respondents mostly take care of their health as well as of the environment and in the majority of cases they prefer the environment to the physical activities that would lead to its impairment. The investigation was not focused especially on what is understood as gentle behaviour to the environment or whether the respondents are aware fully of all environmental consequences of their active leisure. In conclusion of the descriptive part of the investigation we can only say that the “positive attitude” to the active leisure and care for health dominates in context with the environmental care.

In the relational part of investigation we have established a very interesting relationship between “responsible care for one's own health” and between the “efforts to behave gently to the environment” (correlation $t_p = 0.32$). In our research set we have revealed a low (but significant) dependence between care for one's own health and between the environmental care. The research set is very small and has not been chosen by the method which could lead to the possibility of result inference to the population. Nevertheless the result implies possibilities of further research investigations that would be focused on a detailed examination of this remarkable relationship on a more representative research set.

Conclusion

Lack of active leisure, hypokinetic biodegradation of the man (LIBA 2007, p. 74) according to Hošek (1995), incorrect dietary habits and psychosocial factors are considered risk factors for the health. Continuous updating of the education curriculum contributes to avoidance of the clash between the care for health and the environmental care, namely not only at the cognitive level (to understand contexts, relationship of the man and the nature, consequences of human activities on the environment, incl.

the possibilities to mitigate, restrict or even eliminate the consequences, incl. the risk factors for the health; to understand values of the nature complexly, in all dimensions, with subsequent reduction of unnecessary human needs and unfounded and groundless claims), the affective level (acquisition of ethic principles of acting and behaviour and overcoming primitive egocentric opinions and values; understanding of aesthetic value of the nature; promoting consideration, economy, humility, thoughtfulness) as well as at the practical and transformation level (skills and habits of safe behaviour, healthy lifestyle, cooperation in the environmental care; involvement in solution of the issues connected with environmental protection, communication on environmental issues, assessment of objectivity and severity of the information concerning environmental issues and health. Results of the research investigation are understood a call for transformation of preparation of the future teachers for their profession.

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POHYBOVÉ AKTIVITY PRO ZDRAVÍ V KONTEXTU PÉČE O ŽIVOTNÍ PROSTŘEDÍ

Abstrakt: Nárůst pohybových aktivit v nestandardních prostředích (například rozsáhlé sportovní areály v přírodní krajině, sjezdovky na hranicích národních parků či ekologický dopad dopravy při „cestách za pohybem“) s sebou přináší řadu změn. Na jedné straně vede ke zvýšení zájmu o sportovní aktivity, na straně druhé však dochází k narušování přírodního prostředí. Péče o zdraví se tak dostává do konfliktu s péčí o životní prostředí. Stať nejdříve popisuje vlivy pohybových/sportovních aktivit na životní prostředí. Výzkumné šetření sleduje, jak studenti zohledňují poškozování životního prostředí při uskutečňování svých pohybových aktivit. V druhém plánu pak zjišťuje, zda u studentů existuje vztah mezi zodpovědnou péčí o vlastní zdraví a péčí o životní prostředí.

Klíčová slova: environmentální výchova, ochrana přírody, relaxace v přírodě, pohybové aktivity, péče o životní prostředí, péče o zdraví, výchova ke zdraví

THE PROBE INTO THE UNIVERSITY DRUG SCENE IN SLOVENIA AND ITS COMPARISON WITH THE SITUATION IN THE CZECH REPUBLIC

Petr KACHLÍK, Radek KLECH

Abstract: *An anonymous questionnaire survey was carried out to assess the drug scene at the University of Ljubljana, the data were statistically analyzed and compared with the results of a similar study carried out in 2006 among students of Masaryk University Brno. The comparison of the drug scene at the two universities indicated, among others, that opiates were more easily available to Slovenian university students, who also use hemp drugs, stimulant drugs and volatile substances more frequently. University students in Brno, on the other hand, more often consume hallucinogens, particularly hallucinogenic mushrooms. Hemp drugs, particularly marijuana, have become the most popular illegal drugs for students at both universities. Taking addictive substances is currently present in the university population to the extent that is not negligible. Bearing in mind that many university students after graduation in their professions operate on youth and that they are authority figures for the public, then these findings are particularly alarming.*

Keywords: *Czech Republic, questionnaire, drug scene, addictive substances, Slovenia, comparison, student, university*

Introduction

Drugs are an integral part of today's society. In the 21st century they represent a major challenge of global nature, which affects virtually every country in the world. In the past year, 208 million people, or 4.9 % of the world's population had used any illegal drugs, and according to recent estimates, the costs associated with drug problems in Europe alone amounted to 40 billion Euro (*Kalina, 2003; EMCDDA, 2008; UNODC, 2008*).

The Czech Republic unfortunately plays an important role in these statistics. According to research conducted both in the general population and among youth, it belongs among the countries with the highest prevalence of alcohol and certain illicit drugs, mainly cannabis, ecstasy and methamphetamine (*Hibell et al., 2004; EMCDDA, 2008*).

Enormous acceleration of life pace, the societal pressure demanding high performance, large-scale urbanization, anonymity, and not least the current global economic crisis, all these pose as stress factors and considerable stress which people must cope with in some way. The desire to eliminate stress as soon as possible and bring about pleasant feelings leads in many cases to a situation where people will use a variety of addictive substances (*Kachlík, 2003*).

A number of negative phenomena appear in connection with drug abuse, which may affect both the users themselves, and their circle of loved ones, and thus the society as a whole. Normal social relationships loosen, persons change their behaviour, the value chain. Drug abuse leads to increased crime, traffic accidents, deteriorating mental and physical health of the population, the reproductive and development abilities (*Nožina, 1997; Kachlík, 2003; Radimecký et al., 2003*).

It is therefore necessary to adopt measures that would alter the ways of acting, thinking and behaviour of humans so that they opt for a healthy, drug-free lifestyle, and thus avoid all the above-mentioned negative phenomena associated with drug abuse. Such action is the responsibility of primary drug prevention, which focuses on youth in primary and secondary schools as the most vulnerable population group (*Heller; Pecinová, 1996; Kachlík, Havelková, 2007*).

University students, however, are under less focus because they are regarded as sufficiently mature persons with such knowledge and attitudes to effectively resist the offers of various drugs and thus become victims of pathological addiction. On the other hand, they are exposed to stressful moments connected with adaptation to a new lifestyle, which places high demands on autonomy, accountability, effective planning and use of time (*Kachlík, Havelková, 2007*).

Drug use in the segment of university population in the domestic environment has been systematically researched since 1993 by Kachlík and Šimůnek, who mapped the drug scene of the Masaryk University in Brno. In 2005-2007, a three-year project entitled "Description of the drug scene at MU and proposals for preventive measures" was carried out, involving research of a representative sample of almost 10 000 respondents of Masaryk University in Brno. The results of these studies clearly showed that drug use is currently present in the university population, to an extent that it is not negligible (*Kachlík, Havelková, 2007*). Results of other surveys carried out among university students were published by *Csémy et al. (2004)*.

Although partial monitoring of drug abuse at universities the Czech Republic is taking place, according to the information available, there are still no comparative studies like in the case of the ESPAD school survey, which would undertake the same at the European level (*NMSDDZ, [online] 2003, 2008*). This contribution in the Czech environment is an attempt to compare the extent of drug use among university students in two different states of the European Union.

The basis for this work is found in a study carried out in 2006 under a three-year project entitled "Description of the drug scene at MU, and proposals for preventive measures" by authors *Kachlík and Havelková (2007)*. These were compared with the research results carried out by *Klech (2009)* at the University of Ljubljana during his European Socrates / Erasmus study programme there.

Material and methodology

The objectives of this work included mapping the drug scene at the University of Ljubljana and its analysis focused on statistically significant differences between the sexes. The main aim was the subsequent comparison of the results of this analysis with a similar study that was conducted in 2006 among students at Masaryk University in Brno in the project “Description of the drug scene at MU and proposals for preventive measures” (Kachlík, Havelková, 2007). Comparisons were made on the basis of quantitative analysis to determine statistical significance between phenomena sets studied at the University of Ljubljana, and Masaryk University in Brno.

Based on all the above-mentioned findings and previous studies, the following assumptions were tested:

- higher frequency of cannabis in the last six months is found among students of Masaryk University in Brno than among students at the University of Ljubljana,
- there is greater frequency of experience with methamphetamine in all examined periods between students of Masaryk University in Brno than among students at the University of Ljubljana,
- a lower frequency of use of ecstasy in the last six months occurs among students at the University of Ljubljana than among students of Masaryk University in Brno,
- heroin is more accessible drug for the students at the University of Ljubljana than for students of Masaryk University in Brno.

Quantitative analysis was selected for the purpose of this study - an empirical research allowing to obtain data in the form of numbers which then can be relatively easily, quickly and precisely analyzed using various statistical methods (*Denscombe, 1998; Blaxter et al., 2006*).

A questionnaire was chosen for primary data collection, as the most frequent way of obtaining a mass of data in a relatively short time (*Denscombe, 1998, Gavora, 2000*). An important factor for the selection of a questionnaire survey was the fact that the data obtained using this technique at the University of Ljubljana had to be subsequently compared with the results of a survey conducted at Masaryk University in Brno.

To acquire information for the survey, a standardized questionnaire by Kachlík and Havelková was selected, the same which was used in 2006 to collect data during the three-year project entitled “Description of the drug scene at MU, and proposals for preventive measures” (*Kachlík, Havelková, 2007*). The initial questionnaire was modified so that its completion was less time-consuming and the subsequent processing easier. Some items were omitted, such as detecting the use of black coffee, playing slot machines, open response questions, some items focused on respondents’ attitudes towards drugs and basic socio-economic indicators. All other items have been retained so that the data was later comparable without a problem, between the sets of Masaryk University and the University of Ljubljana.

The resulting questionnaire consisted of an input section with a short motivational and explanatory text with contacts of the interviewers, the basic identifiers (respondents’ age, course studied, class) and 11 closed questions with answers. This modified

questionnaire was translated into Slovenian by a Bohemistics student at the University of Ljubljana.

The basic research population was set to include all the students at Ljubljana University. The sample set then comprised the 262 students who completed the questionnaire (for detailed characterization see Tables 1 and 2). They were approached based on a “snowball method” (*snowball sampling*), which consists of selecting a few people who address their friends with a request to contact their friends, thus creating a “snowball process” (*Denscombe, 1998, Kalina et al., 2001*). In our case these were authors’ acquaintances, students at the University of Ljubljana, who were asked to send out a questionnaire via e-mail to other students and colleagues from the University with the request to fill it out and forward to other students. *Denscombe (1998)* considers this method of purposive sampling an efficient and fast way to create a group of acceptable size.

Prior to the distribution of the questionnaires, respondents were required to carry out pilot research, or the so-called pre-study (*Gavora, 2000*). The aim is to determine whether each questionnaire item is clear and there is no incorrect interpretation. The Slovenian version of the questionnaire was discussed with the author of the translation and with a few students at the University of Ljubljana.

Acquisition of primary data was carried out through an anonymous questionnaire. The questionnaire was converted into electronic form and then distributed via e-mail to students at the University of Ljubljana, from whom the authors had an earlier promise of further cooperation. They then sent the questionnaire via e-mail to students and colleagues from the University with the request to fill it out and send to other students. Completed questionnaires were sent back via a specially created e-mail box called anketa.droge@gmail.com in order to preserve the absolute anonymity of respondents. The data were collected from 5 February 2008 to 18 March 2008. After completion, the data from the questionnaire (doc, docx) was converted to xls and dbf, thus prepared for subsequent analysis.

Statistical processing of primary data collected in the survey was carried out using the statistical packages of EpiInfo 6.04 En and Statistica for Windows 7 Cz (*Dean et al. 2004; Statsoft Inc., 2004, Punch 2008*). To assess the statistical significance of differences between the characters in the set division into groups the following statistical tests were used: chi-square and its Mantel-Haenszel Yates modification. At a lower frequency of characters the Fisher exact test was used and the ANOVA method for examining the data of continuous nature of (*Dean et al. 2004; Statsoft Inc., 2004*).

Results

The results of the comparative study are presented in the form of tables, graphs and text commentary. The abbreviation “UNIVLJ” at the top of the tables and text comments stands for the University of Ljubljana, while the abbreviation “MU” means the Masaryk University in Brno. The term “n” in the header of the tables means the absolute frequency of the character, all the other details are given in percentages. Title of the table serves as an indication of a the researched phenomenon. The star symbol “*” indicates the level of statistical significance as follows:

- * $p < 0,05$, significance level less than 5 %
- ** $p < 0,01$, significance level less than 1 %
- *** $p < 0,001$, significance level less than 1 %

The basic characteristics of individual sets

Table 1: Gender representation on both sets

Gender	UNIVLJ (n=262)	MU (n=9993)
Men	24,4	40,4
Women	75,6	59,6

Table 2: Study year representation on both sets

Study year	UNIVLJ (n=262)	MU (n=9993)
First	3,8	28,8
Second	12,6	23,8
Third	22,9	20,6
Fourth	30,2	13,5
Fifth	29,0	10,0
Sixth	1,5	3,4

The comparative study subjects were the students of the University of Ljubljana and Masaryk University in Brno. The set at the University of Ljubljana represents 262 respondents (24 % men and 76 % women) and two Academies of the University of Ljubljana. The average age of the respondents in the whole sample is 22.64 years, SD 2.01 (for males 23.13 years, SD 2.21 and for women 22.49 years, SD 1.92). The youngest respondent is 18 years old and the oldest 33 years old.

Masaryk University Brno sample represents 9993 respondents (40 % men and 60% women) who are students from all nine faculties. The average age of the respondents in the whole sample is 24.32 years, SD 5.04 (for males 24.44 years, SD 5.12 and for women 24.25 years, SD 4.98). The youngest respondent is 17 years old and the oldest 36 years old.

Comparative study results

Tobacco

Table 3a: Smoking tobacco during one's life

Group	UNIVLJ (n=262)	MU (n=9953)
Answer	%	%
No	26,7	21,4
Yes	73,3	78,6
Total	100,0	100,0

Table 3b: Age of first tobacco consumption (only for those who did ever smoke tobacco)

Group	UNIVLJ (n=192)	MU (n=7861)
Answer	%	%
Less than 10 years	2,6	5,5
10-14 years	30,2	37,4*
15-18 years	55,2	45,5**
More than 18 years	12,0	11,6
Total	100,0	100,0

Table 3c: Last period of tobacco consumption (only for those who did ever smoke tobacco)

Group	UNIVLJ (n=192)			MU (n=7861)		
	Everyone	Men	Women	Everyone	Men	Women
Answer						
Today	33,6	26,9	36,4	19,5*	22,1	17,7***
In the last week	8,6	5,8	10,0	16,7**	16,6	16,8*
In the last month	10,9	5,8	12,9	12,1	12,1	12,1
In the last 6 months	12,5	21,2	9,3	15,1	14,6	15,4*
Earlier	33,6	40,4	31,4	36,6	34,6	38,0
Total	100,0	100,0	100,0	100,0	100,0	100,0

Tab. 3a shows that smoking tobacco during one's life is comparable in both groups (over 70%). Statistically significant differences can be found at the age of first tobacco consumption, the respondents of MU have earlier experience in tobacco from the age of 10-14 years (37 %), while for most UNIVLJ students first smoking attempts (55 %) took place between 15 - 18 years (see Table. 3b). Other significant differences were found in the analysis of the latest tobacco consumption. Compared to a fifth of MU respondents, a third of UNIVLJ respondents smoked at the time of interview, with a statistically significant difference between women (36 % of UNIVLJ women, 18 % of women at MU, $P < 0.001$, x^2), see Table 3c.

Alcohol

Table 4a: Drinking alcoholic beverages during one's life

Group	UNIVLJ (n=262)	MU (n=9953)
Answer	%	%
No	1,2	0,9
Yes, exceptionally	14,1	13,7
Yes	84,7	85,4
Total	100,0	100,0

Table 4b: Age of first alcohol consumption (only for those who did ever drink alcohol)

Group	UNIVLJ (n=259)	MU (n=9860)
Answer	%	%
Less than 10 years	10,8	11,9

10-14 years	38,2	42,8
15-18 years	46,7	42,5
More than 18 years	4,3	2,8
Total	100,0	100,0

Tab. 4a shows that 99 % respondents from both samples tried drinking alcohol during their lives. The frequency of first contact with alcohol was the same for both universities' respondents, most often seen at the age of 15 to 18 years (over 40 %), see Table 4b. A statistically significant difference was found in alcohol consumption in the last week preceding the interview (more respondents at MU, $P < 0.001$, χ^2), then in the last month and 6 months, where UNIVLJ students dominated ($p < 0.001$, χ^2), see Table 4c.

Table 4c: Last period of alcohol consumption (only for those who did ever drink alcohol)

Group	UNIVLJ (n=259)	MU (n=9880)
Answer	%	%
Today	7,3	10,5
In the last week	44,4	61,0***
In the last month	34,0	20,4***
In the last 6 months	11,2	5,6***
Earlier	3,1	2,5
Total	100,0	100,0

Cocaine and crack

Three times more UNIVLJ respondents than MU came into contact with cocaine during their life (9,2 % UNIVLJ vs. 2,6 % MU, $p < 0,001$, χ^2). The same applies to the use of cocaine in the last six months (3,1 % UNIVLJ vs. 0,8 % MU, $p < 0,001$, χ^2). More UNIVLJ cocaine users had experience with this substance during their 15-18 years of age (41,7 % UNIVLJ vs. 15,5 % MU, $p < 0,01$, χ^2), while more MU users have tried it in early adulthood (58,3 % UNIVLJ vs. 81,8 % MU, $p < 0,01$, χ^2). The frequency of cocaine use did not show any statistically significant differences between users of individual universities (Table 5).

Table 5: Frequency of cocaine use in life (only for those who ever used cocaine in their life)

Group	UNIVLJ (n=24)	MU (n=256)
Answer	%	%
1 - 3 x	50,0	68,8
4 - 10 x	37,5	20,7
More than 10 x	12,5	10,5
Total	100,0	100,0

Marihuana

Table 6a: Use of marihuana in life

Group	UNIVLJ (n=262)	MU (n=9993)
Answer	%	%
No	41,6	40,5
Yes	58,4	59,5
Total	100,0	100,0

Table 6b: Use of marihuana in the last 6 months

Group	UNIVLJ (n=262)	MU (n=9993)
Answer	%	%
No	69,8	71,6
Yes	30,2	28,4
Total	100,0	100,0

Table 6c: Use of marihuana in the last 30 days

Group	UNIVLJ (n=262)	MU (n=9993)
Answer	%	%
No	80,9	83,8
Yes	19,1	16,2
Total	100,0	100,0

Table 6d: Age of first use of marihuana (only for those who ever used marihuana in their life)

Group	UNIVLJ (n=153)	MU (n=5852)
Answer	%	%
Less than 10 years	0,0	0,1
10-14 years	10,6	8,4
15-18 years	69,3	63,7
More than 18 years	20,1	27,8
Total	100,0	100,0

Regarding the use of marihuana, 60 % respondents from both universities have tried it at least once in their lives, about 30 % in the last six months (Tables 6a, 6b). A statistically significant difference was found in the frequency of marihuana use during life, when 60 % of UNIVLJ consumers and 45 % at MU consumers have used it more than 10 times ($p < 0,001$, χ^2), see Table. 6e.

Table 6e: Frequency of marihuana use in life (only for those who ever used marihuana in their life)

Group	UNIVLJ (n=153)	MU (n=5868)
Answer	%	%
1 - 3 x	22,2	28,7
4 - 10 x	18,3	26,2*
More than 10 x	59,5	45,1***
Total	100,0	100,0

Hashish or hashish oil

Unlike for marihuana, statistically significant differences were found for all examined phenomena in connection with the use of hashish or hashish oil. More UNIVLJ than MU respondents had used hashish or hashish oil at least once during their lives (29,4 % vs. 23,7 %, $p < 0,05$, χ^2) and in the last six months (11,5 % vs. 7,7 %, $p < 0,05$, χ^2). The biggest difference was however observed in the use of these substances in the last month (7.3 % vs. 3.5% - more UNIVLJ respondents, $p < 0.01$, χ^2). Users of these substances at UNIVLJ started to consume it earlier, aged 15-18 years (75.3 % vs. 61.0 %, $p < 0.05$, χ^2). For MU hashish or hashish oil consumers, there were rather 1-3 experiments (43 % vs. 20.8 %, $p < 0.001$, χ^2), while more than half of all UNIVLJ users (53.2 %) tried it more than 10 times compared to 31.7 % of respondents at MU ($p < 0.001$, χ^2).

Hallucinogens

Compared to UNIVLJ respondents, almost twice more MU respondents used hallucinogens at least once during their lives (3,8 % UNIVLJ vs. 7,1 % MU, $p < 0,05$, χ^2). The same applies to the use of hallucinogens in the last six months, already without statistical significance (0,8 % UNIVLJ vs. 1,5 % MU).

Hallucinogenic mushrooms are more popular among MU respondents, as evidenced by 5 % higher lifetime prevalence of their use in comparison with the UNIVLJ set (8,4 % UNIVLJ vs. 12,9 % MU, $p < 0,05$, χ^2). In about 60 % of the respondents from both universities there were rather 1-3 experiments, see Table 7.

Table 7: Frequency of hallucinogenic mushrooms during life (only for those who ever used hallucinogenic mushrooms)

Group	UNIVLJ (n=22)	MU (n=1243)
Answer	%	%
1 - 3 x	63,6	62,5
4 - 10 x	27,3	26,1
More than 10 x	9,1	11,4
Total	100,0	100,0

Methamphetamine and other Energising resources of the ephedrine and amphetamine series

At least one experience with methamphetamine during their life was stated by 2.3 % of the surveyed set at UNIVLJ and 4.4% at MU. Some 0.8 % of the UNIVLJ group and 1.0 % of the MU group admitted using it in the last six months preceding the interview. methamphetamine file and. Most experiments with methamphetamine were reported in early adulthood (66.6 % respondents at UNIVLJ, 49.0 % respondents from MU). In most cases at both universities, these were 1-3 experiments (see Table 8.). All characters examined for methamphetamine experiences showed statistically significant differences between respondents at the universities.

Table 8: Frequency of methamphetamine use during life (only for those who ever used methamphetamine)

Group	UNIVLJ (n=6)	MU (n=427)
Answer	%	%
1 - 3 x	66,6	47,3
4 - 10 x	16,7	20,8
More than 10 x	16,7	31,9
Total	100,0	100,0

While the prevalence of meth use did not show any statistically significant differences between the sets of UNIVLJ and MU, the analysis of prevalence of other amphetamine-type stimulants (Energising amines) portrays a very different situation. Nearly three times more respondents of UNIVLJ (5.7 %) than respondents from MU (2.1 %) had at least one experience with Energising amines during their life ($p < 0.001$, χ^2). A comparable difference between the sets of UNIVLJ and MU (again, more respondents from UNIVLJ - 1.9 % versus 0.5 % at MU, $p < 0.05$, Fisher exact test) is visible in the use of Energising amines in the last half year. Statistically significant differences were also observed at the frequency of Energising amines consumption (see Table 9.). While 55.6 % of MU users have tried Energising amines no more than 3 times in their lifetime, 60.0 % of UNIVLJ users had used these substances more than 10 times.

Table 9: Frequency of ephedrine, amphetamine and similar Energising substances use without a prescription during their lives (only for those who have ever used such substances)

Group	UNIVLJ (n=15)	MU (n=178)
Answer	%	%
1 - 3 x	13,3	55,6**
4 - 10 x	26,7	23,0
More than 10 x	60,0	21,4**
Total	100,0	100,0

Volatile substances for deliberate inhalation

In the case of volatile substances, most statistically significant differences in their use were found among UNIVLJ and MU respondents. Vastly more UNIVLJ respondents (5.7 %), compared to MU respondents (1.5 %) have had at least one experience in life with these substances ($p < 0.001$, χ^2). As shown in Tables 10a - 10b, the same applies to their use in the last month and six months (again, more respondents from UNIVLJ, $p < 0.01$, Fisher exact test).

Table 10a: Use of volatile substances in the last 6 months

Group	UNIVLJ (n=262)	MU (n=9993)
Answer	%	%
No	98,5	99,8
Yes	1,5	0,2**
Total	100,0	100,0

Table 10b: Use of volatile substances in the last 30 days

Group	UNIVLJ (n=262)	MU (n=9993)
Answer	%	%
No	98,9	99,9
Yes	1,1	0,1**
Total	100,0	100,0

Table 10c: Frequency of using volatile substances for deliberate inhalation during life (only for those who ever used these substances)

Group	UNIVLJ (n=15)	MU (n=135)
Answer	%	%
1 - 3 x	60,0	66,7*
4 - 10 x	33,3	18,5
More than 10 x	6,7	14,8
Total	100,0	100,0

Heroin and other opiates (morphine, codeine, drugs containing opiates without a prescription)

In terms of relative frequency, UNIVLJ and MU respondents differ in the use of heroin (UNIVLJ 1.1 % during life vs. MU 0.4 %; in the last six months: UNIVLJ 0.4 % vs. MU 0.1 %) and other opiates (during life, UNIVLJ 1.1 % vs. MU 2.0 %). However, there was no statistically significant difference, thus it cannot be claimed that respondents from one university have significantly more or less experience with heroin and similar substances than respondents from the other university.

Means of inducing sleep and calmness, without a prescription

Medication with a calming effect (to induce sleep, calm, relieve pain, fear) without a prescription was tried at least once in their lifetime by 9.9 % UNIVLJ respondents and 7.6 % MU respondents. In the last six months these means have been used by 3.8 % of the UNIVLJ set and 2.6 % of the MU group. The respondents of both universities stated these were mostly 1-3 experiments (50.0 % UNIVLJ, 44.0 % MU). In all these cases, there were no statistically significant differences between the universities.

Ecstasy

More UNIVLJ respondents (13.0 %) than MU (9.0 %, $p < 0.05$, χ^2) tried ecstasy at least once during their lives. The difference in use of ecstasy in the last six months was not statistically significant between the sets (1.1 % UNIVLJ vs. 2.1 % MU). For users from both universities these were mostly 1-3 experiments (50.0 % UNIVLJ vs. 58.8 % MU), see Tab. 11.

Table 11: Frequency of using ecstasy during life (only for those who ever used ecstasy)

Group	UNIVLJ (n=34)	MU (n=875)
Answer	%	%
1 - 3 x	50,0	58,8
4 - 10 x	29,4	23,4
More than 10 x	20,6	17,8
Total	100,0	100,0

Other studied phenomena

One or two meetings with falsified or diluted drugs was mentioned by about one tenth of respondents from each university. Three or more meetings with the “poor quality” drugs was reported by 1.1 % of those surveyed at UNIVLJ and 3.1 % of respondents at MU. If students encountered drug dealers, 16.0 % UNIVLJ respondents vs. 4.1 % MU respondents said that dealers included the university students ($p < 0.001$, χ^2). 5.3 % of UNIVLJ respondents, compared to 2.1 % of MU respondents then admitted meeting with a dealer - a student of the faculty same as the interviewee ($p < 0.001$, χ^2).

Table 12: Very easy availability of selected drugs

Group	UNIVLJ	MU
Answer	%	%
Marihuana	72,6	58,1***
Energising amines	4,4	4,3
Cocaine, crack	4,5	1,6**
Hallucinogens	5,9	9,0
Ecstasy	28,2	10,3***
Heroin	11,5	1,1***

Table 12 makes it clear that marihuana as a readily available drug was identified by more than 70 % of those surveyed at UNIVLJ and almost 60 % of respondents at

MU ($p < 0.001$, χ^2). Likewise, cocaine and crack are more available to the UNIVLJ respondents than to MU respondents ($p < 0.01$, χ^2). Compared with the tenth among MU respondents, ecstasy is readily available for almost a third of UNIVLJ respondents ($p < 0.001$, χ^2). The largest difference was found in the availability of heroin, which was identified as a readily available drug at UNIVLJ by 11.5 % respondents compared to 1 % of respondents from MU ($p < 0.001$, χ^2).

Table 13: Attitudes towards risky activities (only positive responses listed)

Group	UNIVLJ	MU
Studied characteristic	%	%
Regular smoking of 20 and more cigarettes daily	5,0	6,3
Regular marihuana smoking	9,5	10,1
Experiments with „hard“ drugs	3,4	5,4
Experiments with hashish, hallucinogens, ecstasy	10,3	24,2***

It is clear from Table 13 that the respondents from both universities are most benevolent to the experimental use of substances with an acceptable risk (the so-called «soft» or «light» drugs such as hashish, hallucinogens, ecstasy). It is also here however, where they also mostly diverge. While the experiment with so-called «light» drugs gained approval by over 10 % of UNIVLJ respondents, there are many more of them at MU, specifically 24 % ($p < 0.001$, χ^2). As regards the attitudes towards other risky activities, respondents from both universities ‘prefer’ regular marihuana smoking before regular smoking of 20 or more cigarettes a day. The least favourable opinion of both universities’ respondents was to experiment with so-called ‘heavy’ drugs.

Summary of research results

Based on the results of drug scene comparison at the University of Ljubljana and Masaryk University in Brno, we can state that:

- For students of both universities, the same incidence was found for alcohol consumption during life (99 %). More students at Masaryk University in Brno have used alcohol in the last week preceding the interview.
- The most popular illegal drug of the students from both universities are cannabis-based drugs, with marihuana as the most commonly used, used at least once in their life by almost 60 % of respondents from both universities and in the last six months 30 % of respondents from both universities. Students of the University of Ljubljana then dominated in all time horizons of hashish or hashish oil use.
- Students of the University of Ljubljana exceed the Masaryk University of Brno students in the use of stimulants (cocaine, energising amines) except for methamphetamine.
- Hallucinogenic mushrooms and other hallucinogens are used by more students at Masaryk University in Brno.
- Sniffing inhalants is more widespread among students at the University of Ljubljana.
- Lifetime prevalence of Ecstasy use is higher among students at the University of Ljubljana.

- Lifetime prevalence of Ecstasy use is higher among students at the University of Ljubljana.
- Four times more students of the University of Ljubljana than students of Masaryk University Brno admitted meeting with a dealer - a student of their university.
- More respondents at the University of Ljubljana identified marihuana, cocaine, ecstasy and heroin as a readily available drug.
- Students of Masaryk University in Brno have considerably more benevolent attitude to experimenting with “light” drugs (hashish, hallucinogens, ecstasy).

Analysis of hypotheses

Hypothesis 1: A higher prevalence of cannabis in the last six months is found among the students at Masaryk University in Brno than among students at the University of Ljubljana.

Slightly more respondents at the University of Ljubljana (30 %) than respondents of Masaryk University (28 %) had used marijuana within the last six months preceding the interview. The use of hashish or hashish oil during the last six months was admitted by more respondents from the University of Ljubljana (12 %) than respondents from Masaryk University (8 %). A statistically significant difference between groups was observed only for the use of hashish or hashish oil ($p < 0.05$, χ^2). Moreover, University of Ljubljana respondents prevailed in the use of these substances over the respondents from Masaryk University, thus we conclude that this hypothesis **has not been verified**.

Hypothesis 2: The prevalence of experiences with methamphetamine is greater among the students at Masaryk University in Brno than among students at the University of Ljubljana, in all examined periods.

2.3 % of those surveyed at the University of Ljubljana have tried methamphetamine at least once during their lives, 0.8 % of the respondents admitted using it consistently in the last six months and one month. The Masaryk University respondents have used methamphetamine at least once during the life in 4.4 %, 1 % in the last six months and 0.5 % of respondents in the last month. The results show that a difference among respondents of the universities is especially obvious in lifetime prevalence of methamphetamine use (higher among Masaryk University respondents). Since no statistically significant difference between the sets was found among all studied phenomena, the hypothesis **has not been verified**.

Hypothesis 3: A lower prevalence of ecstasy use in the last six months is found among students at the University of Ljubljana than among students of Masaryk University in Brno.

The prevalence of ecstasy use among those surveyed at Masaryk University is two times higher (2.1 %) than among those surveyed at the University of Ljubljana (1.1 %), yet without a statistically significant difference, the hypothesis was therefore **not verified**.

Hypothesis 4: Heroin is a more accessible drug for students of the University of Ljubljana than for students of Masaryk University in Brno.

Heroin is easily available for 11.5 % of respondents at the University of Ljubljana compared to 1.1 % of the respondents from Masaryk University in Brno. Since this considerable variety in the answers of respondents from both universities produced a statistically significant difference ($p < 0.001$ %, χ^2), we can conclude that the hypothesis was verified.

Discussion

Although a questionnaire was chosen as the most suitable method for quantitative research, there are some drawbacks and limitations that should be taken into account. The main disadvantage of the questionnaire is, that it is virtually impossible to ascertain the veracity of responses. Another disadvantage may be in incorrectly or incompletely answered questions of the questionnaire, resulting in a narrowing down of the research sample (*Denscombe, 1998*). The last-mentioned drawbacks, however, occurred only minimally in the actual research.

Certain limitations of research may be instituted by small sample size, which included 262 respondents. Although they almost all the faculties of the University of Ljubljana (with the exception of the Faculty of Theology) were represented in the research set, some faculties were only represented by one or two students, making it impossible to compare with the same faculties in the set of the Masaryk University in Brno. Other limitations of this study can be seen in the chosen method of “snowball sampling”. It is a purposive sampling method, which has a limited degree of general validity (*Pelikán, 2004*). For this reason, we see a possible recommendation for future research in obtaining data from a larger number of respondents who would be chosen by random selection. Acquisition of data would also be easier through an online questionnaire based on a specific web address. The data acquired this way would be then stored and processed through a collecting database.

Drug Epidemiology Research carried out among young people in Europe (ESPAD), the general population (various national surveys), and university students (e.g. the “Description of the drug scene at MU, and proposals for preventive measures), point out the differences between genders in the extent of drug use. Although these differences have recently began to diminish, especially in the school population, it still holds that drug use is more widespread among men than among women. The only exceptions are antidepressants (sedatives, hypnotics), where women exceed men (*NMSDDZ [online], 2007; Kachlik, Havelková, 2007*).

The reason for such results may be the current trend, where according to recent reports about a gradual levelling out of differences between genders, especially in terms of lifetime experience with the use of drugs among youth, that is, the school population (*NMSDDZ [online], 2007*). This trend is also being felt in the university population. In the future, a gradual levelling out of differences between men and women (in the sense of increasing drug use prevalence among women) could lead to a significant increase in the overall prevalence of drug use.

The reason for difference equalisation between genders may be in the general characteristic of today’s society, which changes considerably the status of women, traditional for centuries. Today’s emancipated woman is no longer just a housewife as pre-

viously, but occupies a position in modern society, which becomes increasingly approximated to men. This may be even more pronounced in the more developed countries, which undoubtedly include Slovenia. This presumption can be affirmed by the research conducted at the University of Ljubljana and Masaryk University in Brno.

While in most cases, significant differences in drug use between genders were not detected among the students at the University of Ljubljana, the students of the Masaryk University in Brno have shown the exact opposite. Men are according to these studies more frequent users of marijuana, while women are more casual users of the drug. This may be primarily due to the fact that women are more cautious in the use of addictive substances and also because they are more aware of the risks and negative impacts associated primarily with more frequent or regular drug use. (*Kachlik, Havelková, 2007*)

Since there is no research on drug use among the university population in Slovenia, which would be comparable to the studies conducted at the Masaryk University in Brno in 2006, the formulation of hypotheses was based primarily on the results of the ESPAD national research in the general population as well as information available from the 2008 Annual Report issued by the EMCDDA, mapping the drugs issues in Europe. Based on these findings, four hypotheses were suggested, of which only one (fourth) has been verified. Let us analyze the conclusions drawn from those hypotheses that have not been verified.

A very surprising finding was revealed for the first hypothesis, in which it failed to prove that the students of Masaryk University in Brno have a higher prevalence of cannabis in the last six months than students at the University of Ljubljana. This hypothesis was mainly based on data from the EMCDDA's Annual Report for 2008, according to which the Czechs aged 15-34 years (university students best fit within this age group) are among the nations with the highest prevalence of cannabis use in Europe (*EMCDDA [online], 2008*).

Czech university population differs in its drug use from the general population, but in reverse than we expected. While the prevalence of marijuana use over a time horizon of 30 days is 16 % for Masaryk University students, the general population aged 15-34 years has 10 % (*EMCDDA, [online], 2008*). This unflattering finding should have meant an even more pronounced difference in cannabis use among students of different universities. The reason why this was not so may be in the fact that the extent of cannabis use (mainly hashish) among students at the University of Ljubljana is also significantly higher than in the general population.

Another quite unexpected finding came from the analysis of the second hypothesis, since it has not been verified that Masaryk University students have more frequent experience with methamphetamine than students at the University of Ljubljana. This hypothesis was examined in three time periods of methamphetamine use, and only the first one of them (lifetime prevalence) showed a greater difference in relative in response rates between students of different universities. Although respondents of Masaryk University nearly doubled over the respondents from the University of Ljubljana, there was no statistically significant difference, which is influenced primarily by the methodological aspect of this research, namely a small sample of students at the University of Ljubljana.

For other examined time periods, methamphetamine use (during the last six months and one month) only minimal frequency of positive responses has been repor-

ted (which can be considered negligible), moreover without major differences between respondents from various faculties. This may mean that university students are aware of all methamphetamine risks, and that is why most of them avoid it.

The last hypothesis that was actually verified, did not as the only one concern drug use, but their availability, in this case, the availability of heroin. Confirmation of this hypothesis clearly showed that Slovenia as a country of the former Yugoslavia, which formed an integral part of the so-called “Balkan route” and today lies rather on its sideline, is still severely affected by this heroin transit route from Afghanistan.

Conclusion

The aim of this study was to analyze the extent of use of addictive substances in a sample of university population. The main objective was the comparison of results of the drug scene analysis at the University of Ljubljana, with the results of similar studies that were conducted among students at Masaryk University in Brno in 2006 in the project “Description of the drug scene at MU, and proposals for preventive measures” by authors *Kachlik and Havelková (2007)*.

Comparison of the drug scene at the University of Ljubljana and Masaryk University in Brno was carried out through four hypotheses. Of these only one has been verified - one which presumed greater availability of drugs among students at the University of Ljubljana. It was established that heroin is a readily available drug for students at the University of Ljubljana rather than for students at Masaryk University. Since the remaining hypotheses were not verified, we can state that Masaryk University students do not exceed students at the University of Ljubljana in the use of cannabis during the last six months preceding the interview. Furthermore, there was no evidence that the students at Masaryk University in Brno have a higher prevalence of methamphetamine use in all reporting periods than students at the University of Ljubljana. Another unverified hypothesis assumed that compared to students at Masaryk University in Brno, students at the University of Ljubljana showed lower prevalence of ecstasy in the last six months preceding the interview.

Although most of the hypotheses were not verified, statistically significant differences were found in the extent of drug use among students of the two universities, and on this basis the following conclusions were reached:

- Compared to students of Masaryk University, students from the University of Ljubljana clearly dominate in all studied time periods of using hashish or hashish oil.
- Students of the University of Ljubljana also exceed students of Masaryk University in the extent of use of all stimulants (cocaine, energising amines) except methamphetamine.
- Another difference was found in the range of use of volatile substances whose use is again more widespread among students at the University of Ljubljana.
- Conversely, hallucinogenic mushrooms and other hallucinogens are used by more students at Masaryk University in Brno.
- In the overall perspective on the drug scene of both universities one can say that almost all students have ever drunk alcohol.

- The most popular illegal drugs of the students from both universities contain cannabis, where marijuana was the most commonly used, consumed at least once in their life by consistently almost two-thirds of both universities' respondents and roughly one-third of from both universities in the last six months.

The results of the surveys that were conducted at both universities clearly showed that drug use is currently present in the university population, to the extent that it is not negligible. In many cases, an even higher prevalence of substance abuse was found among university students than in the general population or among young people. If we realize that many university students work with young people or patients after graduation in their professions and they are perceived as authorities by the public, then these findings are particularly alarming.

This paper is one of the first attempts in the Czech environment to compare the extent of drug use among university students in two different states of the European Union. For this reason, we recommend pursuing further studies of the same nature carried out regularly at European level, as is the case with the ESPAD study.

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SONDA DO VYSOKOŠKOLSKÉ DROGOVÉ SCÉNY VE SLOVINSKU A JEJÍ SROVNÁNÍ SE SITUACÍ V ČESKÉ REPUBLICE

Abstrakt: Pomocí anonymního dotazníkového šetření byla provedena sonda do drogové scény Univerzity v Lublani, data byla statisticky analyzována a porovnána s výsledky obdobné studie realizované v roce 2006 mezi studenty Masarykovy univerzity Brno. Ze srovnání drogové scény na obou univerzitách vyplynula mimo jiné snadnější dostupnost opiátů pro slovinské vysokoškoláky, vyšší frekvence jejich konzumace konopných a stimulačních drog a těkavých látek. Brněnští vysokoškoláci zase častěji konzumují halucinogeny, zejména halucinogenní houby. Nejoblíbenějšími ilegálními drogami studentů obou univerzit se staly konopné drogy, zejména marihuana. Užívání návykových látek je aktuálně přítomné ve vysokoškolské populaci, a to v rozsahu, který není zanedbatelný. Pokud si uvědomíme, že mnozí vysokoškolští studenti po absolutoriu ve svých profesích působí na mládež a že pro veřejnost představují autority, pak jsou tato zjištění obzvláště alarmující.

Klíčová slova: Česká republika, dotazník, drogová scéna, návykové látky, Slovinsko, srovnání, student, univerzita

THE ATTITUDES AND OPINIONS OF PUPILS AT THREE SELECTED SCHOOLS IN THE SOUTH MORAVIAN REGION ON THE ISSUE OF PATHOLOGICAL ADDICTION

Petr KACHLÍK, Marie HAVELKOVÁ

Abstract: *Two hundred and fifty students of the second level of three elementary schools in the South Moravian region were anonymously interviewed. The survey revealed that pupils from the town show higher benevolence towards drugs than pupils from the village, which, however, does not apply in the classification by gender. In the town, children are strongly influenced by views of their peers. In the village, the media have a dominant position and the school and parents have unfortunately only minimum influence in drug dependence matters. The results show, among others, that the majority of pupils think that alcohol and nicotine dependence is everybody's personal matter as long as the person is not a risk to those around him. Most of the interview respondents would ban gaming machines and agree with a ban on smoking in public places. Curiosity, influence of the gang or friends, escape from reality, need to improve mood and fight off depression are considered the most frequent impulses to use drugs. Other results are also discussed.*

Keywords: *questionnaire, town, addictive substance, opinion, attitude, prevention, village, primary school, addiction, pupil*

Introduction

Narcotics and psychotropic substances were used in what is now the Czech Republic in ancient times, as they were elsewhere in the world, evidence of which is provided by, for example, a knowledge of the effects of hallucinogenic mushrooms and cannabis (Nožina, 1997). The ancient Slavs had experience of the roots of plants such as mandrake and bryony. Pagan customs were, however, violently suppressed by the church in this country, as they were in the rest of Europe (Valíček, 2002; Escohotado, 2003).

Documents were published at Charles University in the 14th century in which the Czech names for cannabis, mandrake and poppy were recorded. Alcohol was traditionally used in the area, notably wine, beer and mead, as it was elsewhere in Europe. People using mandrake, belladonna, henbane, aconite, hemlock, and, in particular,

thorn-apple to make ointments were labelled witches in the Middle Ages, and cruelly persecuted (*Valíček, 2002*).

The humanist and physician Philippus Aureolus Paracelsus, who lived in the Czech Lands for some time, performed experiments on the effects of drugs on his own body. He came to the conclusion that the only difference between a medicine and a poison was the size of the dose. In the 17th century, narcotics and psychotropic substances began to be used more frequently to attain mental and physical experiences, which lead to the mass production of not merely medicines and poisons, but also “gratification” substances. In the eighteen twenties, polymath Jan Evangelista Purkyně also tested the action of drugs on his own organism. Certain substances were considered universal cures and were widely used to treat such problems as pain, convulsions and nausea (nutmeg, laudanum and tobacco). (*Nožina, 1997; Escohotado, 2003*)

Morphine abuse was first recorded in the Czech Lands at the end of the 19th century. At first, there were merely isolated cases in which the drug was used by pharmacists, doctors and patients who had previously been treated with opium and its derivatives and had built up a dependence on this substance. A similar situation was described at the beginning of the 20th century. The ranks of morphine addicts were joined by medical students, writers and artists. Opiate addiction was seen as an illness of the individual leading to personal and family tragedy. No radical change in the situation in this area was seen until the Second World War, when it began to be recognised as a serious threat to society as a whole. (*Nožina, 1997; Kudrle, 2008*)

Cocaine abuse appeared in the Czech Lands at the beginning of the 20th century, though not, initially, on a massive scale. Cocaine found a large clientele particularly after the First World War, when consumption became particularly widespread among dancers, artists, actors, the cream of society and prostitutes in Prague. Cocaine was smuggled almost exclusively from laboratories in Germany, with only a small quantity being made in this country. The Czech press began an extensive campaign in the interwar period to draw attention to the danger of cocaine, the abuse of which had reached dangerous proportions. Abuse of cannabis preparations, which were consumed in the form of marihuana cigarettes, largely in the capital city, was seen in the nineteen thirties. Opium smoking also appeared in this country in the post-war years, again largely in Prague. (*Nožina, 1997*)

Although Czechoslovakia signed up to a number of international agreements on the battle against drugs, the legislative standards of the time took an extremely vague approach to the illegal production, trade and handling of controlled substances until 1938, and punishments were light. Stronger legal tools were created in 1938 with the aim of helping in the fight against the danger posed by drugs and defining internal anti-drug policy. Handling controlled substances was strictly monitored. These drugs could not be manufactured, distributed or prescribed without a special licence, and had to be recorded in special registers. The action of offenders was classified according to its seriousness, and much stricter legal recourse was introduced. (*Krmenčík [online], 2009a, b, d*)

State monitoring of the handling of drugs after the Second World War followed on from the legislation of the nineteen thirties. The issue of substances other than alcohol was said not to be so important that it need be explicitly resolved. Attention focused on problematic consumption of alcoholic beverages. The laws of 1948 and 1961 did not contain any provisions relating to non-alcoholic drug addiction. (*Krmenčík [online], 2009a, c*)

A rapid increase in consumption of medicines was seen from the nineteen fifties onwards, particularly medicines with psychotropic effects, analgesics and anti-asthmatics, which was associated with the development of medicine and advances in pharmacotherapy. The relatively easy availability of certain preparations acting on the psyche and sweeping prescription lead to their use by many people for the resolution of stressful situations. They became fashionable and part of the modern lifestyle, for which reason it became necessary to amend the existing rules and stipulate new rules for the handling of medicines. (*Záškodná, 1997, 2004*)

The legislation in this country was harmonised with international standards in 1961 following the acceptance of the Joint Convention on Narcotics. The handling of narcotics was regulated by the Law on Human Health of 1966. In 1967, the government issued the Order on Poisons and Other Substances Harmful to the Health, which was implemented by a decree from the Ministry of Health and Justice. This contained detailed regulations and an appendix with a list of narcotics. (*Krmenčík [online], 2009c, d*)

This country was not particularly interesting to the foreign drugs mafia in the nineteen sixties. Later (from the nineteen seventies onwards) it served primarily for the transit of drugs smuggled to the West. The official government functionaries denied that there was a drug problem in the then Czechoslovak Socialist Republic. (*Nožina, 1997*)

Young people began to be interested in volatile substances, which can be considered a “beginner’s drug”, in the nineteen seventies. Anxiolytics were one group of medicines whose abuse became popular (Diazepam and Radepur). Amphetamines, and ephedrine in particular, came to the forefront at the end of the nineteen seventies. They were obtained from freely available preparations such as cough medicine (Solutan). Raw materials for illegal production could also be got hold of by smuggling from pharmaceutical factories or by breaking into a pharmacy. (*Záškodná, 1997; Kudrle, 2008*)

The abuse of composite analgesics appeared among young people at the beginning of the nineteen eighties. These were generally psychostimulants, anxiolytics and anti-Parkinson’s medications, though also included substances of the morphine and amphetamine type (codeine and pervitin). Substitutes for cocaine and heroine were prepared from medicines available without a medical prescription, often extremely cheaply. The frequency of experiments with mushroom and plant hallucinogens was low. “Beginner’s drugs” included analgesics and solvents, in addition to alcohol and tobacco. (*Záškodná, 1997, 2004*)

The Government Order on Poisons and Certain Other Substances Harmful to the Health came into effect at the beginning of 1989. The situation on the domestic drugs scene deteriorated markedly in this politically unstable period, and the existing legislation was seen to no longer correspond to international standards, for which reason changes were made over the next decade and a number of new provisions entered into criminal law with the aim of making the battle against drugs more effective. (*Krmenčík [online], 2009c, e*)

At the turn of the nineteen eighties and nineties, addicts most often used drugs orally, followed by sniffing and parenteral application. The substances most commonly consumed were volatile organic substances, psychostimulants (particularly pervitin and ephedrine), substances of the morphine type, analgesics, anxiolytics, anti-asthmatics, hypnotics, barbiturates and marihuana. A drug boom occurred – a rapid increase in in-

terest in drugs, an influx of new commodities (principally heroin), and an expansion of cannabis cultivation and the illegal sale of drugs, which was controlled, for the large part, by a foreign drug mafia. Non-governmental organisations, which surveyed the needs of drug addicts and responded to them, began to be created as a countermeasure. Programmes for exchanging needles and syringes appeared, drop-in centres were established, and drug-prevention coordinators appointed. A new “dance scene” appeared, which offered young people new types of drugs and their “recreational use”, which is, however, far from safe. (*Záškodná, 1997*)

The Law on Addictive Substances and on the Amendment of a Number of Other Laws came into effect on 1 January 1999. It regulates the handling of addictive substances, preparations containing addictive substances, auxiliary substances and precursors, their import and export, and transit operations. It further defines conditions for the cultivation of poppies, cannabis and coca for agricultural and technical purposes. (*Krmenčík [online], 2009e*)

Research conducted in 2002 and 2004 showed that roughly one fifth of the adult Czech population has tried an illegal drug, which points to a halt in the increasing trend seen in the preceding decade. A slight increase in the use of pervitin and a significant increase in cocaine use was registered among those attending dance events. The illegal drugs used most frequently in this period were cannabis substances, hallucinogenics, ecstasy and volatile substances. (*Pešek & Orliková, 2008*)

A National Drug Prevention Policy was implemented in the Czech Republic in the period 2005–2009. The use of drugs among the Czech population has gradually stabilised since the beginning of the new millennium. The growing trend for cannabis substances was halted in 2007. The level of ecstasy use is declining, though the proportion of people using pervitin and cocaine in nightclubs has increased, and the number of HIV-positive drug users has also increased. A new draft criminal code was passed in 2008, which better differentiates between individual types of drug according to their medical and social risk. (*Drogy-info.cz [online] 2010*)

The annual report of the International Narcotics Control Board for 2008 shows that the Czech Republic lies in third place behind Spain and Italy in the use of cannabis among adults. Research shows that young Czechs believe that the use of tobacco and alcohol is far riskier than the consumption of cannabis drugs. The report also notes that this country is the principal source of illegally produced methamphetamines for the Western European clientele. (*INBC Annual Report 2008 [online], 2010*)

Schools are an extremely important part of drug prevention. They help shape and positively influence children’s attitudes in life, shape their value system, and provide targeted education against the abuse of addictive substances. Drug prevention education must be comprehensive and systematic, with a long-term conception. Drug prevention coordinators, or prevention methodologists, have been appointed at primary and secondary schools. These coordinators provide drug prevention education on a professional basis, and must be appropriately prepared for this. All teachers at the school co-operate with them. Their principal task is positive everyday work with pupils. Drug prevention coordinators should be capable of determining the drug situation in the school, should have a knowledge of modern teaching and consultancy tools and be able to use them, and should communicate with pupils, colleagues, parents, the police and other experts. (*Kalina et al., 2003; Kachlík [on-line], 2005*)

The government resolution entitled A Conception and Programme of Drug Prevention Policy for the Period 1998–2000 gives a clear definition of the coordination of drug prevention policy at the central and local level. It stipulates the introduction of the “Minimal Programme of Prevention” into every school and school institution, while also defining the individual responsibilities of individual entities for its implementation. The principals of schools and other school institutions bear the primary responsibility for drawing up and implementing teaching programmes of a high standard. Minimal Programmes of Prevention are generally drawn up by school prevention methodologists, and are often incorporated into the teaching strategy of the individual school.

The Ministry of Education, Youth and Sports of the Czech Republic performs a number of important tasks within the framework of prevention. It determines basic strategy in given areas and priorities for the coming period, supports the creation of networks and structures of entities engaged in and contributing to the priorities set, and (no less importantly) supports the creation of the material, staffing and financial conditions essential to the implementation of prevention in the educational system. (*Kachlik [on-line], 2005*)

At the present time, the approved Strategy for the Prevention of High-risk Behaviour among Children and Young People applies in pedagogical practice in the sphere of responsibility of the Ministry of Education for the period 2009–2012.

The long-term goals of the Ministry of Education, Youth and Sports are (*MEYS [on-line], 2009*):

- interconnection of the Ministry of Education system with the systems of other materially relevant ministries
- effective co-operation at the inter-ministerial and international level in the area of primary prevention of high-risk behaviour by children and young people
- a unified system for the coordination of activities in the area of primary prevention on the horizontal and vertical level
- a functional information system for the implementation of preventative work
- the creation of a unified system for the interconnection of primary and secondary prevention
- support for education and the development of educational programmes in the area of prevention
- the creation of an effective system for the accreditation of educational programmes in the area of primary prevention
- expansion of certification for a comprehensive range of primary prevention programmes
- the evaluation of the certification process
- the creation of a system for the recognition of the qualifications of prevention methodologists
- support for multi-source and long-term financing for projects in primary prevention and prompt intervention
- an increase in the volume of financial means for preventative activities
- interconnecting the activities of methodical and inspection components within the framework of primary prevention (effective co-operation between the Ministry of Education, Youth and Sports and the Czech School Inspectorate in the given area)

Materials and methodology

The aim of the research was to discover the attitudes and opinions of a sample of pupils in level two of primary school on drugs and associated phenomena, and to find possible differences in the attitudes and opinions of girls and boys and of pupils from village and town.

This was a quantitative type of investigation. An anonymous questionnaire containing 14 closed questions, some of which offered the chance for the pupil to give an extended answer expressing a viewpoint that was not in agreement with the possibilities offered, was selected as the research tool used. Identifiers such as age, sex and residency were given in the introductory part of the questionnaire. The subsequent items focused on the opinions and attitudes of pupils towards drugs, drug addicts, addiction, legal drugs, illegal drugs, causes of drug-taking, etc. The first version of the questionnaire was tested on a small pilot sample. Its second version was presented to the questioned group following amendment.

Pupils taking the questionnaire were told that their answers were anonymous and confidential, that there were no categorically “right” or “wrong” answers, and that the questionnaire was intended to determine their opinions and attitudes. The fact that respondents could contact the administrators in the case of any uncertainty was also emphasised. Completion of the questionnaire took no longer than 15 minutes in the majority of cases.

The completed forms were transferred to electronic form using the programme MS-Excel 2007, in which basic tables and coded answers were created. Further processing was performed using the computer programme Epi Info, version 6.04 (*Dean et al., 1994*). The statistical significance of the differences between characteristics during the sorting of the set according to sex and residence were evaluated using version 2 of the test and its modifications.

Two primary schools in villages (Štěpánov nad Svratkou and Dolní Rožínka) and one town school (Bosonožská, Brno) were selected. This selection was not conducted on a random basis. A larger number of schools were addressed (ten), particularly in Brno, though only one agreed to take part in the investigation. Village schools tend to have a smaller number of pupils than town schools. This problem was resolved by the selection of two village schools, in order that the number of respondents from village and town was roughly the same.

The investigated group was comprised of 250 pupils from the selected primary schools. During the data collection process, a number of questionnaires were found to have not been completed in full, for which reason the final number of respondents was 244. Exactly a half came from the small primary schools in Štěpánov and Dolní Rožínka, the other half from the large Bosonožská primary school in Brno.

Three contentions were tested:

- A more liberal attitude towards drugs would be seen among the set of pupils from the town primary school than pupils from the primary schools in villages
- There would evidently be a more liberal attitude towards drugs among boys than among girls
- The opinions about drugs held by village pupils would be most strongly influenced by friends, those held by town pupils by the media

Results

The results are given in tables with a text annotation. The frequency of responses to a given item is expressed by absolute (abs.) and relative (%) frequency.

Table 1: The structure of the group of respondents addressed

Group	entire group (n=244)		girls (n=107)		boys (n=137)		younger pupils (n=108)		older pupils (n=136)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
village	122	50.0	54	50.5	68	49.6	54	50.0	68	50.0
town	122	50.0	53	49.5	69	50.4	54	50.0	68	50.0

Table 1 gives an overview of the group of respondents and its sorting into subgroups. The village schools represented were the primary schools in Štěpánov and Dolní Rožínka, the town school was the Bosoňská primary school in Brno. The subgroup younger pupils was comprised of children from years 6 and 7, the subgroup older pupils of children from years 8 and 9. It can be seen from the table that the subgroups children from the village environment and children from the town environment contain the same number of respondents – 122 pupils. The number of girls and boys taking part was also relatively balanced.

Table 2: Opinion on people who use legal drugs. *What do you think about people who are addicted to legal drugs (coffee, tobacco, alcohol, medicines)?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
I do not see anything wrong with addiction to these drugs	52	21.2	22	20.6	30	21.9	24	19.7	28	23.0
It is the private matter of each individual, as long as it doesn't threaten anyone else	152	62.3	74	69.2	78	56.9	77	63.1	75	61.4
They are weak people who are incapable of overcoming their addiction	18	7.4	3	2.8	15	10.9	10	8.2	8	6.5
They are ill	6	2.5	3	2.8	3	2.2	2	1.6	4	3.3
They are unsatisfied with life or suffer from some kind of complex	10	4.1	2	1.8	8	5.8	6	4.9	4	3.3
I think something else	6	2.5	3	2.8	3	2.3	3	2.5	3	2.5

Table 2 presents the opinions of the respondents regarding people who use “legal drugs” (i.e. the use of coffee, alcohol and tobacco by adults, the use of medicines according to expert advice). The view that the use of legal drugs is the private matter of the individual, so long as this use does not pose a threat to others, is the dominant opinion both among the group as a whole and when classified according to sex and residence (held by two thirds of respondents). One fifth of those questioned do not consider there to be anything wrong with addiction to legal drugs, and this is true both of the group as a whole and its individual subgroups.

57 % of respondents would ban certain “legal drugs” (see table 3). Classification by sex shows a greater proportion of boys in favour of prohibition, while classification by residence shows a greater proportion of pupils from the village environment in favour.

Table 3: Attitude towards legal drugs. *Would you ban any legal drugs (coffee, tea, tobacco, alcohol, gaming machines, medicines)?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
yes	139	57.0	66	61.7	73	53.3	76	62.3	63	51.6
no	105	43.0	41	38.3	64	46.7	46	37.7	59	48.4

Respondents answering in the affirmative to the question about the prohibition of certain legal drugs were asked to state which drugs they would ban. The most frequent items stated were alcohol, tobacco and gaming machines. Three quarters of the group would ban gaming machines, 43 % tobacco, and one-fifth alcohol.

More than half the respondents would ban smoking in public places (57 % of boys, 48 % of girls). 58 % of village pupils and 47 % of town pupils were in favour of such a ban.

Table 4: Opinion on the cause of drug-taking I. *Why do you think people start taking drugs?(more than one response may be given)*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
They are influenced by their friends and the people they hang out with	218	89.3	97	90.7	121	88.3	110	90.2	108	88.5
They want to be different	45	18.4	12	11.2	33	24.1	22	18.0	23	18.9
They want to relax, get in a good mood or fight off depression	149	61.1	70	65.4	79	57.7	80	65.6	69	56.6
They want to use drugs as an escape from a particular problem	154	63.1	68	63.6	86	62.8	86	70.5	68	55.7
Boredom	50	20.5	21	19.6	29	21.2	26	21.3	24	19.7
A desire for adventure and new experiences	103	42.2	43	40.2	60	43.8	54	44.3	49	40.2
Another reason	12	4.9	5	4.7	7	5.1	6	4.9	6	4.9

Respondents had the opportunity of giving more than one answer to the question featured in table 4. Nine-tenths of the children addressed considered the most significant cause of starting drug use to be the influence of friends and the people they hang out with. This is true both of the group as a whole and when broken down according to sex and residence. The second most frequent answer was the need to escape from problems by using drugs, the third rapid relaxation, a need for fun, a way of getting into a better mood and alleviating depression. We can see a significant difference among respondents

from the village environment here, with 15 % more respondents from village schools responding that people begin to take drugs because they have a problem of some kind than respondents from the town.

Table 5: Opinion on the cause of drug-taking II. *If I started taking drugs, it would be because: (more than one response may be given)*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
My friends start to take drugs and I want to fit in with them	60	24.6	24	22.4	36	26.3	32	26.2	28	23.0
I want to be different from other people	15	6.1	6	5.6	9	6.6	8	6.6	7	5.7
I think that drugs can get me in a better mood and fight off depression	78	32.0	35	32.7	43	31.4	41	33.6	37	30.3
I think that drugs will help me if I have a problem of some kind	68	27.9	34	31.8	34	24.8	47	38.5	21	17.2
Out of boredom	28	11.5	7	6.5	21	15.3	14	11.5	14	11.5
If I am looking for adventure and new experiences, I think that drugs can provide them	43	17.6	18	16.8	25	18.2	19	15.6	24	19.7
I just want to try it to see what it's like	105	43.0	45	42.1	60	43.8	49	40.2	56	45.9
I would never start taking drugs. They won't do me any good and I don't need them in my life	128	52.5	60	56.1	68	49.6	65	53.3	63	51.6
Another reason	3	1.2	0	0.0	3	2.2	1	0.8	2	1.6

The question presented in table 5 again offered the chance of choosing more than one answer. Half of the group does not see any benefit in taking drugs and would not start taking them. As the second most frequent response, four-tenths of the group chose the response trying drugs out of curiosity and to find out what it's like. The third most frequent response was taking drugs to get into a better mood (one-third), the fourth to escape from a problem of some kind (28 %). Comparing the responses according to sex, we saw that boys would start using drugs more frequently out of boredom, girls to escape from a problem of some kind. The views expressed by girls showed them to be relatively more cautious than boys. Respondents from the village environment would take drugs more often than town children to escape a problem (38 % as compared to 17 %).

The responses given in table 6 show the fears of respondents associated with the use of drugs. The respondents are most afraid of becoming addicted (34 %), followed by losing control of themselves (26 %) and damaging their health (22 %). A comparison of girls and boys shows that 13 % more girls than boys are afraid of losing control over themselves. In contrast, around 10 % more boys than girls are afraid of becoming addicted. A comparison of the village and town environments shows a similar situation (pupils from the village are more frequently afraid of becoming addicted).

Table 6: Fears associated with the use of drugs. *What are you most afraid of about drugs?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
A loss of control over oneself and ceasing to be “oneself”	64	26.2	36	33.6	28	20.4	36	29.5	28	23.0
Becoming addicted	84	34.4	31	29.0	53	38.7	47	38.5	37	30.3
Endangering one’s health	53	21.7	20	18.7	33	24.1	24	19.7	29	23.8
Committing a criminal act under the influence of drugs	31	12.7	16	15.0	15	10.9	13	10.7	18	14.8
I am not afraid of anything	10	4.2	3	2.8	7	5.2	2	1.6	8	6.5
I am afraid of something else	2	0.8	1	0.9	1	0.7	0	0.0	2	1.6

It is clear from table 7 that the largest number of respondents answered the given question with the response that they would try to convince someone close to them who uses drugs to stop taking them (64 %). The second most frequent response was that it is a matter for each individual and that they would not get involved (16 %). We do not see any significant differences when comparing the responses given by girls and boys, with the exception of the fact that boys would be more likely to copy the given behaviour, as would pupils from the town. When assessing the answers given by respondents from the village and the town, we see that 8 % more children from the village environment would try to convince the person in question to stop taking drugs. In contrast, 6 % more town children are inclined to think that it is a personal matter for the individual and would not get involved.

Table 7: Attitude towards someone close who uses drugs. *What would you do if you discovered that someone close to you takes drugs?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
I would start taking them too, to get closer to him	8	3.4	2	1.9	6	4.4	2	1.6	6	4.9
I would try to convince him to stop	156	63.9	69	64.5	87	63.5	83	68.0	73	59.8
I would tell a counsellor or someone who I think could help him	34	13.9	17	15.8	17	12.4	19	15.6	15	12.3
It is his own matter, I would not get involved	39	16.0	16	15.0	23	16.7	16	13.2	23	18.9
I would stop seeing him	3	1.2	1	0.9	2	1.5	1	0.8	2	1.6
I would do something else	4	1.6	2	1.9	2	1.5	1	0.8	3	2.5

Table 8 shows the respondents' attitudes as potential parents, if their children used drugs. More than half (59 %) of respondents hope that they would be able to bring their children up so that they would not start taking drugs in the first place. A fifth of respondents answered that they would try to convince their children to stop taking drugs. When classifying the respondents by sex, we see that girls more often expressed the wish that they could bring their children up so they would not take drugs in the first place. Boys, on the other hand, would be more likely to use various kinds of punishment (grounding and stopping their pocket money). Respondents from the village environment would try to convince their children to stop taking drugs, while respondents from the town would apply various kinds of punishment more frequently. Only around one-tenth of those addressed would choose consultation or institutional treatment.

Table 8: Attitudes to drug use by own children. *What would you do if your own children took drugs?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
It is purely their own affair	4	1.6	1	0.9	3	2.2	0	0.0	4	3.3
It would bother me, and I would try to convince them to stop	51	20.9	20	18.7	31	22.6	29	23.8	22	18.0
I would punish them by grounding them and not giving them any pocket money	17	7.0	4	3.7	13	9.5	6	4.9	11	9.0
I would send them to an expert for consultation or to an institution of some kind	26	10.7	11	10.4	15	10.9	12	9.8	14	11.5
I hope to bring up my children so that they do not start taking drugs in the first place	143	58.6	70	65.4	73	53.3	75	61.5	68	55.7
I would do something else	3	1.2	1	0.9	2	1.5	0	0.0	3	2.5

Table 9 presents the feelings the respondents have when meeting drug addicts in person or seeing them in the media. More than one answer could be given to this question. The largest number of respondents feels pity for drug addicts (45 %) and is afraid of them (42 %). Comparing the responses given by girls and boys, we see that almost four times as many boys as girls express hatred towards drug addicts. Roughly 15 % more boys than girls stated that they disapprove of drug addicts. Two fundamental differences can be seen when we compare the answers given by respondents from the village and the town. 12 % more respondents from the village stated that they have never seen a drug addict, and 11 % more respondents from the village disapprove of drug addicts.

Table 9: Attitudes towards drug addicts. *What do you feel when you see drug addicts (on the street, in a club, at a disco, on television...) (more than one response may be given)*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
I am jealous, because I'm sure they feel good	9	3.7	1	0.9	8	5.8	3	2.5	6	4.9
I want to try it to	5	2.0	2	1.9	3	2.2	2	1.6	3	2.5
I disapprove of them	82	33.6	27	25.2	55	40.1	48	39.3	34	27.9
I feel sorry for them	110	45.1	52	48.6	58	42.3	51	41.8	59	48.4
I am afraid of them	103	42.2	41	38.3	62	45.3	48	39.3	55	45.1
I am indifferent to them	38	15.6	18	16.8	20	14.6	19	15.6	19	15.6
I hate them	45	18.4	8	7.5	37	27.0	22	18.0	23	18.9
I have never seen a drug addict	42	17.2	21	19.6	21	15.3	28	23.0	14	11.5
I feel something else	7	2.9	4	3.7	3	2.2	0	0.0	7	5.7

It is clear from table 10 that almost half of respondents do not think that people would lose interest in cannabis if it was legalised. The differences between the views of girls and boys are not significant. When comparing the answers given by respondents from the village environment and the town environment, we discover that town children are more inclined to believe that cannabis drugs would become less attractive following legalisation. The position held by village children is less clear, with larger numbers of the undecided among them.

Table 10: Opinion on the legalisation of marihuana and hashish. *Do you think people would lose interest in cannabis if it was legal in this country because it would no longer be prohibited?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
yes	52	21.3	22	20.6	30	21.9	17	13.9	35	28.7
no	121	49.6	55	51.4	66	48.2	63	51.6	58	47.5
I cannot judge	71	29.1	30	28.0	41	29.9	42	34.5	29	23.8

The figures in table 11 show that more than 40 % of respondents in the group agree with the criminal action for offences concerning illegal drugs. Almost 37 % of respondents not only agree with these punishments, but would make them even stricter. There are significant differences between the opinions of girls and boys regarding punishments associated with illegal drugs. Practically twice as many boys agree with punishment and call for it to be stricter. Around half of the girls agree with punishment to the extent of the current legislation, as compared to 35 % of boys. A significant difference regarding increased punishment was seen when the group was broken down according to residence, with 7 % more respondents from the village in favour.

Table 11: Opinions on punishments for illegal drugs. *Do you think that the state should punish people for the production, sale and possession of illegal drugs?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
no	28	11.5	11	10.3	17	12.4	11	9.0	17	13.9
yes	105	43.0	57	53.3	48	35.0	55	45.1	50	41.0
yes, and I would make the punishments even stricter	90	36.9	26	24.3	64	46.8	49	40.2	41	33.6
I cannot judge	21	8.6	13	12.1	8	5.8	7	5.7	14	11.5

In response to the question focusing on the handling of illegal drugs (table 12), three-quarters of respondents stated that they would not permit the production, sale or possession of illegal drugs. There was no significant difference between the views held by girls and boys. When comparing the responses given by children from the village with those of children from the town, it was clear that 9 % more respondents from the town environment were in favour of the legalisation of drugs that are currently illegal.

Table 12: Opinions on the handling of illegal drugs. *Would you permit the production, sale and possession of drugs that are illegal in this country?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
yes	21	8.6	7	6.5	14	10.3	5	4.1	16	13.1
no	190	77.9	82	76.6	108	78.8	100	82.0	90	73.8
I cannot judge	33	13.5	18	16.9	15	10.9	17	13.9	16	13.1

According to table 13, almost a half of respondents (47 %) associate drug addiction with disease, a third with criminality, and a fifth with pleasant feelings and experiences. There was a considerable difference in the views held by girls and boys in this area. 23 % more girls than boys associate drug addiction with disease, while 18 % more boys associate it with criminality and 6 % more boys with pleasant feelings. When comparing respondents from the village and town environment, we discovered that 12 % more respondents from the village associate addiction with criminality, while 9 % more respondents from the town associate it with pleasant feelings and experiences.

Table 13: Opinion on what addiction is associated with? *You associate drug addiction primarily with:*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
pleasant feelings and wonderful experiences	47	19.2	17	15.9	30	21.9	18	14.8	29	23.8
criminality	77	31.6	23	21.5	54	39.4	46	37.7	31	25.4
disease (e.g. jaundice, HIV, AIDS, cancer, cirrhosis, etc.)	114	46.7	64	59.8	50	36.5	55	45.1	59	48.4
something else	6	2.5	3	2.8	3	2.2	3	2.4	3	2.4

Table 14 shows who or what the respondents believe to have the greatest influence over other people and over them themselves when it comes to opinions about drugs. The most common responses were friends (46 %) and the media (32 %). Breaking the responses down by sex, we see that 6 % more boys than girls see the school as having a strong effect, while girls gave preference to the influence of parents. Comparing the responses given by children from the village and the town, it is clear that 16 % more children from the village environment feel a strong influence from the media. In contrast, 12 % more respondents from the town chose the option that people (and them themselves) are most influenced by their friends.

Table 14: Opinion about who has the greatest influence over other people in matters related to drugs. *Who do you think has the greatest influence over people (and over you) when it comes to opinions about drugs?*

Group	total (n=244)		girls (n=107)		boys (n=137)		village (n=122)		town (n=122)	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
the media (TV, radio, magazines, newspapers, the internet, etc.)	77	31.6	31	29.0	46	33.6	48	39.4	29	23.8
parents	27	11.1	15	14.0	12	8.8	16	13.2	11	9.0
school	20	8.2	5	4.7	15	10.9	7	5.7	13	10.7
friends	111	45.5	51	47.7	60	43.8	48	39.3	63	51.6
celebrities	3	1.2	2	1.9	1	0.7	2	1.6	1	0.8
someone else	6	2.4	3	2.7	3	2.2	1	0.8	5	4.1

Analysis of working hypotheses

Three working hypotheses were drawn up:

1. A more liberal attitude towards drugs would be seen among the pupils from the town primary school than pupils from the primary schools in villages
2. There would evidently be a more liberal attitude towards drugs among boys than among girls

3. The opinions about drugs held by village pupils would be most strongly influenced by friends, those held by town pupils by the media

Ad. 1: A more liberal attitude towards drugs would be seen among the pupils from the town primary school than pupils from the primary schools in villages

The answers given to the following questions (tables 15–17) related to this contention:

- Would you ban any legal drugs?
- Would you ban smoking in public places?
- Would you permit the production, sale and possession of drugs that are illegal in this country?

Table 15: Answers to the question *Would you ban any legal drugs?*

Group	village (n=122)		town (n=122)	
	abs.	%	abs.	%
yes	76	62.3	63	51.6
no	46	37.7	59	48.4

It is, it is true, clear that around 10 % more pupils from the village would agree to a ban on certain legal drugs, though this difference is not statistically significant.

Table 16: Answers to the question *Would you ban smoking in public places?*

Group	village (n=122)		town (n=122)	
	abs.	%	abs.	%
yes	71	58.2	58	47.5
no	28	23.0	46	37.7
I cannot judge	23	18.8	18	14.8

Respondents from the village have a relatively less liberal attitude. Almost 60 % would ban smoking in public places, a quarter would not. Respondents from the town are more liberal in comparison – scarcely half were in favour of such a ban, while almost 40 % were not in favour. A level of statistical significance of 1 % was recorded for this response. The overall level of statistical significance for this question was 5 % ($p = 0.04289145$).

Table 17: Responses to the question *Would you permit the production, sale and possession of illegal drugs?*

Group	village (n=122)		town (n=122)	
	abs.	%	abs.	%
yes	5	4.1	16	13.1
no	100	82.0	90	73.8
I cannot judge	17	13.9	16	13.1

Respondents from the village hold a less liberal attitude towards illegal drugs than respondents from the town. The level of statistical significance was 5 % for the response that those questioned would agree with the production, sale and possession of

illegal drugs. The overall level of statistical significance for this question was 5 % ($p = 0.04245707$).

The first hypothesis was analysed by means of the evaluation of the answers given by respondents shown in tables 15–17. A level of statistical significance of 5 % was discovered for two of the three questions, and the hypothesis was verified.

Ad. 2: There would evidently be a more liberal attitude towards drugs among boys than among girls

The answers given to the following questions (tables 18–20) related to this contention:

- Would you ban any legal drugs?
- Would you ban smoking in public places?
- Would you permit the production, sale and possession of drugs that are illegal in this country?

Table 18: Answers to the question *Would you ban any legal drugs?*

Group	girls (n=107)		boys (n=137)	
	abs.	%	abs.	%
yes	66	61.7	73	53.3
no	41	38.3	64	46.7

No statistically significant difference was found for this item, in spite of the less liberal attitude towards legal drugs among girls than boys.

Table 19: Answers to the question *Would you ban smoking in public places?*

Group	girls (n=107)		boys (n=137)	
	abs.	%	abs.	%
yes	51	47.7	78	56.9
no	31	29.0	43	31.4
I cannot judge	25	23.3	16	11.7

In contrast to the preceding question, boys were seen here to be rather more liberal towards smoking in public. A level of statistical significance of 5 % was recorded for the response “I cannot judge”, though overall the difference in the answers given by respondents is not statistically significant for this item.

Table 20: Responses to the question *Would you permit the production, sale and possession of illegal drugs?*

Group	girls (n=107)		boys (n=137)	
	abs.	%	abs.	%
yes	7	6.5	14	10.3
no	82	76.6	108	78.8
I cannot judge	18	16.9	15	10.9

The differences between the frequency of individual responses are small and are not, therefore, statistically significant.

Analysis of the three questions given here that related to the second hypothesis (tables 18–20) showed that the differences in the answers given for all three items are statistically insignificant, and the hypothesis was shown to be false.

Ad 3: The opinions about drugs held by village pupils would be most strongly influenced by friends, those held by town pupils by the media

Answers to the question Who do you think has the greatest influence over people (and over you) when it comes to opinions about drugs? related to this contention.

It is clear from table 21 that respondents from the village are influenced entirely comparably by friends and the media in relation to their attitudes towards drugs, while respondents from the town are most influenced by friends. The hypothesis was not, therefore, confirmed, since we anticipated that village pupils would be most influenced by friends and town pupils by the media and celebrities. Celebrities are seen to be an absolutely insignificant item in this comparison. A level of statistical significance of 1 % was found for the answer that people are most influenced by the media. Overall, however, the level of statistical significance for this question amounted to 5 % ($p = 0.02921698$). Hypothesis H3 was found to be false.

Table 21: Answers to the question *Who do you think has the greatest influence over people (and over you) when it comes to opinions about drugs?*

Group	total (n=244)		village (n=122)		town (n=122)	
	abs.	%	%	abs.	%	%
the media (TV, radio, magazines, newspapers, internet, etc.)	77	31.6	48	39.4	29	23.8
parents	27	11.1	16	13.2	11	9.0
school	20	8.2	7	5.7	13	10.7
friends	111	45.5	48	39.3	63	51.6
celebrities	3	1.2	2	1.6	1	0.8
someone else	6	2.4	1	0.8	5	4.1

Discussion

The given research should be understood as a probe into the primary school environment and an indication of the opinions and attitudes of primary school pupils associated with the issue of pathological addiction. A representative investigation or multi-centric study would be required for the verification and generalisation of the results obtained.

Questioning was conducted in February 2009. Almost 250 pupils in level two of primary school were involved in the study. The respondents were aged from 11 to 16. Evaluation of their responses provided a number of interesting discoveries.

The majority of the children think that addiction to legal drugs is the private matter for the individual, so long as he or she poses no threat to others, and does not see

anything wrong with addiction to these substances. This attitude is a faithful reflection of today's social climate, which shows a high degree of tolerance to tobacco and, in particular, alcohol. Their consumption is a common feature of celebrations, business dealings and relaxation. Unfortunately, we find ourselves in a situation in which abstainers are thought "strange" and antisocial.

A large proportion of respondents would ban gaming machines, which is pleasing because pathological gambling is associated with significant health and social problems, the occurrence of which is continually increasing. It should be mentioned that the primary schools in Štěpánov nad Svratkou and Dolní Rožínka are located in close vicinity to the town of Bystřice nad Pernštejnem, where gaming machines are prohibited. This fact has evidently had a positive influence on the respondents from these villages. Another positive aspect shown by the study is that the majority of respondents would ban smoking in public places, which we might rather speculatively explain by the fact that those addressed are either non-smokers or merely occasional smokers, for which reason such a ban would have only a minimal impact on their own personal freedom.

Within the framework of preventative work, it is essential to emphasize the advantages of a healthy (drug-free) way of life, to highlight a holistic conception of health, and to emphasize the fact that health is a value that must be cared for and that the decision to be "clean" is a kind of personal heroism. There are two aspects to drug use – the initial sought-after pleasant aspect and the unpleasant aspect that generally comes later, is difficult to come to terms with, and is the penalty that must be paid for the initial pleasure.

The pupils addressed should try to imagine themselves in a situation in which their families find out about a drug problem of some kind and imagine what their reaction might be. They should consider and discuss desirable and undesirable models of behaviour and positive and negative examples they can refer to when they themselves become parents.

Conclusion

Pupils from primary schools in Štěpánov nad Svratkou, Dolní Rožínka and Bosonožská, Brno were addressed in the form of anonymous printed questionnaires, with the aim of determining what attitudes and opinions a sample of 250 pupils in level two of primary school hold about drugs and phenomena associated with drugs, and comparing the answers given by respondents broken down according to sex and residence.

According to the majority of the pupils, people begin to take drugs as a result of the influence of the people they hang out with or their friends, because they have a problem that they expect to alleviate with the help of drugs, or because they want to improve their mood. Those addressed gave similar responses to the question as to why they would ever decide to start to take drugs themselves. Their predominant motivation for experimenting with drugs would be curiosity.

The respondents most frequently associate drug use with the risk of addiction and damage to the health, followed by the fear of a loss of control over themselves. If those questioned discovered that someone close to them was using drugs, they would try to convince him or her to stop. As future parents, they hope to bring up their children in such a way that they avoid problems with drugs. If they did have such problems, they would try to convince their children to stop using drugs.

When they see or meet a drug addict, the pupils most often feel pity, condemnation and fear. Only a small proportion feels sympathy or even jealousy.

The majority of respondents are of the opinion that the legalisation of cannabis drugs would not make them any less attractive. More than a third of those questioned consider the current punishments for the production, sale and possession of illegal drugs to be low, and would recommend increasing them. A large proportion of respondents associate the term “addiction” with disease or criminality. The opinions of the pupils are most strongly influenced by friends and the media. Their parents and schools have only a minimal influence.

The sample investigated confirmed that town pupils have a more liberal attitude towards drugs than pupils from the village. The contention that boys would have a more liberal attitude towards drugs than girls was not, however, confirmed. The contention that the opinions of pupils from the village regarding drugs would be more heavily influenced by friends, while those of pupils from the town by the media and celebrities, was likewise not confirmed. The opposite was actually found to be true – pupils from the village were influenced by the media, pupils from the town by their friends, when it came to their attitudes towards drugs.

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POSTOJE A NÁZORY ŽÁKŮ 3 VYBRANÝCH ŠKOL V JIHOMORAVSKÉM KRAJI K PROBLEMATICE PATOLOGICKÝCH ZÁVISLOSTÍ

Abstrakt: Pomocí anonymního dotazování osloveno 250 žáků druhého stupně tří základních škol v Jihomoravském kraji. Šetření ukázalo, že u žáků z města je benevolence vůči drogám vyšší než u žáků z vesnice, což ale neplatí při třídění podle pohlaví. Ve městě na děti silně působí názory vrstevníků, na vesnici dominují média, škola a rodiče mají v problematice závislosti bohužel jen minimální vliv. Z výsledků mimo jiné vyplývá, že Většina žáků si o závislosti na alkoholu a nikotinu myslí, že jde o soukromou věc každého člověka, pokud tím neohrožuje své okolí. Většina respondentů by také zakázala hrací automaty a souhlasí se zákazem kouření na veřejných místech. Za impuls k užívání drog je nejčastěji považována zvědavost, vliv party nebo kamarádů,

únik od problémů, potřeba zlepšit si náladu a zahnat depresi. Další výsledky jsou diskutovány.

Klíčová slova: dotazník, město, návyková látka, názor, postoj, prevence, vesnice, základní škola, závislost, žák

STUDY OF A SEGMENT OF PEOPLE WITH PHYSICAL DISABILITIES, FOCUSING ON DEPENDENCY BEHAVIOR

Petr KACHLÍK, Marie HAVELKOVÁ

Abstract: *A total of 228 motor disability clients from a social care institution were asked to complete an anonymous questionnaire. Frequent cases of life-long use of a number of addictive substances and of activities displaying characteristics of addictive behaviour were found among the interviewees. It follows from the survey that these people mostly observe advice of their parents, teachers and therapists, and show a greater resistance to massive dabbling in or continued use of drugs than the majority population with no disabilities. The survey's results were compared with results of several Czech and Slovak studies of persons without disabilities. One of surprising findings was, e.g., lower numbers of tobacco and marihuana users.*

Keywords: *questionnaire, addictive substance, physical disability, attitudes, social care institution, drug use, dependence*

Introduction

According to a number of epidemiological studies (*Youth and Drugs 2000; ESPAD, 2003,2007, the work of Nešpor, Csémy, Sovinová, Miovský; in Slovakia for example Novotný, Kolibáš, Kovářová, Pavúk, and others*) children, adolescents, and young adults, and especially pupils at elementary and secondary schools, are among the at-risk groups in terms of the epidemiology of addiction.

They are threatened by a number of socially pathological phenomena, among them substance dependence, virtual drugs (for example gambling, internet, mobile phones, computers) and addictive behavior (for example sects, compulsive shopping, mental anorexia and bulimia). Their value system is still being formed, or has not yet organized itself; they seek ways to express their own opinions, attitudes; and they often come into conflict with parents, teachers, and care providers. They are sensitive to the positive or negative models around them; they are curious, and have the will and the courage to try new, unknown things; they yearn for recognition and satisfaction. Insufficient communication within the family, social pressure, and the consumer way of life may cause children and young people to seek experimentation with addictive

substances or behavior. With this they hope to escape from reality, to discover pleasant feelings, camaraderie, and new experiences; they refuse to recognize the possible risks (health, social), and tend to have a high level of the personal immunity syndrome (“it can’t happen to me”).

The Czech drug scene is developing. The age of first experimentation with drugs remains low; “safer” methods of applying drugs are preferred (for example inhalation, sniffing, ingestion); alcohol, tobacco, and cannabis are at the forefront of interest, as well as the easy-to-get hallucinogens and dance drugs, and recently cocaine as well, or the sniffing of various volatile organic substances as a substitute. The so-called “legal” drugs are still very much tolerated socially, despite a number of legislative measures (such as the minimum age of 18 for alcohol and tobacco use). Children and the adolescent population are also influenced by gambling in various forms (games for pleasure, games for money or other material advantages), watching television, videos, frequent surfing, internet shopping and auctions, and use of mobile technology and telebanking (*Csémy et al., 2007*).

Unlike the above information on the non-handicapped population, there is relatively little information available on problems of addiction in specific population groups such as people with disabilities. It can be assumed that because of their handicap they may suffer more from exclusion, difficulty of finding a partner, friends (depending on their degree of handicap and integration), employment, and self-realization. They may experience their emotions with greater intensity or in a different manner than do “healthy” people. If they are unable to find a helping hand, there is a danger that some will attempt to deal with their problems through substance abuse or other addictive activities.

In the USA, *Kessler and Klein (1995)* carried out an extensive comparative study of nearly 41,000 non-handicapped secondary school students and nearly 500 physically handicapped students. It was shown that handicapped persons more frequently experienced negative emotions, have lower self-esteem, and just as often or even more frequently than the non-handicapped population resort to using addictive substances including alcohol and tobacco.

Pančocha (2006) studies in detail the special pedagogical dimensions of addictive behavior. He lists a number of risk factors threatening persons with some kind of disability. This often takes the form of more frequent use of medicaments, weakened metabolism and organ systems, atypical activity of the central nervous system, and decreased ability to predict risk. Even for experts it is sometimes difficult to identify the indicators of substance abuse among handicapped people, because they are often masked by manifestations of the disability itself. In his publication the author analyzes in detail various types of disability, and their relation to addictive behavior.

When we focus on disabled persons (*according to Vitková, 2006*: these are defects of the motor and skeletal system, as well as defects or damage to the nervous system resulting in limited mobility). The risk of drug problems is greater among these people than in the general population. Their resulting condition is often associated with abuse of alcohol or other habit-forming substances. Continuing consumption of alcohol and/or other drugs can go hand in hand, but can also be also completely independent of one another (*Heinemann, 1993*).

Another group consists of persons with chronic algic syndromes and spastic conditions. Among them overuse of alcohol and its combination with other substances, especially painkillers, is frequently observed. Epidemiological studies carried out abroad using small sample groups of physically handicapped people show that people are more inclined to use drugs if their handicaps were caused by post-natal consumption of drugs (in adulthood) than people whose conditions appeared pre- or peri-natally. Addictive substances are most often obtained from friends and family members; there are many reports of dealers specializing in providing drugs to handicapped persons (*Pančocha, 2006*).

According to *Glass (1980)*, handicapped people with substance abuse problems can be divided into two types: type A displays the signs of addictive behavior before the onset of the handicap; type B afterwards. According to *Heinemann et al. (1989)*, type A predominates; physical handicaps are often the result of an injury that occurs in the direct context of drug use. The incidence of drug use occurring after the onset of the handicap is relatively low. Persons with handicaps are given greater attention in dealing with their health problems and living alongside majority non-handicapped society; but mapping and long-term monitoring of pathological dependence is more common abroad than in this country. Effective community primary prevention must rely on knowledge of the local environment. Without this the necessary contacts cannot be made, and proper preventive strategies chosen and implemented.

To acquire the relevant knowledge on the state of the drug scene among handicapped persons, their opinions and attitudes towards addiction, and come up with proposals for preventive measures, it was deemed necessary to address a pilot sample of respondents. After evaluating the results and correction of the methodology using feedback from the field, a larger study can be made later (with a broader range of disabilities, more respondents, visits to facilities, mapping the situation on the regional and national level, and with a multicentric character).

Material and methodology

The questionnaire was addressed to a pilot sample of 228 young adult clients with motor disabilities at the ÚSP Kociánka Brno social care institution, who were also secondary schools students. Respondents were given anonymity; no sensitive personal information was collected or processed during the study. After preliminary discussions and obtaining permission to carry out the survey, the management of ÚSP Kociánka was sent an official letter of request; no objection to the research was raised. After the study was concluded, the institution was given the final research findings.

The pilot study on a segment of ÚSP Kociánka clients was carried out by means of an anonymous printed questionnaire, consisting of a standardized main part (on the topic of lifetime experience with drugs, drug use within the past six months and last month before the study, the circumstances of the drug experiment, opinions, attitudes), and basic socio-economic indicators. Standardized items were used taken from similar surveys conducted within the EU (for example *ESPAD*) to make the data comparable.

The questionnaire itself consisted of 20 questions, of which 3 represented basic identifiers (school grade, sex, age), 13 questions were close-ended and 4 partially close-ended. The questionnaire was slightly modified from similar research on the majority

“healthy” population (formulation of answers, graphics); likewise its administrators were re-trained. Before filling out the form, respondents were given all the necessary information on the project and the researchers, and they could decide freely whether to take part in the study.

The answers provided by the respondents were processed en masse; reverse identification of the individual questionnaires was impossible. The questionnaires (in their paper version) were destroyed after their contents were entered into electronic form. All of the information was regarded as confidential; the only people to handle the returns were the implementers and other trained individuals; the returns were not provided to any third parties.

The responses were transferred into numerical codes; with the semi-open questions they were copied verbatim. Using the EpiInfo statistical packages, v. 6 cz (CDC, Atlanta, 1991-2004; SZÚ, Praha, 1996-2000) and Statistics for Windows, v. 7 cz (Stat-Soft Inc., 2005), univariate and bivariate statistical analysis of the collected data was carried out. The sample was sorted according to gender and age, and characterized using descriptive statistics methods. The significance of the difference between groups after sorting (categorical data) was verified by statistical test (χ^2 and its modification according to the Yates, Fisher exact test).

On the basis of information from the professional literature, comparison was made of the study’s results with those of similar surveys of the majority population of adolescents and young adults. A later repeat of the survey over a more extensive sample will allow more precise comparison and reveal trends.

The tables show levels of statistical significance of differences as follows:

* 5 %, ** 1 %, *** 0.1 %.

Results

Basic description of the studied sample (tab.1-3)

The sample consisted of 228 clients of ÚSP Kociánka with physical disabilities, of which 126 (55.3 %) were men and 102 were women (44.7 %). The average age of the respondents was 20.37 years, the standard deviation 3.85. The clients surveyed attended secondary school, most of them in the first to third classes.

Table 1: Class level of entire sample

Class level	Absolute frequency (n)	Relative frequency (%)
First	63	2.6
Second	84	36.8
Third	51	22.4
Fourth	18	7.9
Fifth	12	5.3

Table 2: Gender composition of entire sample

Gender	Absolute frequency (n)	Relative frequency (%)
Men	126	55.3
Women	102	44.7

Table 3: Age composition according to class

Class level	Arithmetic average (years)	Standard deviation (SD)
First	19.86	5.51
Second	19.57	2.38
Third	19.94	1.94
Fourth	24.33	3.24
Fifth	24.50	2.81

Smoking tobacco (tab. 4a, 4b)

Almost half of the respondents had consumed tobacco some time in their lives (lifelong prevalence). No statistically significant difference was found between the sexes on this. The most first-time experiments took place between the age of 15-18 (one quarter of the sample); one tenth between ages 10-14, and around 7 % under the age of 10. Only about 7 % smoked tobacco for the first time “legally”, that is after 18 years of age (10 % of men, 3 % of women; $p < 0,05$, χ^2). About one fifth of respondents had smoked tobacco the day of the survey (29 % of men, 9 % of women; $p < 0,001$, χ^2) or a week before; 15 % can be regarded as ex-smokers (last used tobacco more than 6 months ago).

Table 4a: Age of first use of tobacco

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Less than 10 years old	15	6.6	9	7.1	6	5.9
10-14 years	24	10.5	9	7.1	15	14.7
15-18 years	54	23.7	33	26.3	21	20.6
Over 18 years	15	6.6	12	9.5*	3	2.9*
Never smoked + no response	120	52.6	63	50.0	57	55.9
Totals	228	100.0	126	100.0	102	100.0

Table 4b: Last experience consuming tobacco

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Today	45	19.7	36	28.6***	9	8.8***
Within last week	3	1.3	0	0.0	3	2.9
Within last month	6	2.6	3	2.4	3	2.9
Within last six months	21	9.2	9	7.1	12	11.8
Longer ago	33	14.6	15	11.9	18	17.7
Never smoked + no response	120	52.6	63	50.0	57	55.9
Totals	228	100.0	126	100.0	102	100.0

Alcoholic beverages (tab. 5a-5c)

More or less regular drinking of alcohol sometime in life was reported by 46 % of respondents; 40 % only on special occasions (family celebration, New Year’s); the rest are abstainers. Affirmative answers to lifelong consumption showed significant differences between genders; ($p < 0.05$ or better, χ^2). In the general population there are 2-3 % abstainers; in this sample there were more than 10 %. For 40 % of the sample the

first taste of alcohol came at 15-18 years of age (31 % of men, 50 % of women; $p < 0.01$, χ^2), one fifth between 10-14 years, 9 % even before the age of 10. Only 17 % of respondents had their first experience with alcohol “legally”, after they reached the age of 18. Around half of those surveyed consume alcohol more or less regularly (of those who used alcohol today: the difference between genders is insignificant; within the last week men were predominant; $p < 0.05$, χ^2 ; during the last month: difference insignificant); roughly a quarter within the last six months (women more; $p < 0.05$, χ^2).

Table 5a: Drank alcohol sometime in life

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Answer						
No	27	11.8	18	14.3	9	8.8
Yes, exceptionally	90	39.5	36	28.6***	54	52.9***
Yes	105	46.1	66	52.3*	39	38.3*
No response	6	2.6	6	4.8*	0	0.0*
Total	228	100.0	126	100.0	102	100.0

Table 5b: Age of first-time drinking of alcoholic beverage

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Answer						
Less than 10 years old	21	9.2	12	9.5	9	8.8
10-14 years	45	19.7	27	21.5	18	17.6
15-18 years	90	39.5	39	31.0**	51	50.0**
Over 18 years	39	17.1	24	19.0	15	14.8
Never drank + no response	33	14.5	24	19.0*	9	8.8*
Total	228	100.0	126	100.0	102	100.0

Table 5c: Last time an alcoholic beverage was consumed

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Answer						
Today	6	2.6	3	2.4	3	2.9
Within last week	63	27.6	42	33.4*	21	20.6*
Within last month	42	18.4	27	21.4	15	14.7
Within last six months	54	23.8	18	14.3***	36	35.4***
Over six months ago	18	7.9	9	7.1	9	8.8
Never drank + no response	45	19.7	27	21.4	18	17.6
Total	228	100.0	126	100.0	102	100.0

Coffee (tab. 6)

Half of the sample group regularly drinks coffee, 14 % only occasionally; one third have never drunk it (significant gender difference in abstinence, men predominate; $p < 0.05$, χ^2). The first experience drinking coffee most often take place at 15-18 years of age (29 %); one fifth of the sample first tried it at between 10-14 years of age, 16 % after the age of 18. There were some individuals who first drank coffee before age 10. One fifth of respondents last drank coffee on the day of the survey or the week before it.

Table 6: Drank coffee sometime in life

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Answer						
No	78	34.2	51	40.5*	27	26.5*
[Yes, occasionally]	33	14.5	18	14.3	15	14.7
Yes	114	50.0	54	42.8	60	58.8
No response	3	1.3	3	2.4	0	0.0
Total	228	100.0	126	100.0	102	100.0

Cocaine and crack

These drugs had been tried by only a few respondents (6), representing less than 3 % of the sample; they were exclusively men (significant difference between genders; $p < 0.05$, Fisher exact). Identical numbers had used the drugs within the last six months or 30 days before the survey. First experiments fall into the very early age before 10; this might be explained by the previous lege artis use of cocaine as a local anesthesia in otolaryngology and ophthalmology. 6 respondents had used these substances 4 or more times during their lives.

Cannabis products - marijuana, hashish (tab. 7a, 7b)

Nearly 16 percent of the entire sample had tried these during their lives; men predominated significantly (24 % of men vs. 6 % of women; $p < 0.001$, χ^2). During the last 6 months 12 % of the sample had consumed cannabis products (17 % of men, 6 % of women; $p < 0.05$, χ^2) with significant predominance of men. A similar situation was found with cannabis consumption within the last month (9 % of entire sample; 14 % men, 3 % women; $p < 0.01$, χ^2). First experiments with marijuana fell most frequently into the 15-18 age group, but they were also reported under the age of 10 (there were consistent significant differences between men and women except with the below age 10 group). A single experiment with cannabis was reported by 1 % of the sample, 4 % reported 4-10 times use, 9 % more than 10 times (with significant difference in this category between genders, with men predominating; $p < 0.01$, χ^2).

Table 7a: Age of first use of cannabis products

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
Answer						
Less than 10 years old	3	1.3	3	2.4	0	0.0
10-14 years	6	2.6	6	4.8**	0	0.0**
15-18 years	18	7.9	15	11.8*	3	2.9*
Over 18 years old	6	2.6	0	0.0**	6	5.9**
Never used it + no response	195	85.6	102	81.0*	93	91.2*
Total	228	100.0	126	100.0	102	100.0

Table 7b: Frequency of use of cannabis products during lifetime

Group	All		Men		Women	
	abs.	%	abs.	%	abs.	%
1 - 3 x	3	1.3	0	0.0	3	2.9
4 - 10 x	9	3.9	6	4.8	3	2.9
More than 10 x	21	9.2	18	14.2**	3	2.9**
Never used + no response	195	85.6	102	81.0*	93	91.3*
Total	228	100.0	126	100.0	102	100.0

Hallucinogens (LSD, trips, psilocybins, mescaline)

Roughly 5 % of the sample reported having used drugs with hallucinogenic effects some time in their lives, men more than women (7 % vs. 3 %). 3 % of the sample have used them within the last six months; these were practically only men, same with use within the past 30 days. With both indicators, statistically significant differences are observed between the genders ($p < 0.05$, Fisher exact). Some first contacts with hallucinogens were reported under the age of 10 and in the 10-14 age brackets. Use of hallucinogens 10 times and more was admitted by 3 % of the sample (5 % of men, 0 % of women; $p < 0.05$, Fisher exact), 1 % each reported 1-3 experiments, or having consumed them 4-10 times.

Stimulants such as amphetamines and ephedrine (pervitin, Ice)

Of the sample, 3 % have had experience with these types of drugs during their lifetimes. During the last 6 months and last 30 days 1 % of the sample (exclusively men) have used them. First experiments with amphetamines and ephedrine derivatives occurred with some respondents at a very early age – below 10. The overall number of times they have consumed the drug is over 10. None of the indicators showed significant differences between the genders.

Deliberate inhalation of volatile substances (toluene, xylene, benzine, trichloroethylene)

Experience inhaling volatile organic solvents was reported by about 1 % of the sample. During the last 6 months and 30 days they were used by 1 % of the whole sample (exclusively men). First experiments with volatile substances among those surveyed took place at ages under 10; the total number of incidences of use during their lifetimes exceeded 10. No significant differences were found between the genders for any of the indicators.

Opiates (heroin, codeine, morphine, opium)

Experience with opiates was found among 3 % of the sample. 1 % of the entire sample, all of them men, had consumed opiates within the past 6 months and past 30 days. Respondents reported their first experience with opiates at ages under 10. The entire number of uses of the drugs did not exceed 10. A statistically significant difference between the genders was found with the lifetime prevalence of opiate use (men 5 %, women 0 %; $p < 0.05$, Fisher exact).

Sedatives and tranquilizers used non lege artis

These include preparations from various medicinal groups (sedatives, hypnotics, analgesics, tranquilizers...) which are used without the knowledge and recommendation of a doctor or pharmacist, usually for the conscious purpose of improving one's mental state. These substances were used at least once by a third of the sample group, most frequently by women. During the last six months a fourth of the sample reported consumption, during the last few days one fifth, in both cases predominantly women. Depressant drugs were first used at ages below 10 (8 % of sample), 7 % reported first consumption at the ages of 10-14 and 15-18, and 1 % after age 18. Some 5 % of respondents only experimented with these drugs; 4-10 times 8 %, and 7 % more than 10 times. These higher rates of use of depressant drugs compared to the general population is probably due to the specific circumstances of the segment of physically handicapped persons, and an effort to relieve pain even beyond the recommendations of the therapists.

A number of highly significant statistical differences were found between the genders, with lifelong prevalence of use (19 % of men, 56 % of women; $p < 0,001$, χ^2), with consumption within the last 6 months (12 % of men, 38 % of women; $p < 0,001$, χ^2), and 30 days (7 % of men, 32 % of women: $p < 0,001$, χ^2), in first use below 10 years (2 % of men, 15 % of women; $p < 0,001$, χ^2) and 15-18 years (2 % of men, 12 % women; $p < 0,01$, χ^2), and in frequency of use 1-3 times (0 % of men, 12 % of women: $p < 0,001$, χ^2).

Dance drugs (typically Ecstasy)

Experience with this group of drugs was admitted by 4 % of the sample, all men (7 % of men, 0 % of women; $p < 0.01$, Fisher exact). Within the last six months these substances were used by 3 % of the sample. First experiments fall into the below-10 and 10-14 age groups. Dance drugs were used by 1 % of the sample 4-10 times; about twice as many had used them more than ten times. Significant differences were observed between the genders in the categories of total number of uses, consumption within the last six months (5 % of men, 0 % of women; $p < 0.05$, χ^2), within the last month and with number of times used over 10 (with similar ratios to the previous).

Gambling and slot machines

This activity carries the elements of gambling games and betting. In the first case the focus is on finding more time to gamble and continuing in the game; in the second case it is an effort to win money. One fifth of the sample has tried a slot machine at least once in their lives. 1 % of the sample had played on the date of the survey, during the last week 4 %, during the last month and last six months 3 %. The most frequent (12 %) first experience with gambling machines was at ages 15-18. Only 3 % of those surveyed played for the first time "legally", at ages over 18. Most experiences remained isolated (1-3 times with a tenth of respondents). Significant differences between the genders were found in the category "played within the last month" and "first experience playing at over 18 years of age" (with both 5 % of men, 0 % of women, $p < 0,05$, Fisher exact).

Time spent daily watching television, videos, DVD

This manner of spending free time was reported by 95 % of those surveyed. Most common is 1 to 3 hours a day (46 % of sample); next is "less than an hour" (20 %),

“more than six hours” (16 %), and “from 3 to 6 hours (13 %). No significant differences were found between the genders on this topic.

Time spent daily playing computer games

With 60 % of the sample a certain amount of time is devoted daily to playing computer games; a third never play. One fourth of the sample group spends between 1 and 3 hours a day (31 % of men, 15 % of women; $p < 0,01$, χ^2), 16 % play less than an hour a day, and 10 % from 3 to 6 and 6 or more hours a day.

Time spent daily with on-line entertainment on the computer (surfing the web, e-mail, chat, blog)

Out of the entire sample, 13 % of respondents do not engage in this form of entertainment; a fourth less than one hour a day, a third from 1 to 3 hours a day, 16 % from 3 to 6 hours a day, and 9 % spend more than 6 hours a day on computer activities. No significant differences were found between the genders.

Time spent daily using mobile telephones

A tenth of those surveyed do not use a mobile telephone; one third spend 10-30 minutes a day using them, one fifth less than 10 minutes and one fifth more than one hour; 16 % spend from 30 to 60 minutes a day. No significant differences were found between the genders.

Who motivated respondent to use drugs

In the case of first experiments with substance abuse and behavior (aside from medicines prescribed lege artis, alcohol, tobacco, and caffeine), one fifth were introduced to it by friends, one tenth by parents, and 7 % by another person; followed by the answers “sibling” and “dealer” (3 % each), “acquaintances” and “partner” (1 % each). Significant differences were found between the genders with the answer “parents” (5 % of men, 21 % of women; $p < 0.01$, χ^2), “dealer” (5 % men, 0 % women; $p < 0.05$, Fisher exact) and “someone else” (10 % of men, 3 % of women; $p < 0.05$, χ^2).

Encounters with drug dealers

Of the sample, 16 % had met a drug dealer at some time; 78 % never had, 6 % gave no answer. No significant differences were found between the genders.

Reasons given by respondents leading to use of drugs (outside of medicines prescribed lege artis, alcohol, tobacco, and caffeine).

Most frequent reasons given were to cope with health problems (13 %); 12 % curiosity, 7 % to induce pleasant feelings (10 % of men, 3 % of women; $p < 0.05$, χ^2), same with 7 % “for other reasons” (philosophical, spiritual, sexual), in 5 % to ease psychological stress). Less often (from 1 to 4 %) they mentioned fitting in with the group, suppression of unpleasant sensations (hunger, fatigue, cold) and improving performance.

Availability of selected drugs

This category was surprising for the relatively high incidence (40-50 %) of persons who were unable to express their opinion.

In the case of cocaine and crack, a third of the sample group regarded them as practically inaccessible, one tenth relatively accessible, and 4 % easily accessible. No significant differences between the genders were found.

Cannabis drugs are easily accessible for 16 % of the sample, for 13 % relatively accessible, for a quarter of respondents practically inaccessible. No significant differences were found between the genders.

Drugs with hallucinogenic effect were practically inaccessible for a third of those surveyed, for 8 % they are relatively accessible, for 8 % easily accessible. With the answer “practically inaccessible” a significant difference between the genders was observed (29 % of men, 41 % of women; $p < 0.05$, χ^2).

Stimulants such as amphetamines and ephedrine were regarded by 37 % of the sample as practically inaccessible, 8 % as relatively accessible, 3 % easily accessible. The answer “easily accessible” showed a significant gender difference (5 % of men, 0 % of women; $p < 0.05$, Fisher exact).

Volatile substances are regarded by one quarter as practically inaccessible, by at tenth as relatively accessible or easily accessible. The answer “accessible” showed a significant gender difference (14 % of men, 6 % of women; $p < 0.05$, χ^2).

Opiates are practically inaccessible to 40 % of the sample group, for 7 % relatively accessible, for 4 % easily accessible. No significant differences were found between the genders.

In the case of depressant drugs, their accessibility is much greater: 22 % find them easily accessible, one fifth relatively easily accessible, and practically inaccessible for 16 % of the sample group. With the answer “easily accessible” (14 % of men, 32 % of women; $p < 0.01$, χ^2) and “accessible” (14 % of men, 26 % of women; $p < 0.05$, χ^2) a significant gender difference was observed.

Dance (discotheque, designer) drugs are practically inaccessible for a third of those surveyed, for 5 % relatively accessible and easily accessible for 12 % of people in the sample. No significant differences were found between the genders on this question.

Attitudes of respondents towards some high-risk activities

No answers to the attitude-related questions were given by one fifth of the respondents.

Regular smoking of 20 or more cigarettes a day was not approved of by 58 % of those surveyed; 8 % approved, and 15 % could not decide. No significant differences were found between the genders, even though women tended to be more disapproving in general of regular consumption of tobacco.

Regular smoking of marijuana was strongly disapproved of by 62 % of the sample (here there was a significant gender difference: 10 % of men, 3 % of women; $p < 0.05$, χ^2), 7 % approved, 13 % were unable to judge the risk.

Experimentation with so-called “hard” (unacceptably high-risk) drugs is strongly disapproved of by 67 %; none approved of it, 12 % were unable to decide. No significant differences were found between the genders.

Experimentation with so-called “soft” (light, with acceptable risk) drugs is strongly disapproved of by 60 % of the sample, 1 % approve, and 17 % are unable to judge the risk. No significant gender differences were found. 45 % of respondents disapproved

of trying marijuana; 14 % approve, and 21 % are unable to decide on the risk. No significant gender differences were found.

Opinions on drug legalization

38 % of the sample group was against the legalization of any kind of drug; 45 % would agree with legalizing some substances (esp. the cannabis drugs) provided they are intended for medical use and prescribed *lege artis*. Other types of opinion appeared sporadically; in particular, 4 % were for the legalization of “soft” drugs and 3 % for legalization of all types of drugs. The last opinion showed a significant difference between the genders (0 % men, 6 % women; $p < 0.01$, Fisher exact).

Main ways of spending free time

Respondents spend the most amount of their free time in the company of friends (68 %), watching television, videos, DVD, or listening to radio (66 %), reading, listening to music (55 %), with family (47 %), nature walks (40 %), and sports activities (37 %).

Less preferred are the company of a partner, further self-study beyond regular studies, artistic activities (20 % for each of these last three); relatively less frequent is [taking advantage of the opportunity to make some extra money (14 %) and animal husbandry or gardening (10 %).

Significant differences between the genders were found in the choice “with family” (60 % of men, 32 % of women; $p < 0,001$, χ^2), “making extra money” (21 % of men, 6 % of women; $p < 0,01$, χ^2), “artistic activities” (10 % of men, 30 % of women; $p < 0,001$, χ^2), “in the company of friends” (62 % of men, 76 % of women $p < 0,05$, χ^2) and “nature walks” (31 % of men, 50 % of women; $p < 0,01$, χ^2).

Discussion

Presentation of selected Czech and Slovak studies, undertaken on sample of persons without disabilities, as comparative material

Study by Polanecký et al. (2000, 2001) “Mládež a drogy 2000” [Youth and Drugs 2000], sample of more than 1300 elementary and secondary school students

The sample showed 40 % regular smokers; 8 % daily smokers, 3 % of respondents had never tried alcohol; 48 % of the sample had experimented with illegal drugs (cannabis, depressants without prescription, ecstasy, pervitin, toluene). Differences between girls and boys were not statistically significant. Half of all seventeen-year-olds had had at least one drug experience. 30 % of elementary school students had already tried drugs; 5 % were regular users. Out of a hypothetical class with 30 students, 6 have taken drugs, 3 smoked only marijuana or hashish, and 3 have already used “hard drugs”. Most common among illegal drugs was the smoking of cannabis (55 % of respondents), followed by sniffing (10%).

First experiments with illegal drugs most often took place at age 14 in the cases of cannabis and solvents, 15 with sedatives, 16 with ecstasy, pervitin, crack, LSD, and other hallucinogens and steroids. Heroin and cocaine were first tried by youth most often at ages 15-17.

25 % of young people own a mobile telephone, over 30 % a computer. Almost 90 % have played PC games at some point, 25 % every week, 15 % daily. Around 14 % had experience with gambling, 1 % played slot machines daily. 25 % of the sample had surfed the Internet.

ESPAD 1999 (Csémy, Sovinová, Sadilek, 2000), sample of 16-year-olds

Health-threatening forms of drinking alcoholic beverages were very common among boys, and is becoming more common among girls (18-24 % of boys and 8-10 % of girls 16 years of age). Compared to 1995 data, by 1999 there had been a clear and very sharp increase in experience with drugs containing opiates, and with stimulants and hallucinogens. In 1995-1999 the incidence of repeated (more often than 5 times) substance abuse increased by 2.5 – 3 times. There was also a sharp increase in the number of young people who are in greater danger of direct and indirect health risks associated with substance abuse (overdose, infection).

Substance abuse was generally more common among boys, which was especially true in the case of marijuana, reported most often by respondents. The situation differs when comparing experience with other substances, where the gender differences were practically insignificant.

Experience with drugs and the dangerous consequences of substance abuse are indirectly correlated with level of education. Prague remained by far the area with an extraordinarily high incidence of drug use among young people. Other at-risk regions were northern and western Bohemia and south Moravia. In the period 1995-1999 the availability of drugs grew in every region.

Smoking tobacco and drinking beer are high-risk behaviors appearing most often in the age group up to 13. In the case of illegal drugs, during the period between 1995 and 1999 the number increased of people reporting their first experience with drug use by the age of 13.

Compared to 1995, by 1999 the number of young people who had no experience with drugs declined (from 74.1 % to 61.5 %); the proportion of respondents who had their first experience with marijuana had grown (from 18.7 % to 31.3 %). This finding correlated with the theory that young people usually arrive at hard drugs via marijuana, preceded by tobacco or alcohol.

There is a link between experience with drugs (even one time) with the incidence of other forms of addictive or problematic behavior. Persons with previous drug experience (usually with marijuana only) are also more likely to be heavy (daily) smokers, more frequently show problems with consumption of alcohol, and tend to have more frequent behavioral disorders than persons without drug experience.

On an international basis the comparison is unfavorable: we exceed the other European nations in consumption of tobacco and alcohol. If we take the findings of the ESPAD as the lower boundary of estimates of experience with drugs for the age group 15-19, it can be concluded that at least 250,000 young people in the CR have experience with some kind of drug, 128,000 young people had repeated experience (more than 5 incidents of use), 26,000 people repeated experience with drugs other than marijuana or hashish, of which some 15,000 had repeatedly used opiates or stimulants (most often heroin or pervitin).

Risky forms of behavior in relation to addictive substances among Czech youth were more widespread than the average in Europe among their contemporaries, apparently due to the extraordinarily lenient to tolerant attitude of the adult population towards the use of alcohol and tobacco. An important role was played by dysfunctional families and family relationships, influence of peers, and biological and psychological characteristics of the individual.

ESPAD 2003 (Csémy, Lejčková, Sadilek, Sovinová, 2006), sample of 16-year-olds

Almost all of the surveyed students in the Czech Republic had drunk at least one alcoholic drink within the last year (95 %), which is higher than the average value for all the surveyed countries (83 %). Likewise the percentage of students who had gotten drunk within the last year was higher than the European average (68 % versus 53 %). More students smoked cigarettes sometime in their lives (80 % vs. 66 %), but the percentage of students who had smoked within the past 30 days (43 %) approached the average percentage of smokers in all the countries involved in the ESPAD project (35 %). Twice as many students in the Czech Republic had experience with marijuana or hashish (44 %) than the average in all countries (21 %). Likewise the use of all other illegal drugs besides marijuana was higher in the CR (12 % compared to 6 %). Inhaling solvents was roughly on the same level in the Czech Republic (9 %) as the average of the other studied countries (10 %). The percentage in the CR of those surveyed using sedatives or other psychoactive medicines without a doctor's recommendation (11 %) was greater than the average of all countries (6 %). Drinking alcohol in combination with medicine was more common in the Czech Republic (12 %) than the average of all countries involved in the project (7 %).

ESPAD 2007 (Csémy, Chromynová, Sadilek, 2007), sample of 16-year-olds

Compared to the preceding period, there was a stabilization of the situation in the area of young people's experience with illegal drugs – compared with 2003 there was a drop in experience with all drugs being studied except with cannabis substances. With cannabis the situation was comparable with 2003; at that time the steady growth in substance abuse observed since the mid-1990's came to a halt. At the same time there was a drop in subjective perceptions of the accessibility of illegal drugs (except for cannabis substances) and a growth in subjective perceptions of risk as a consequence of substance abuse.

Among the illegal drugs, respondents in 2007 had the most frequent experience with cannabis substances (45.1 %). Further down the scale were experience with sedatives (9.1 %), hallucinogenic mushrooms (7.4 %), and sniffing solvents (7.0 %). Experience with LSD (5.0 %), ecstasy (4.6 %), and amphetamines (3.5 %) was less common; experience with drugs like heroine or cocaine was minimal among the sixteen-year-old population (2.0 % and 1.1 %).

Use of illegal drugs within the last 12 months among the 16-year-old respondents differed little from the lifelong patterns of use. During the last 30 days 18.5 % of sixteen-year-olds had used marijuana, volatile substances almost 2 %, other drug use hovered around 1 %. In the CR about 300,000 people at ages 15-19 had had at least one experience with illegal drugs, during the last month around 120,000 people.

Research in 2007 re-confirmed the gender differences in drug use – boys reported a higher incidence of experience with illegal drugs than girls did. There are significant differences when comparing regions within the CR. The greatest proportion of sixteen-year-old students with drug experience is found in the Ústí nad Labem and Karlovy Vary regions, followed by the Liberec and Olomouc regions. Regional differences were also evident in the types of drugs being used and their accessibility.

25 % of sixteen-year-olds smoke daily, of which 8 % are heavy smokers (more than 11 cigarettes a day). The proportion of daily smokers fell somewhat between 2003 and 2007, mainly among boys; while a slight increase was reported among girls.

As for use of alcoholic beverages, the situation has not changed significantly since the 1990s, which in view of the relatively high alcohol consumption among young people in the CR is alarming information. Over 20 % of students have overconsumed alcohol (defined as 5 or more glasses on a single occasion) more than 3 times in the last month.

Compared to 2003 there has been a decline in the perceived accessibility of cigarettes and alcohol, but also a subjective decline in the perceived risks of smoking and frequent alcohol use.

Research carried out on sample of university students

Kachlík and Šimůnek (1995, 1998) studied drug consumption and attitudes towards drugs on the part of students at Masaryk University, beginning in 1993. In the period 1993-1997 they carried out an anonymous questionnaire survey on a sample of 456 students (177 men and 279 women) of the 5th year class at the MU Medical Faculty in Brno.

It was shown that so-called “hard drugs” (opiates, cocaine, pervitin) had penetrated into the selected group. The incidence of students who had tried hard drugs themselves was relatively low, around 2 %; though almost 4 % of men admitted to having experience with cocaine in 1993-1994. The abuse of medicines mainly took the form of depressants used by women to cope with psychological and physical problems.

Much worse was the situation with consumption of cannabis products. Marijuana became the most widely-used drug in the sample; more than 30 % of men reported having some experience with it, and nearly 20 % of women. Some 6 % of men and 1 % of women smoked it regularly. After cannabis the most widely-used group of drugs among university students was hallucinogens, mostly naturally-occurring mushrooms (psilocybins). Around 30 % of men and 15 % of women regularly smoked tobacco; 20 % of men and 50 % of women were non-smokers; the rest were occasional smokers and ex-smokers.

Students took a very tolerant stance towards trying marijuana (accepted by two thirds, only 15 % strongly disapproved). The numbers of disapproving grew in the cases of occasional (20 %) and regular consumption (60%). A third of those surveyed took no clear position; the attitudes of women were generally more critical. The medical students were much more critical of regular smoking of 20 cigarettes a day. Half of men and 65 % of women strongly disapproved of possible legalization of so-called “soft” drugs; the significance of the gender difference on this issue has increased over time.

More than three quarters of the sample were introduced to drugs by their friends or chance acquaintances; 45 % of respondents took drugs out of curiosity. Other reasons mentioned were for pleasure, relief from psychological stress, coping with health pro-

blems (mostly among women), for an increased sense of companionship and acceptance by peers. Almost half of men and a third of women said they had had a desire at some time to try drugs.

Besides anti-smoking campaigns, as part of an internship at the Institute of Preventive Medicine medical students were also called upon to participate in activities on primary prevention of abuse of non-tobacco drugs. The subject of dependency prevention was also raised in the classroom and study materials of future educators. Cooperation with the MU Counseling Centre was strengthened, giving student the opportunity to deal with their dependency problems directly on the university campus.

Csémy et al. (2004) studied a sample of 904 Prague university students (Charles University, University of Economics, Czech Technical University, Czech University of Life Sciences, and University of Chemical Technology) using an anonymous, structured questionnaire focused on drug abuse and attitudes towards drugs. It also contained a set of questions focusing on a number of selected psychological characteristics.

High-risk or socially undesirable forms of addictive substance abuse were reported among a third of the sample. Over-consumption of alcohol was reported by one fifth of men and 8 % of women. The proportion of daily cigarette smokers was practically the same for both sexes (14 % of men, 13 % of women); use of particular drugs (marijuana, pervitin, heroin, LSD, ecstasy) more than 5 times within the past year was admitted by 24 % of men and 12 % of women. Persons engaging in high-risk behavior with in connection with addictive substances exhibited increased tendencies towards depression, deterioration of mental health, and difficulty in identifying with generally-accepted social norms. Students over-using alcohol or consuming other drugs took more accepting attitudes towards the use of addictive substances. No significant link was found between quality of family environment and high-risk use of drugs.

Pavúk and Koščo (1997) published the results of a questionnaire on smokers' habits and the prevalence of smokers among students of the Faculty of Education in Prešov in 1982-1995. More than 1900 respondents were surveyed.

In 1982 on average 31.2 % of students were smokers, 43.4 % of men and 26.5 % of women. Among first-year students 20.3 % were smokers (16.6 % of women, 34.7 % of men), among final-year students 36.7 % (30.9 % of women and 51.6 % of men). Data from later stage of research in 1991 showed prevalence of smokers among first-year students at 26.2 % (25.8 % of women, 27.2 % of men), among final-year students 44.3 % (39.6 % of women, 52.0 % of men). Also available was information on the prevalence of smoking among first-year students in 1995 (24.5 % overall, 23.3 % of women, 29.4 % of men).

1991 saw a growth in the number of smokers in a student sample of first and final year students, especially among the new first-years students, and women in general. In 1995 there was a decline in smoking among first year students compared to 1991, though still an increase compared to 1982 (both changes below the level of statistical significance, however). In 1991-1995 to trend towards increasing prevalence of smoking among women was observed, and the number of men smoking declined compared to 1982-1991.

Long-term research was also carried out among 3rd-5th year students at the Faculty of Medicine, Komenský University in Bratislava (*Novotný, Kolibáš, 1997; Kolibáš, Novotný, 1998*). At the end of the 1990s the research tracked students' experience with

and knowledge of alcohol and other psycho-active substances. The most frequently-used substances among the respondents were coffee (drunk regularly by more than 40 %) and alcohol (20 % regular consumers). Regular smoking of tobacco was reported by around 10 % of those surveyed. Regular use of benzodiazepines was very rare; however, it was more often repeated. Regular and repeated consumption of alcohol and nicotine was 3-4 times more frequent among men; drinking coffee and using benzodiazepines occurred more often among women. Of the illegal drugs, the most frequently reported among the sample is marijuana (1.8 % regular consumers, repeated use another 5.5 %). There are isolated occurrences of psychostimulants, ecstasy, and hallucinogens. 2.3 % of students report using psychostimulants at least once, LSD around 1.4 %, and ecstasy around 0.5 %. None reported any experience with opiates. In evaluating knowledge about drugs, the best-understood were cannabis products, followed by heroin, hallucinogens, and volatile substances. The least-understood were the so-called “designer drugs”.

Another study (*Kolibáš et al., 2003*) used an anonymous questionnaire to survey a group of 381 students of the 3rd-5th year at the Faculty of Medicine, Komenský University in Bratislava, and at other faculties of Komenský University (education, natural science, law, and arts) and students of the Republic of Slovakia Police Academy. University students in Bratislava most often drank coffee (48 % of sample), consumed tobacco (14 % regular smokers) and alcoholic beverages (12 % drank regularly). Regular drinking of alcohol and smoking tobacco occurred most often among men; women more frequently drank coffee and used medicines with habit-forming components (nearly 4 %, esp. analgesics). Of illegal substances, the most frequently used were cannabis products (27 % of men and women had at least one experience; less than 1 % took it regularly). Persons who had experience with marijuana were more often regular consumers of tobacco and alcohol as well; the majority of them had tried other drugs as well, and had friends that used addictive substances. To a lesser degree they reported having experience with LSD, and in isolated cases volatile substances and opiates.

Novotný and Kolibáš (2004) presented the results of their anonymous survey in 2002, acquired from 230 students (157 women, 73 men) of the 3rd and 5th-year classes at the Faculty of Medicine, Komenský University in Bratislava. 11 % of the sample group smoked regularly (7 % of women, 21 % of men); 11 % regularly drank alcohol (8 % of women, 16 % of men), and another 68 % drank occasionally, but repeatedly. Coffee was drunk regularly by 46 % (half of men, a third of women). Of the illegal substances, the most frequently abused were cannabis drugs (15 % had a single experience, 12 % repeated, and there were isolated incidences of regular cannabis use). A single or repeated use of cannabis was reported by 22 % of women and 42 % of men (a statistically significant difference). Almost 3 % had tried LSD once; repeat users were few, and a similar situation was reported for ecstasy.

Comparing 2002 with 1997 we find that by 2002 there was a significant increase in the number of tobacco users; however the number of regular and occasional consumers of alcohol did not change significantly. There was a significant increase in the rates of drug experience with cannabis (single or repeated use); the proportion of regular consumers fell slightly.

The work of *Kovářová and Dóci (2004)* investigated the relationship between smoking and physical activity by students at the Faculty of Medicine, Pavel Jozef Šafárik

University (UPJŠ) in Košice. The answers given by survey subjects were part of CINDI cardiovascular monitoring, including a questionnaire on smoking and physical activity. The sample group consisted of 1104 5th-year medical students (426 men and 678 women) surveyed in the period 1996-2001. Of the entire sample, 17.5 % smoked; of these three quarters were regular smokers and about one fifth occasional. The prevalence of smoking was higher among men, and men smoked for a longer time than women. The average daily consumption of cigarettes was 11 for men, 7 for women. Students often began to smoke regularly after entering university. Subjectively men rated their own physical condition higher than women did; the most frequent type of physical activity was brisk walking (given by over 60 % of respondents); one fourth of those surveyed took part in recreational activities more than once a week; around 2 % were active in sports. No general link was shown between smoking and physical activity by university students; however, a significant correlation was found between daily cigarette consumption and physical activity. Students who smoke multiple cigarettes daily have a tendency to be less physically active. From the standpoint of cardiovascular prevention and dependency prevention, it would be very beneficial to strengthen the role of physical education in the curriculum and implementation of various methods in the anti- smoking campaign.

The drug scene at MU (Kachlík, Havelková, 2005, 2007)

More than three quarters of those surveyed had used tobacco sometime in their lives, usually for the first time between the ages of 10-18; one tenth of those surveyed smoked for the first time “legally”, 5 % tried tobacco before age 10, and nearly 40 % had smoked within the last 7 days before the survey was given.

Virtually 99 persons out of 100 had drunk alcohol at some time in their lives, women more or less occasionally, men regularly; first contacts with alcohol tended to occur between ages 10-18; 3 % of the sample drank for the first time “legally”, one tenth had tried alcohol before age 10, and nearly three quarters had consumed alcohol within the previous 7 days before the survey. Coffee was tried by 8 out of 10 surveyed; its regular users include a higher proportion of women; most had their first coffee experience between ages 15-18. One half the respondents had drunk coffee within the last 7 days before the survey.

Some 3 % of the sample group had come into contact with cocaine, men more than women; within the last month it had been used by 0.2 %. First experiments with cocaine most often took place in early adulthood; nearly 70 % had not taken it more than 3 times. 0.3 % of those surveyed had at least one experience in their lives with crack; only a fraction of a percent had used it within the last month (3 persons, 0.03 %); the usual maximum number of uses was similar to that of cocaine.

Of those surveyed 60 % had tried marijuana at least once in their lives, men more often. 16 % of the entire sample group had consumed it during the last month, men predominating significantly; the greatest number used marijuana for the first time at 15-18 years of age; 45 % of those surveyed had used marijuana more than 10 times, again mostly men; experiments (1-3 times) were reported by a third of the sample. A quarter of respondents had used hashish or hashish oil at least once in their lives, again mostly men; 4 % of the sample had consumed it within the last month. First use was most often at ages 15-18; in the majority of cases 1-3 experiments.

Hallucinogens were used at least once in their lives by 7 % of the sample, more often by men. During the previous month 0.5 % of all surveyed reported consuming hallucinogens; again predominantly men. First contact with hallucinogens most often fell into the 15-18 age group and the period of early adulthood; 60 % used the drug only experimentally (1-3 times), one third more often (4-10 times). Hallucinogenic mushrooms (psilocybins) had been tried by almost twice as many people as had tried hallucinogens in general, men more often. They had been used within the last 30 days by 0.8 % of the sample (more often men); the age of first use of hallucinogenic mushrooms was similar to that of the first use of hallucinogens in general; in 60 % of the cases hallucinogenic mushrooms had been used 1-3 times, in a quarter of cases 4-10 times.

Less than 5 % of those surveyed had had at least one experience in their lives with so-called "hard" drugs; most were men. First contact came most often in the 15-18 age group and early adulthood. Half these cases represented 1-3 experiments.

Depressant medicines without a doctor's prescription or professional recommendation had been used at least once by 8 % of respondents (more women); during the month before the survey by 0.9 % of the sample group (again mostly women). Around one half of the users of depressants first deliberately took these drugs during early adulthood, 40 % between 15-18 years of age. Roughly 40 % had used them experimentally or 4-10 times, one fifth more than 10 times.

Dance drugs were used at least once in their lives by 9 % of those surveyed, within the past 30 days by 0.7 % of the sample (most often men). First experiments were most often at 15-18 years of age and early adulthood; in two thirds of the cases these experiments were isolated.

More than a third of those surveyed had played a slot machine at least once in their lives (mostly men); 6 % admitted to playing during the month before the survey was given (again mostly men). Players mostly encountered the machines for the first time at ages 15-18 and in early adulthood; two-thirds admitted 1-3 contacts, a fifth 4-10., and a tenth more than 10.

The most frequent motivation reported by the respondents for using drugs were their friends, followed by influence of a partner, or random acquaintances. In the case of meetings with drug dealers, these were in ten percent of cases a university student from outside MU, 4 % a student from MU, 2 % a student of MU from the same faculty as the respondent. One or two encounters with fake or diluted drugs was reported by a tenth of the subjects; more frequent experience was reported by 3 %. The predominant reasons frequently cited for using drugs were peer pressure, curiosity, pleasure, relaxation of psychological stress, and spirituality.

They described marijuana as very easy to obtain, dance drugs and hallucinogens as fairly easy to obtain. The friends of the respondents most often used marijuana, followed by dance drugs, hallucinogens, and stimulants (pervitin etc.). Attitudes towards daily consumption of tobacco vary according to gender (9 % of men and 4.5 % of women approve; similar opinions apply to regular use of marijuana (16 % of men and 6 % of women approve). Experimental use of "hard" drugs is approved of by 8 % of men and 3 % of women; experimental use of soft drugs by 31 % of men and 19 % of women. In the case of marijuana 66 % of men and 56 % of women approve of experimental use; these attitudes are extremely tolerant.

Legalization of all drugs is strongly opposed by 13 % of the sample; permission to use selected substances *lege artis* would be supported by 53 % of those surveyed (women more), legalization of so-called “soft” drugs (esp. cannabis) would be supported by a quarter of respondents, of all drugs by less than 2 % of the sample group (in both cases more by men).

Conclusion

Many life experiences were contained in the sample studied with a variety of addictive substances and activities characteristic of addictive behavior. In view of the specific character of the sample of respondents, the majority of these people heed the advice of their parents, teachers, and therapists and are more resistant to further major experimentation and substance abuse than the majority non-handicapped population. The lower rates of tobacco and marijuana consumption were surprising (in the general population 50-60 % of adolescents and young adults have experimented with these, in the sample only 16 %), as was the higher rates of abstinence from alcohol (10 %).

There was experimentation with opiates, cocaine, amphetamines, and ephedrine stimulants, hallucinogens, volatile substances, and dance drugs. Some tried these substances at a very early age, even used repeatedly (more than 10 times). But these were isolated cases, not the rule.

Medicines with depressant effect were non *lege artis* used more often in the sample than in the general population, even in the last six months and the last month before the survey. There was a statistically significant gender difference in this category, with women more prevalent.

Using automatic gambling machines usually remained on the level of one to three experiments; a fifth of the sample group never tried them. Respondents most often spent 1-3 hours per day watching television, videos, and DVDs; same with playing computer games. Up to an hour a day was spent with on-line activities, and mobile telephones 10-30 minutes.

Respondents were most often motivated to use addictive substances by friends; it is alarming that parents were reported in second place. 16 % of those surveyed had met a drug dealer at some point. Among the main reasons why drugs were tried were coping with health problems, curiosity (the dominant reason among the majority population), and inducement of pleasure. The most easily accessible substances include depressants, cannabis, hallucinogens, volatile substances, and dance drugs.

Activities with high risk factors are clearly disapproved of by 60-70 % of the sample, except for experimentation with marijuana (only 45 %); surprising was the number of person who expressed no opinion, or were unable to estimate the degree of risk. Some 40 % of respondents opposed legalization of any currently illegal drugs. 45 % would not oppose the legalization of substances that may have a medical use, but are only prescribed *lege artis*.

Respondents spend their personal free time most often with friends, following the public media, listening to music, in the company of family, and in outdoor activities or sports.

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SONDA DO SEGMENTU OSOB S TĚLESNÝM POSTIŽENÍM ZAMĚŘENÁ NA ZÁVISLOSTNÍ CHOVÁNÍ

Abstrakt: Pomocí anonymního dotazníku bylo osloveno 228 klientů s motorickým postižením z ústavu sociální péče. Ve zkoumaném vzorku byly nalezeny četné ce-

loživotní zkušenosti s řadou návykových substancí i s aktivitami charakteru návykového chování. Dle výsledků pilotáže Tyto osoby většinou respektují rady rodičů, pedagogů a terapeutů a masivnímu zkoušení a dalšímu užívání drog odolávají více než majoritní část populace bez zdravotních handicapů. Srovnání výsledků pilotáže bylo provedeno na základě vybraných českých a slovenských studií, realizovaných na vzorcích osob bez zdravotního postižení. K překvapivým zjištěním patří například nižší výskyt konzumentů tabáku a marihuany.

Klíčová slova: dotazník, návyková látka, motorické postižení, postoje, ústav sociální péče, užívání, závislost

DYSFUNCTIONAL BEHAVIOURS FROM THE SOCIAL – COGNITIVE LEARNING THEORY PERSPECTIVE

Michaella BUCK

Abstract: *The most elaborated theory of the third type of learning, Social – Cognitive Learning Theory (SCLT) has been formed as the alternative to the conditioning theories. The theory contributes to the nature/ nurture discussion by claiming that both forces of internal dispositions as well as environmental influences are interactive (reciprocal determinism). SCLT does not doubt that to maintain dysfunctional maladaptive behaviour more than traumatic conditioning is needed and thus tries to prove that dysfunctional behaviour is learned and maintained by the interaction of factors of personality, environment and behaviours formed by conditioning. In the paper, phobias are explained from the perspective of the SCLT.*

Keywords: *Social Cognitive Learning Theory, reciprocal determinism, dysfunctional behaviour, agoraphobia*

Social Cognitive Learning Theory

Anything can be observed. Nature, plants, rivers, animals, moon in the sky. However, the most important for life, is to observe people and learn from them. Father of observation theories, Albert Bandura (1925) proved by research that by observing someone who **models** behaviour or emotional states, a person can increase or decrease her own behaviours be it simple reactions or handling complicated problems. Experiments with overcoming a fear of dogs are well known (Bandura, 1986). After fearful children observed a fearless model playing with a dog, they were more willing to step towards a dog and stroke it.

Bandura elaborated his research results into a theory known as **Social – Cognitive Learning Theory (SCLT)**. Originally, it was called **Theory of Social Learning**, and it was formed as a main alternative to conditioning theories. Undoubtedly, it is the best elaborated *theory of a third type of learning*. However, its basic concepts and methods consequently leaned a theory away from behaviourism to such an extent that it is doubtful if J. B. Watson and B. F. Skinner would recognize their own theories within SCLT framework.

SCLT is **social** because it emphasizes *the social context*, in which behaviour is learned and maintained, as well as *interaction with people* (Buck, 1999). The theory

does not deny the importance of classical and operant conditionings, after all, it is rooted in them (Pervin, 1993). It agrees that classical conditioning can explain how the response is moved from stimulus to stimulus, and operant conditioning can explain how positive reinforcement leads to repetition of a particular response. However, the theory refuses the statement that all learning is based on a trial – error mode. If the latest were the truth, how would one explain obtaining knowledge from books, maps, television, from teachers, or other resources which serve as a kind of a prevention or protection from the consequences of mistakes at trials?

Theory is **cognitive** because it underlines *a role of cognitive processes in behaviour* (Buck, 1999). A person learns some behaviour by observation, nevertheless, it does not mean that this behaviour will be thoughtlessly copied and automatically becomes a part of a person's behavioural repertoire. A person consciously decides if a behaviour will or will not be automatically imitated. There are practical reasons beneath this decision. Every day we observe countless types of behaviours. It is impossible to utilize all of them, therefore we store for a future only limited part of them. And which part is stored, depends on the consequences of a particular behaviour. Even monkeys, not so intelligent as humans, are able to integrate experiences of others into their own behaviour and evaluate the possible impact it might have on them (Bandura, 1986).

Observational learning

Probably, the most intriguing contribution of Albert Bandura is his explanation of acquirement of new behaviours without reinforcements. A. Bandura noticed that people acquire so many new and complicated responses that it is impossible to learn every single response by contingencies. Therefore he overstepped the boundaries of classical learning theories, and hypothesised that people learn also without direct performing new behaviours and without rewards or punishments. He called this type of learning **observational learning** or **vicarious learning** (obtained vicariously by observing other people's experiences). In literature, the term **modelling** is used as well.

Dysfunctional behaviour

In psychology, the debate about nature/ nature has taken many years. A. Bandura (1988) contributed to this debate by his theory of **reciprocal determinism** which states that personal dispositions and environmental influences are *interactive*. Environment influences a person, yet, a person can decide how to respond. People are not passive agents pulled by somebody else, but active agents making their own decisions, taking responsibility, actively constructing the world, forming others, and in response being shaped by others. This view significantly draws A. Bandura away from B.F. Skinner's statement that people do not have freedom of choice, and confirms that A. Bandura was taken by a wave of **humanistic psychology** underlying capacities of people to decide about their own lives and to develop themselves within a framework of their biological limitations. Nonetheless, Bandura remains a behaviourist with a strong commitment to systematically study human behaviour.

Theory of reciprocal determinism argues that in an attempt to maintain dysfunctional behaviour more than traumatic conditioning is needed. According to the theory, dysfunctional, maladaptive behaviours are learned in the interaction of *personality*, including cognitive and neurophysiological processes, *environment*, including interpersonal relations and socio – economic conditions, and *behaviours* formed by reinforcements. In the next part of the article, using the theory of reciprocal determinism, the process of learning and maintaining of phobic behaviours will be drawn.

Reciprocal determinism and phobias

Phobias (*anxiety disorders in which intense fear of particular objects and situations is based on irrational basis*) are learned in a direct contact but above all by observation (Bandura, 1986). Once formed, a phobia is maintained by reinforcement which is obtained after a person avoids feared situations. Two illustrations of the theory follow. In the first example, a 19 – year old agoraphobic student is presented. In the past, she experienced a panic attack in a park. It is understandable that she does not want to re-experience a panic attack again and therefore she keeps avoiding parks (negative reinforcement). Avoidance behaviour (dysfunctional) is reinforced by the interaction of expectations (I will have a panic attack in a park), external environment (park), and behaviours (previous experience in a park). However, the core of the problem is not a park (external environment) but *expectation* that a panic attack will hit her in a park, and her *perception of inefficiency* to manage a walk in a park because she believes in her inability to manage the terror of a possible attack. Thus cognitions become a part of her pathology. Always when she approaches a park her attention is focused on a lurking catastrophe which finds its reflection in her behaviour. She turns back and escapes. Hence, avoidance to a situation (park) depends on the depth of *a belief* that a panic attack will occur at a particular place rather than on a fact how many times she had a panic attack at a particular place or how serious were panic episodes. The real problem lies in avoidance behaviour. It is very difficult to extinguish her agoraphobia if she continues avoiding threatening objects (in our case parks). Agoraphobia can be overcome only when she will expose herself to the most feared situations.

Agoraphobic behaviour maintains only if it is reinforced. What is an effective reinforcement in a given case? Lowered anxiety. If she avoids a park (behaviour) her behaviour gets rewarded. As if she was saying: “I do not feel anxious because I successfully avoided a situation, a thought, a feeling. For all that I will avoid them also the next time.” Many agoraphobics cannot get rid of this belief as they believe in its truth, as many panic patients believe that they have a serious illness even though medical tests prove different.

The theory of reciprocal determinism is illustrated in the next case as well. A child is begging her mother to allow her to stay at home and not to go to school. If mother automatically agrees, based on operant conditioning principles, both of them will reinforce the behaviour of the other one. Mother’s behaviour will be controlled by environment (daughter), and simultaneously, mother’s behaviour will have countercontrol effect (Skinner, 1989) on environment (daughter). In this point, Bandura extended traditional operant conditioning model for *cognitive processes*. Thus, also in our case,

mother's ability to think about the consequences of reward or ignoring daughter's behaviour must be taken into account. Let say, a mother will conclude: "If I permit my daughter to avoid a school she will stop crying (short term goal) but in the long term her phobia gets deeper. For that reason I am not going to give her permission." Thus mother's behaviour will affect external environment (daughter) as well as her own environment (she rejects daughter's request). Consequently, daughter's behaviour will partially shape mother's future cognitions (I made the right decision) and her behaviour (she will repeat it in the future).

This example illustrates a theory of reciprocal determinism from mother's perspective. At the beginning, daughter's behaviour (begging) influences mother's behaviour (environment influences behaviours) and mother's cognitions (environment influences personality). Simultaneously, mother's behaviour shapes mother's thoughts (behaviour influences personality), and mother's thoughts partially influence mother's behaviour (personality influences behaviour). The remaining question is whether mother's cognitions influence environment. Bandura asserts that this is not processed directly but indirectly through the whole personality including factors such as: age, height, status, sex. All these factors interfere prior to mother saying anything. Therefore, mother, due to her status and age influences daughter (personality influences environment). Thus the last determination is completed.

Phobias and observation

As any behaviour, also dysfunctional phobic behaviours can be learned either by direct experience or by *observing „sick“ models*. When research participants observed a model who was just pretending a pain, unknown that a model is just pretending a pain, as soon as they heard the sound of a bell, they started to show a strong emotional reaction (Bandura, 2000). In other words, they reacted emotionally strongly to a harmless stimulus. Similar process is present while learning of phobic behaviours. If a child was brought up in a family with a long term ill family member or a hypochondriac a child observed for years „a sick“ model and listened to its fears. Therefore a child's focus on health and „threats“ from the external environment can be expected making the basis for a child's phobia. Against their will, every parent suffering from a phobia is a model for a child. If mother suffers from social phobia her phobic reactions are observed by a daughter and learned by imitation or **vicarious learning**. It explains (Bandura, 2000) why phobic behaviours run in families from generation to generation.

Vicarious conditioning takes place during direct observations as well as through verbal instructions. Anxious sensitivity pushing a person to exaggerate a danger is rooted in information gathered. Fear reactions are learned through listening to people what terrible things might happen during a walk in the park, or driving a car on a bridge, or after the lights in the cinema are switched off. An example is represented by a mother worrying that her son will choke if he does not bite food properly. She keeps warning him to swallow slowly otherwise he will die. Today, to avoid suffocation, her 4 year old son refuses to eat solid food and drinks only liquids.

A great responsibility for forming and the maintenance of phobias, was attributed by A. Bandura to environmental influences, especially to television. Rapes, robbery,

terrorist attacks and many other catastrophies attacking people day after day from TV screens result in their feelings of security only behind the closed door of their houses. Even though nobody ever has raped them or mugged them, in other words they do not have a direct experience, they live in fear. And as it is known, fear is feeding itself by reinforcement.

Therapeutic change

Therapeutic work within a framework of SCLT does not have a long tradition despite the fact that A. Bandura focused his reaserch also in this direction and elaborated methods of therapeutic change. He argued that therapeutic change happens after acquiring new thoughts and behaviours, and after their generalization and maintenance (Bandura, 1988). In this process, a key role in played by **modeling**. To overcome phobias, dysfunctional beliefs and avoidance behaviour are changed through observation of models modeling desirable behaviours which brings positive consequences or at least not negative. The complex behaviour is broken into small sequencies and tasks with successively increasing difficulties (Buckova, 1999). Numerous studies have proven (Bandura, 2000) that by observing a model undesirable behavior is reduced and simultaneously new skills and competencies are acquired.

Conclusion

SCLT represents an application and refinery of classical learning theories. A. Bandura drew psychologists attention to the observational learning overlooked by clasical theories. He proved that learning through observation does not need any external reinforcers.

To what extend can be Bandura's theory utilized in practice? We believe, that a theory offers a useful map for every teacher or parent interested in increasing and maintaining a particular behaviour. Modeling and observation of desirable behaviours can be utilized for this purpose.

In the article, the aplication of SCTL to phobias was presented. Maladaptive phobic behaviours are learned by the direct observation of an inappropriate model or by verbal instructions. However, the same process of modeling and observation can be used for extinguishing phobias. If a phobic child observes an unfeared model repeatedly modeling desirable behaviour in fearful situations, a phobic will learn how to handle them without fear, adaptively, and that feared consequences will not follow. Thus a model becomes an inhibitor of anxiety helping a phobic to learn desirable adaptive behaviour.

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DYSFUNKČNÉ SPRÁVANIE Z PERSPEKTÍVY SOCIÁLNO – KOGNITÍVNEJ TEÓRIE UČENIA

Abstrakt: Najrozpracovanejšia teória tretieho typu učenia, Sociálno – kognitívna teória učenia (SKTU), sa sformovala ako alternatíva teórií podmieňovania. Podľa teórie k vývoju normálneho aj abnormálneho správania prispievajú tak vnútorné dispozície človeka, ako aj vplyvy prostredia (recipročný determinizmus). Teória nepochybuje o tom, že k udržaniu dysfunkčného, maladaptívneho, správania je treba viac ako traumatické podmieňovanie, a z pozícií tejto perspektívy dokazuje, že dysfunkčné správanie sa upevňuje interakciou faktorov osobnosti, prostredia a správania, ktoré sa sformovalo podmieňovaním. V príspevku ponúkame poňatie fóbií, ich vznik a udržiavanie z pohľadu SKTU.

Kľúčové slová: sociálno – kognitívna teória učenia, recipročný determinizmus, dysfunkčné správanie, agorafóbia

PRESCHOOL AND PRIMARY SCHOOL EDUCATION ON SUN- PROTECTION

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Smiljana ŠKVARČ, Agnes Šömen JOKSIĆ*

Abstract: *Recent studies have shown that over-exposure to the solar ultraviolet radiation (UVR) has negative effects on human health inducing aging of the skin and formation of skin cancer, eye damage, and suppression of the immune system. Because preschool and primary school children are at higher risk than adults due to their vulnerability; it is essential to promote sun-protection from an early age on. The courses Environmental Health and Natural Sciences for students of the preschool and primary school programme at the Faculty of Education Koper, University of Primorska (Slovenia), emphasize the importance of sun-protection education. The background knowledge of students on sun radiation and sun-protection was evaluated among 102 future preschool and primary school teachers, and it was assessed that their knowledge regarding this particular field was poor and insufficient. For these reasons, it was found essential to introduce additional knowledge and skills with the respect to appropriate sun-protection to sufficiently fulfil their future care of preschool and primary school children.*

Keywords: *preschool education, primary school education, solar UV radiation, over-exposure to sun, self-protection, health effects*

1. Introduction

The sun is a vital source of energy for all life on Earth. It supports life by photosynthesis in plants and by providing warmth and light. Without the sun life as we know it could not be sustained. While certain exposure to the solar UV radiation (UVR) is necessary for the formation of vitamin D, next to that excessive exposure or over-exposure is a major public health concern. Due to a thinner layer of ozone in the stratosphere, an increased amount of the UV-B component (280-315 nm) reaches the Earth surface, having potentially severe consequences for human health. An excessive exposure can cause immediate adverse effects, like sunburn, phototoxic reactions, photo-allergic reactions, polymorphic photo-dermatosis and severe long term consequences such as eye cataract and skin cancers (Gallagher & Lee, 2006; Matsumura & Ananthaswamy, 2004). Over-exposure to solar radiation has also a detrimental effect on immune system function (Katiyar, 2007).

It is worrying that over the next 50 years some thousands of extra skin cancers will be experienced, as today's children grow up over-exposed to the higher level of solar UVR due to ozone depletion (EEA, 2004). It is predicted that the risk of skin cancer will increase by 3-6 % for every 1 % decrease in the ozone layer (Mc Whirter *et al.*, 2000). The incidence rates of skin cancer are increasing worldwide (Harrison *et al.*, 2006) and in Slovenia from the year 2003 on, skin cancer is on the first place among all types of malignancies (CR, 2010).

The increase of incidence is attributed to excessive sun-exposure due to increased travel and recreation. Skin cancers are associated with both intense, sporadic sun-exposure (sunburns) and with chronic sun-exposure (tanning). The individual's sun-exposure history before the age of 20 years appears to be a significant risk factor. Repeated and severe sunburns in childhood have a major role in the development of skin cancer later in life (CDC, 2002). Consequently, preventive behaviour could be a key controlling factor. It has been estimated that 90 % of all skin cancers are preventable (Breitbart *et al.*, 2006).

Reducing the incidence of skin cancer has become a priority for health promotion. The WHO (2003) has identified schools as key players in global effort to reduce the rising incidence of skin cancer. Preschool, primary and secondary school children are an important target group. Several authors reported that continuous education of age-specific target groups resulted in changes in the 'sun-behaviour', leading to a reduced, but sufficiently healthy exposure to solar UVR later in life (Breitbart *et al.*, 2006). In Australia, where public and health education campaign have been implemented since 1980s, the level of knowledge about the means of sun-protection was found higher in primary school children in comparison with five northern European countries (Hughes *et al.*, 1996). Additionally, it is reported that children subjected to sun-safe preschool education programs showed statistically significant improvement in behaviour and knowledge compared to children that did not receive this education (Cruz *et al.*, 2005; McWhirter *et al.*, 2000). However, sun-safety behaviour was reported to change less among preadolescents, adolescents and college students (Eide & Eide, 2005; Reynolds *et al.*, 1996; CDC, 2002). These findings suggest that successful prevention messages should start as early in childhood as possible.

In Slovenia, the Sun-safety program has been developed in the cooperation between the Institute of Public health and the Cancer Association (IPH, 2007). The program consists of a poster, a toy and a workbook for children, a brochure for parents and educational and didactic material for teachers. In the first (pilot) phase, ten groups of children were involved, *i.e.* 240 children between age 4 to 6 years and their teachers (n=23) from a selected region. In four weeks (May and June 2007), children were subjected to the daily learning activities about the sun-safety. During this phase, didactic and education materials were evaluated and further needs assessed. The trialled program was then extended in the second phase in spring 2008 involving 14.685 children from 109 kindergartens throughout Slovenia. Similar activities like the year before were performed, followed by an additional evaluation, interviewing the head teachers and preschool teachers from each kindergarten. Parents of the participating children were also involved to provide their opinions regarding the project and the sun-safety activities. As a result, a standardized sun-protection educational program for kindergartens was adopted by the Ministry of Health as a regular task of the National policy on the public health. In 2009 the project was rewarded by the Slovenian Cancer Prevention Union.

Schools are an excellent place to teach healthy behaviours, so teachers play an important role in influencing children’s knowledge, attitudes and behaviours regarding sun-protection (WHO, 2003). Teachers, who are well aware of the adverse effects of the solar UVR, often can be the only effective educators of children. Assuming this, it is extremely important firstly to educate the teachers who may not be aware adequately about the sun-protection measures, and secondly to assure that well-skilled teachers will then transfer a proper knowledge and promote self-protective behaviour.

The present study aims to (1) assess the knowledge, habits and attitudes of future teachers, students of Faculty of Education Koper (University of Primorska, Slovenia) and to (2) propose an effective teaching strategy to improve their knowledge about the consequences of over-exposure to the solar UVR.

2. Methods

102 students age 19 to 26 years participated in the survey (13.7 % male and 86.3 % female). They attended the courses of *Natural Sciences* and *Environmental Health* of the preschool and primary school program at the Faculty of Education Koper, University of Primorska, Slovenia.

A brief questionnaire was developed for this purpose. Ten questions were divided in two groups; the first group consisted of four questions to assess the students’ general habits and attitudes regarding the over-exposure to solar UVR. The second group consisted of six questions to evaluate their knowledge regarding self-protection and adverse effects of over-exposure to solar UVR (Table 1).

Table 1

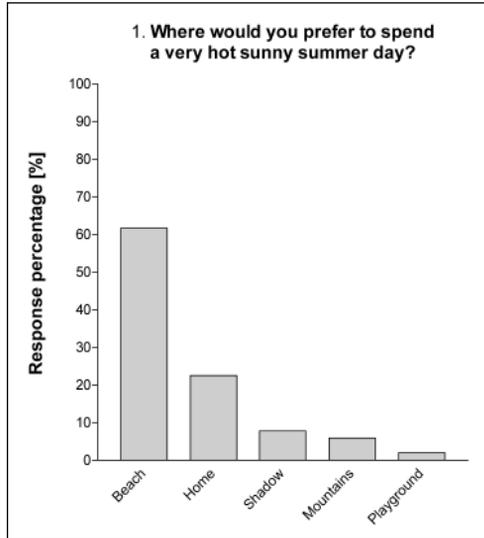
Questions:	
1.	Where would you prefer to spend a very hot sunny summer day?
2.	Do you use any sunscreen?
3.	Which type of sunscreen do you use?
4.	Did you get any sunburn last summer?
5.	Explain the „shadow rule“!
6.	State three of the more relevant health benefits of the sun.
7.	State three of the more severe health risks of overexposure to the sun.
8.	What does the UV-index stand for?
9.	What does the SPF (Sun Protection Factor) stand for?
10.	What are the main causes for elevated solar UV radiation?

3. Results

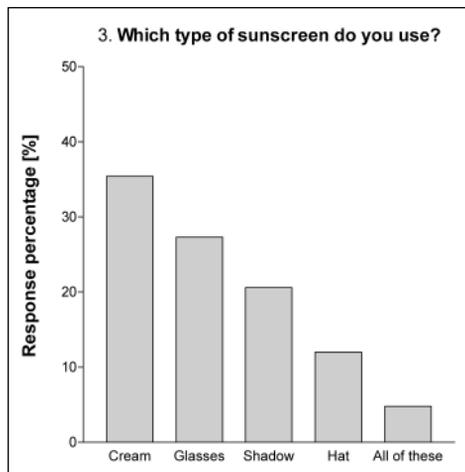
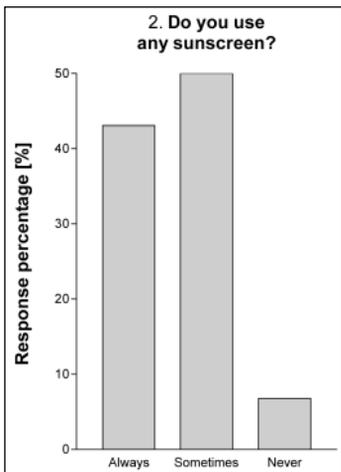
3.1. HABITS AND ATTITUDES OF STUDENTS

From the 102 students, 63 (61.7 %) preferred to spend a very hot sunny summer day on the beach, while 23 of them (22.5 %) preferred to stay at the air conditioned

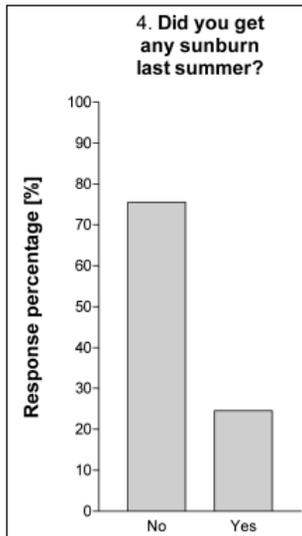
home. Some students rather spend such a summer's day outside in the shadow (8, 7.8 %), or went hiking in the mountains (6, 5.9 %) and only 2 spend their time on the playground (2.0 %) (Figure 1).



The questions about using the sunscreen protection revealed that when exposed to the sun only 43.1 % of students used a sunscreen. 6.8 % of students did not use a sunscreen protection, while 50.0 % used it only occasionally. Of the 95 students who (occasionally) used sunscreen, most of them used sunscreen cream (35.4 %), 27.3 % used sunglasses and 12.0 % used a hat, 20.6 % of students stayed in the shadow and 4.8 % used all of before mentioned protections (Figure 1).



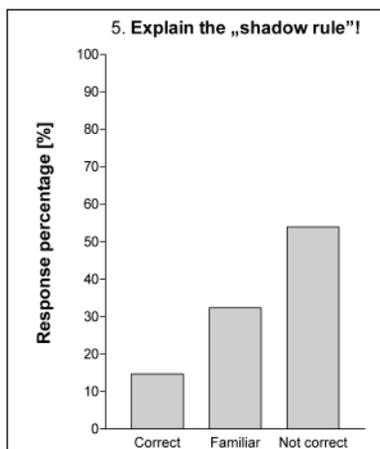
Regarding the experiences of sunburns in last summer 24.5 % of students confirmed sunburns (Figure 1) although most of these (22.5 %) used sunscreen protection.



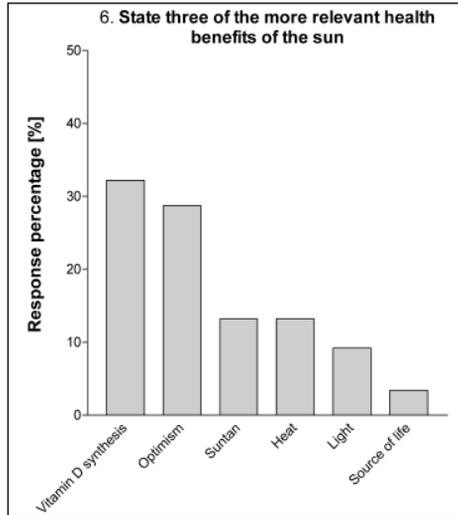
3.2. THE KNOWLEDGE OF STUDENTS ON SUN-PROTECTION AND OVER-EXPOSURE

The question “What is the Shadow rule?” was designed to examine students’ awareness of the severe adverse effects of the solar UVR between the day time period from 10 am to 4 pm. An easy way to describe this crucial time period to children is to explain them the “shadow rule”. The “shadow rule” consists out of a simple method to determine the sun’s altitudes by observing the length of a person’s shadow during the time course of the day. If the length of the shadow is bigger than the person’s height, sunscreen is not necessary.

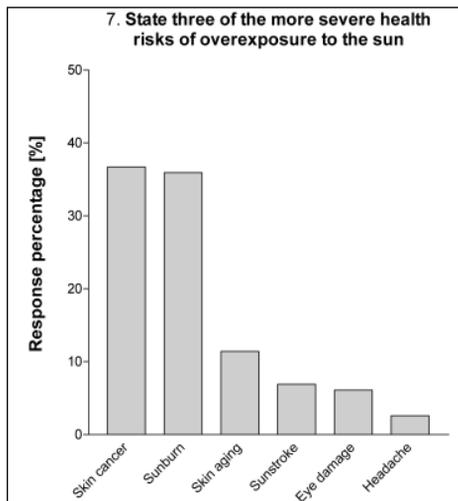
Only 14.7 % of the students knew and understood the “shadow rule”, 32.4 % of students did not understand exactly the rule, however they were aware of the unsafe sun-exposure period and 53.9 % of the students were not aware of the “shadow rule” or the day period with the highest sun-exposure (Figure 2).



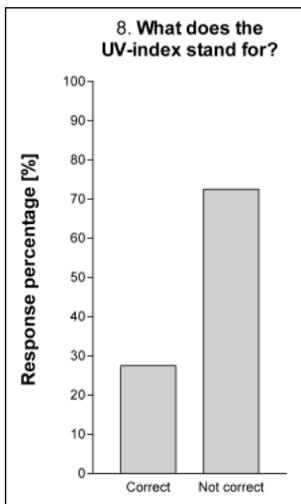
On the question “State three of the more relevant health benefits of the sun” each student could state three answers. About half of the students were aware about the health benefits of the sun (Figure 2) and among them, 32.2 % mentioned the connection of the sun-exposure with the synthesis of vitamin D and 28.7 % of students connected the sun-exposure with optimism and happiness. However, 13.2 % of students considered suntan a benefit of UV exposure.



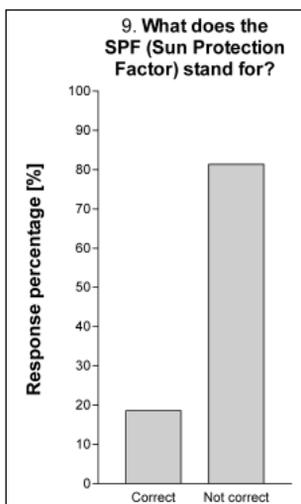
Similarly, the question “State three of the more severe health risks of over-exposure to the sun” revealed various answers (Figure 2). 36.7 % of the students considered skin cancer the most severe long-term consequence of UV over-exposure. 35.9 % of students believed that sunburns are a consequence of over-exposure to the sun. In addition, students were aware of other adverse effects of UVR, like enhanced aging of the skin (11.4 %), sunstroke (6.9 %), eye damage (6.1 %) and headaches (2.6 %).



With the question “What does the UV index stand for?” it was expected that the students would know that UV index is the number, linearly related to the intensity of UVR reaching the surface of the Earth at a given point and time, with higher values representing higher risk level of skin damage due to UV exposure. The question was answered adequately by 27.5 % of students (Figure 2).

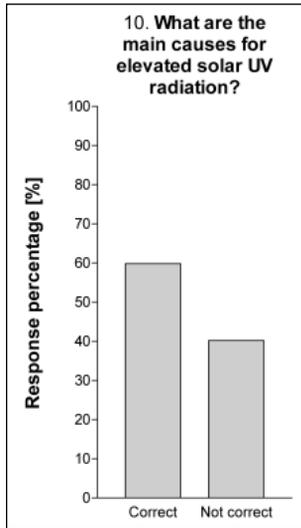


The meaning of Sun Protection Factor (SPF), which is a number for rating the degree of protection provided by sunscreens, was adequately understood by only 18.6 % of the students (Figure 2). Interesting to notice is that 9.8 % of the students did not distinguish the terms UV-index and Sun Protection Factor.



Regarding the last question, to describe the main causes for elevated solar UVR, the majority of students (59.8 %) sufficiently described the main cause for elevated solar

UVR. A fully correct answer would state: the depletion of the stratospheric ozone layer which absorbs the solar UVR, due to the emission of the ozone depletion substances into the atmosphere. 40.2 % of students did not know the correct answer to this question (Figure 2).



LEGENDS TO TABLES AND FIGURES:

Table 1. Questions from the sun-safety questionnaire.

Figure 1. Responses of students to the questions evaluating their habits and attitudes regarding sun-protection: (1) “Where would you prefer to spend a very hot sunny summer day?”, (2) “Do you use any sunscreen?”, (3) “Which type of sunscreen do you use?” and (4) “Did you get any sunburn last summer?”. The columns represent the numbers of answers. For every question the responses of 102 students were evaluated. On question 3 three answers could be stated.

Figure 2. Responses of the students to the questions evaluating their knowledge on sun- protection and over-exposure: (5) “Explain the “Shadow rule”?”, (6) “State three of the more relevant health benefits of the sun.”, (7) “State three of the more severe risks of over-exposure to the sun.”, (8) “What does the UV-index stand for?”, (9) “ What does the SPF (Sun Protection Factor) stand for?” and (10) “What are the main causes for elevated solar UV radiation?”. The columns represent the numbers of answers. For every question the answers of 102 students were evaluated. On the questions 6 and 7 three answers could be stated.

4. Discussion

After the evaluation of the questionnaires, it was concluded that the knowledge of these students - future preschool and primary school teachers- regarding sun-protection was poor and insufficient.

We assumed that students, who used sunscreen protection, are sufficiently aware

of self-protection measures. However, one would expect a higher number of students who do use sunscreen protection among well-aware future preschool and primary school teachers. The reason for high percentage of sunburns among students may be an inappropriate or insufficient use of sunscreen protection. Moreover, a quite worrying fact for future teachers is that 13.2 % of students considered suntan a benefit of UV exposure. Besides, around 10 % did not distinguish the terms UV-index and Sun Protection Factor (SPF). Almost half of the students could not explain the main cause for elevated solar UVR, which was very surprising, since this can be considered general knowledge of university attending students. In addition, the subject is expected to be well recognized among the general population, due to discussion in media on daily basis.

Based on results and evaluation of our questionnaires, an educational plan has been proposed in collaboration with the Institute of Public Health, to improve their knowledge, especially on negative effects of sun radiation and on appropriate self protection measures.

The plan was to perform a project work, as alternative to the traditional teaching method, where the roles of professors and students in a teaching class are to be exchanged. This will demand an active attitude to the subjects of all the participants of the project work. In this way, topics of interest can be discussed from different perspectives due to extensive team work. Additionally, a higher work motivation and consequently also a higher success of learning is maintained throughout the course (Novak *et al.*, 2009). Moreover, external experts could be involved in the project work, like health professionals, local or national agencies, and policy makers.

The project work should be focused on the following tasks:

- (1) Understand the positive and negative health effects of sunlight radiation;
- (2) Application of different sunlight protection strategies;
- (3) Understand and discriminate the terms UV index and SPF factor;
- (4) Understand what UVR is and that the UVR on Earth varies around the globe;
- (5) Achieving responsible behaviour concerning personal health and sunlight radiation;
- (6) Successful application of their knowledge to educate children.

5. Conclusions

This paper suggests that sun-safety educational curricula need to be offered to future teachers and therefore need to be implemented in the Faculties of Education. Standardization of national curricula of Education Programs is thus recommended. This will improve the students' own protective behaviour and furthermore, potentially it will lead to a more responsible and skilled sun protection management in the future for us and our children.

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VZDĚLÁVÁNÍ MATEŘSKÝCH A ZÁKLADNÍCH ŠKOL V OBLASTI OCHRANY PŘED SLUNEČNÍM ZÁŘENÍM

Abstrakt: Nedávné studie ukázaly, že nadměrné vystavování slunečnímu ultrafialovému záření (UVR), má negativní účinky na lidské zdraví, navozuje stárnutí kůže a přispívá ke vzniku rakoviny kůže, poškození očí a potlačení imunitního systému. Jelikož děti v mateřských a základních školách jsou vystaveny vyššímu riziku než dospělí vzhledem k jejich zranitelnosti, je nezbytné podporovat ochranu před slunečním zářením již od útlého věku. Kurzy s názvem *Zdravé životní prostředí a přírodní vědy* pro studenty programu předškolního a základního vzdělávání na Pedagogické fakultě v Koperu, Univerzita Primorska (Slovinsko), zdůrazňují význam výchovy k ochraně před slunečním zářením. Znalosti studentů související se slunečním zářením a ochranou před ním zhodnotil průzkum mezi 102 budoucími učiteli mateřských a základních škol a ukázalo se, že jejich znalosti týkající se této konkrétní oblasti jsou chabé a nedostatečné. Z těchto důvodů se ukazuje jako nezbytné zajistit další znalosti a dovednosti směřované k vhodné ochraně před slunečním zářením, které by dostatečně zajistily budoucí péči o děti předškolního a mladšího školního věku.

Klíčová slova: předškolní vzdělávání, základní vzdělávání, sluneční UV záření, nadměrné vystavení slunečním paprskům, ochrana před slunečním zářením, dopady na zdraví

INTERRELATION OF PERSONAL PSYCHOLOGICAL WELL-BEING AND THE SOVEREIGNTY OF THE PERSONAL PSYCHOLOGICAL SPACEMENT

Ekaterina VODINCHAR

Abstract: *The article is devoted to studying of the sovereignty of psychological space as component of psychological well-being of the person. The results of research are the structural features of interrelation of the sovereignty of psychological space with such parameters of the personal psychological well-being as a degree of purposefulness of a life, its intelligence, personal capacity to resist to stressful situations have been revealed and to come into positive contacts to associates. In research it is revealed interrelation between psychological well-being of the person and the sovereignty of its psychological space: the level of the sovereignty of psychological space of the person influences on parameters of meaning of the life, hardness, satisfactions with life and psychological well-being. It is proved, that the tendency to the control and protection of the psychological space can be considered as correct strategy of.*

Keywords: *sovereignty of the personal psychological space, psychological well-being*

This research is devoted to the problem of psychological well-being of a person in the context of his/her interrelations with other personal qualities, in particular, with the parameters of the psychological sovereignty of a person which is treated as the capacity of a person to manage, protect and develop the psychological placement based on the generalized experience of successful independent behaviour. The research has been implemented during 2010, it involved 55 women and 45 men of 20 - 50 years old. For the implementation of the research there were used such psychodiagnostic procedures as the tests «The sovereignty of psychological placement» of S.K.Nartova-Bochaver, «Scales of psychological well-being» after K.Riff, «Purpose-in-life test» of J.S.Crumbaugh (in D.A.Leontev's adaptation), «The hardness test» of S.Maddi (after D.A.Leontev's, E.I.Rasskazova's adaptations), and «The scale of reactive and personal uneasiness» of C.D.Spilberger. The research hypothesis was verified by the method of correlation analysis which allowed to define the particular

interrelations. The scales of the test «The sovereignty of psychological spacement of a person» has got the interrelation with the scale of the test of K.Riff «Management of social environment» and the general parameter of psychological well-being of a person in the same test.

Table 1

Correlation analysis of the data taken from the scales of the tests «The sovereignty of psychological spacement» and «Scales of psychological well-being»

	Management of social environment	p
Sovereignty of things	0,33	0,01
Sovereignty of body	0,25	0,01
Sovereignty of territory	0,27	0,01
Sovereignty of values	0,4	0,001
Sovereignty of habits	0,26	0,01
Sovereignty of psychological spacement	0,4	0,001

Sovereignty is the ability of a person to own, supervise, protect and develop the psychological spacement. This fact enables to assume that sovereignty is one of the qualities which cause the successful mastering of various activities by a person, the ability to achieve the desideratum, to overcome the difficulties on the way for the achievement of own objectives, to define the borders in the interoperability with other people. At the low level of sovereignty the respondent has got the sense of own powerlessness and incompetence, inability to change or improve anything in life.

There was stated the interrelation between the scale «The sovereignty of habits» and the scales «Personal growth» ($r=0,26, p\leq 0,01$) and «Self-acceptance» ($r=0,31, p\leq 0,01$). The notion «personal growth» in this context means the aspiration to develop, study and perceive the new, as well as the sensation of own progress. If the personal growth is subjectively estimated as low one, consequently, there appeared the feeling of boredom, stagnation, absence of faith in the ability to changes, and in mastering of new skills and crafts.

Self-acceptance is the feeling of self-satisfaction of own's past and the life as a whole. The sovereignty of habits means the self-acceptance of the temporary form of organization of human life. It may be concluded that the way of life of a person will develop on the basis of his/her aspiration to progress or stagnation which, consequently, affects the level of self-satisfaction and sense of life fulfillment.

The scale « Purpose-in-life» is related to the scales «The sovereignty of values» ($r=0,3, p\leq 0,01$) and « The sovereignty of habits» ($r=0,26, p 0,01$). The latter is interconnected with the scale «Satisfaction of a life». It can be treated as the evidence of interrelation between life goals, outlooks and, as consequence, the temporary form of human life organization as availability of goals in future gives the meaningfulness to human life as well as directionality and temporal perspective.

Life goals and the ways of their achievement are individual at every man and

mean the freedom of tastes and outlooks. Our mode of life, its goals and strategies of the achievement is formed on the basis of the values.

Table 2

Correlation analysis of the data taken from the scales of the tests «The sovereignty of psychological spacement» and «Purpose-in-life test»

	Life productivity	p
Sovereignty of things	0,33	0,01
Sovereignty of social communications	0,3	0,01
Sovereignty of values	0,35	0,001
Sovereignty of habits	0,29	0,01
Sovereignty of psychological space	0,38	0,001

The scale «Productivity of a life» and the general parameter of intelligence of life correlates with all scales of the test «The sovereignty of psychological spacement of a person», except for the scales of «Sovereignities of physical body» and «Sovereignty of territory» which have no correlation with the scales of other tests, i.e. somatic well-being and territorial limits of physical spacement are nominally related to the psychological well-being. At the same time, the outlooks, tastes, habits and social life are interconnected with the parameters of psychological well-being of K. Riff.

Table 3

Correlation analysis of the data taken from the scales of the tests «The sovereignty of psychological spacement» and «The hardiness test»

	Control	Risk acceptance	Hardiness	p
Sovereignty of body	0,31	0,29	0,37	0,01 0,001

The somatic well-being depends on the hardiness of a person, his/her ability to risk, keep the control over stressful situations and to overcome them.

The scale «I-myself-locus-control» has interrelation only with the scale «The sovereignty of values» ($r=0,34$, $p\leq 0,001$) that means that the person possessing the freedom of tastes and outlooks, has the sufficient level of freedom in the choice how to construct the life in the conformity with the concepts of its sense.

The personal uneasiness is interconnected with the sovereignty of the world of things, the sovereignty of values, the sovereignty of social communications and the general parameter of the sovereignty of psychological spacement of a person. This interrelation is reverse.

Table 4

Correlation analysis of the data taken from the scales of the tests «The sovereignty of psychological spacement » «The scale of reactive and personal uneasiness»

	Personal uneasiness	p
Sovereignty of things	-0,35	0,001
Sovereignty of social communications	-0,26	0,01
Sovereignty of values	-0,33	0,001
Sovereignty of psychological spacement	-0,34	0,001

The reactive uneasiness also has negative interrelation with the sovereignty of social communications ($r = -0,26$ at $p \leq 0,01$) and the general parameter of psychological space ($r = -0,27$ at $p \leq 0,01$). Thus, the lower the level of uneasiness is, the higher the level of his/her psychological well-being is.

The level of autonomy is interconnected with the degree of sovereignty of social communications of a person ($r = 0,31$ at $p \leq 0,01$). This correlation proves the interrelation between the ways of organization of personal spacement and distances of interoperability with the meaningful others. It is necessary to note that this correlation is unique for the scale «Autonomy». Thus, we can conclude that the concepts of «The sovereignty of psychological spacement» and «Autonomy» are intersected and interconnected only in the social area of person life. It means that cooperating with society any person does not only aspire not to depend on someone but to manage the social environment as well.

Thus, the sovereignty of psychological spacement of a person is related to the degree of purposefulness of life, its intelligence, with the ability of a person to resist to stressful situations and to come into positive contacts to associates.

The author thanks Utenisheva Lyubov, the student of Vitus Bering Kamchatka State University, for the help in collection and processing of empirical data.

VZTAH SUVERENITY A PSYCHOLOGICKÉHO PROSTORU ČLOVĚKA A JEHO DUŠEVNÍ ZDRAVÍ

Abstrakt: Tento článek se věnuje studiu suverenity psychologického prostoru jako součásti duševního zdraví člověka. Výsledky výzkumu mají strukturální charakter vzájemného vztahu suverenity psychologického prostoru s takovými parametry duševního zdraví jako jsou míra cílevědomost v životě, inteligence, schopnost člověka zvládnout stresové situace. Výzkum odhaluje vzájemný vztah mezi duševním zdravím člověka a suverenity psychologického prostoru: úroveň suverenity psychologického prostoru na požadavky významu lidského života, pracovitost, spokojenost v životě a duševní zdraví. Je dokázáno, že sklon ke kontrole a ochraně psychologického prostoru může být považován za správnou strategii ve snaze o zachování a rozšíření duševního zdraví člověka.

Klíčová slova: suverenita psychologického prostoru člověka, duševní zdraví

RESEARCH INTO THE EFFECT OF ADVERTISING ON THE EATING HABITS OF CHILDREN

Jana FIALOVÁ

Abstract: *This paper is devoted to the effect of advertising on the eating habits of children, and presents information about research conducted into this matter in the Czech Republic. Advertising is, along with the influence of the child's family, school and (later) contemporaries, considered one of the principal factors influencing a child's present and future eating habits and its preferences in food selection. For this reason the European Commission, which considers solving the problem of increasing obesity and its associated diseases one of its key priorities, sees more thorough regulation of marketing and advertising aimed at children as one of the possible paths to be taken. Within the framework of preparation of appropriate measures, it therefore initiated the extensive international research project POLMARK (Assessment of POLicy options for MARKeting food and beverages to children), in which Masaryk University participated as representative of the Czech Republic in co-operation with another ten countries. The purpose of this research was not merely to survey the legislation, guidelines and regulations relating to marketing and advertising in the individual member countries, but first and foremost to gather information on the opinions of key individuals and institutions (stakeholders) on this issue. The results will contribute towards the revision of marketing management planned by the European Commission in the year 2010.*

Keywords: *children, obesity, eating habits, prevention, advertising, marketing, self-regulation, POLMARK*

Introduction

Advertising is considered one of the principal factors influencing the present and future eating habits of children, in addition to the influence of the child's family, school and (later) contemporaries. Children are a particularly rewarding target group for marketing and advertising in view of their greater responsiveness and lack of experience and critical thought, and also thanks to the opportunity of indirectly influencing adult consumers through their children. Advertising targeting children is, for this reason, subject to greater restrictions in many countries – either legal restrictions by the state or self-regulation by producers and retailers themselves. The current EU guidelines pro-

hibit any kind of advertising and marketing that would cause moral or physical harm to minors, and stipulate specific tools such as, for example, a prohibition on abusing the trust and inexperience of children and a ban on inciting children to persuade their parents to purchase a particular product. The member states may adopt stricter measures as part of their own legislation, and some have already done so. The European Union has decided to implement a research project to survey the advertising and marketing of food and drinks aimed at children in its member states, with the aim of recommending a common strategy in this area on the basis of the results obtained. Masaryk University has taken part in the project entitled Assessment of POLicy options for MARKeting food and beverages to children (abbreviated to POLMARK) (1) as representative of the Czech Republic in co-operation with another ten EU countries (Belgium, Cyprus, Denmark, France, Great Britain, Ireland, Poland, Slovakia, Spain and Sweden).

In the following text, I will endeavour to summarise the results of this research within the framework of the project in the Czech Republic and to point out a number of important pieces of information relating to the Czech Republic.

Key factors influencing the prevalence of obesity

The prevalence of overweight and obesity has been rising in the Czech Republic in recent years, as it has in many other EU countries. According to research conducted as part of the project Lifestyle and Obesity, around 52 % of the adult population are of more than normal weight, of which 35 % fall into the category overweight and 17 % into the category obese (2). This trend is continuing to increase, and the Czech Republic finds itself in third place in Europe in terms of the occurrence of obesity, behind Greece and Slovenia. Detailed figures on the occurrence of obesity in the Czech Republic are given in table 1.

Table 1. The occurrence of obesity in the Czech Republic.

Occurrence of obesity (%) BMI \geq 30 kg/m²		14.4 %	2006	WHO ^{1,2} , HOPE ³
Adults total	age group 30+	%	2005	WHO ^{1,2} , HOPE ³
Men	age group 30+	26.8 %	2005	WHO ^{1,2} , HOPE ³
Women	age group 30+	30.9 %	2005	WHO ^{1,2} , HOPE ³
Children total	age group \leq 5	8.1 %	2005	WHO ^{1,2} , HOPE ³
Boys	age group \leq 5	3.5 %	2005	WHO ^{1,2} , HOPE ³
Girls	age group \leq 5	4.3 %	2005	WHO ^{1,2} , HOPE ³
Adolescents total	age group 14-17	9.0 %	2005	WHO ^{1,2} , HOPE ³
Boys	age group 13-15	13.2 %	2005	WHO ^{1,2} , HOPE ³
Girls	age group 13-15	6.1%	2005	WHO ^{1,2} , HOPE ³

¹ Branca F., Nikogosian H., Lobstein T.: The challenge of obesity in the WHO European Region and the strategies for response. Denmark. 2007 : 7.

Health status: indicators from the National Health Interview Surveys. European Commission: Eurostat

² Currie C. et al, eds. Young peoples' health in context. Health behaviour in school-aged children (HBSC) study: international report from the 2001/2002 survey. Copenhagen, WHO Regional Office for Europe, 2004 (Health Policy for Children and Adolescents, No. 4; accessed 19 March 2007).

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³ Hope Project.

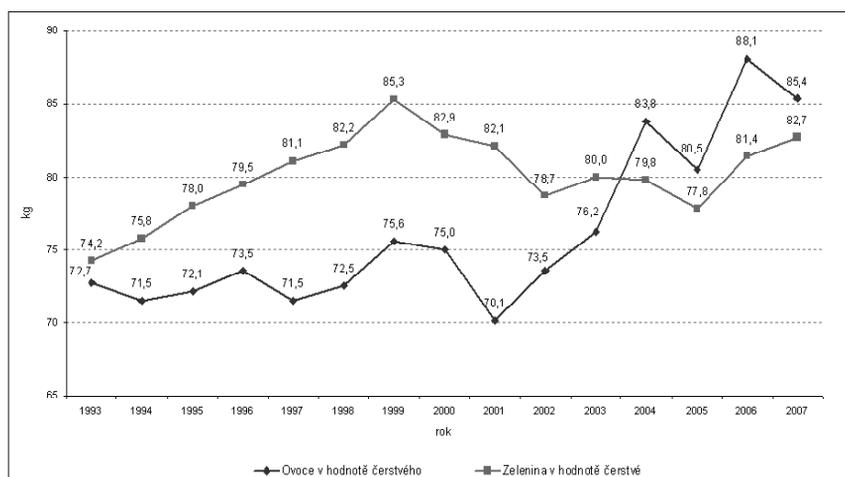
http://www.hopeproject.eu/index.php?page-documents&documents_map%2FPresentations+Network+of+Networks+Geneve+2008%2F

A whole range of factors (3, 4, 5) play a demonstrable part in the onset of excessive weight and obesity, of which the following four factors are considered the most important.

1. *Socio-economic factors.* A dependency between the occurrence of obesity and membership of lower socio-economic groups has been repeatedly demonstrated. Individual pieces of research show the effect of unemployment, lower income (according to the WHO, the gross national product per person in the Czech Republic in 2003 was the third lowest in the EU), and lower level of education attained (according to the WHO the percentage of children enrolled at secondary school is slightly below the EU average) on the choice of food and on opportunities for sport and recreation.
2. *Physical exercise.* The sedentary lifestyle is culturally and socio-economically conditioned in the Czech Republic, and is the result of the small level of promotion of physical exercise in childhood. This is most evident among the middle-aged and older people, who have retained these habits into adulthood. A lack of physical exercise is, however, also appearing to an increasing extent among children, for whom it can be considered a particularly high-risk factor influencing their future health.
3. *Eating habits.* The consumption of high-energy food rich in fats, carbohydrates and salt, and low in important microelements, is closely associated with excessive weight gain and the risk of obesity. The consumption of fresh fruit and vegetables, on the other hand, has a protective effect (see graph below). Consumption of fresh fruit and vegetables in the Czech Republic is extremely low in comparison to a number of EU countries, though the trend is moderately positive, as is show by the graph (6).

Graph of fruit and vegetable consumption in the Czech Republic

Graf 3 Spotřeba ovoce a zeleniny v hodnotě čerstvé v letech 1993 – 2007 (kg/obyvatele)
Consumption of fruits and vegetable in terms of fresh weight, 1993 – 2007, annual per capita averages



Source: The Czech Statistical Office

4. *Breastfeeding.* The WHO strongly recommends that children are exclusively breastfed for at least the first six months of their lives, and that breastfeeding should continue, if possible, until the child reaches the age of two. In addition to increasing the child's resistance to diarrhoea and diseases of the respiratory tract, there is also a proven connection with a reduced tendency to overweight and obesity at a later age.

Thanks to systematic support for breastfeeding from medical experts and the state administration, the percentage of children breastfed at the age of three months increased from 28.2 % to 59.8 % in the Czech Republic between 1993 and 2004 (7). This support is provided by the system of "Baby Friendly Hospitals" – comprised at the present time of 30 of the 116 hospitals in the Czech Republic. 23 % of all children born in the Czech Republic are cared for in these hospitals (8).

The effect of advertising on children's eating habits

The global trend in the increasing prevalence of obesity is already being seen among the child population in European countries. In this regard, however, children are something of a specific group – when trying to encourage weight loss, it is necessary to focus on a healthy diet and an active lifestyle, rather than reducing energy intake or radically reducing the intake of fats and sugars. This goes hand in hand with the limitations imposed by the modern age, in which children tend to engage largely in sedentary activities. When teaching children to eat healthily it is also essential to remember that social factors, such as the influence of the child's family, school and (at a later age) contemporaries, play a large role for children. These social factors also include the influence of advertisements, which to a certain extent give children the chance (at least ostensibly) of measuring up to their idols, and allow them to identify with the majority and achieve a certain social position among their contemporaries.

The effect of advertising on children has been proven quite indisputably in the Czech Republic by numerous pieces of research. In 2006, for example, the study *Czech Children 2006* conducted by the agency Millward Brown was concerned (among other things) with the impact of advertisements on children, and the results showed that the advertising of products for immediate consumption, such as food and drinks, acts as a purchase impulse for more than 50 % of children. Branding (linking a particular advertisement with a brand) works extremely well in this area, particularly for drinks (advertises for Kofola, Sprite, Coca-Cola, etc.). The force of impact of an advertisement changes according to how children's preference for individual types of media changes with their age. Small children (7–11 years-old) are most affected by television advertising, while the effect of media such as the internet, on-line computer games, etc. is noticeably greater at a later age. The trend for advertising "on the web" is even more pronounced in many EU countries. Many types of advertising tool have yet to become widespread in the Czech Republic, such as targeted advertisements sent to children's mobile phones, advertisements on school exercise books and other teaching aids, or the logos of sponsors (producers of sweet food and drinks) on school sports kit, etc. (9). There are, of course, other forms of marketing in addition to this (the most effective) form of media advertising. The placement of sweets at a child's eye-level by the checkout or on the

main aisles of a supermarket, for example, is a common and extremely effective way of drawing attention to these products. A similarly effective method is packaging toys of various kinds or computer games with sweets, or sales campaigns of the “2 plus 1 free” type. A less superficial, and perhaps therefore more “insidious”, marketing method are automatic vending machines of various kinds at places where children tend to go without their parents, such as schools. Here, it is possible either to have an influence on the range of products offered or for the school principal to completely ban such vending machines (though many do not do so for financial reasons). Self-regulatory measures have also begun to be applied in the Czech Republic in this area. This means syndicates (generally international syndicates) of producers agreeing to the voluntary observation of certain principles of advertising and marketing, such as not exposing children up to the age of 12 to advertisements for fatty and salty food or sweet food and drinks. In practice, this particular measure relates primarily to advertisements in schools and the ranges of products offered in school vending machines at the first level of primary school.

Possible ways of regulating advertising

The EU has recently been devoting heightened attention to the increasing occurrence of obesity, evidence of which is provided by many documents, such as the White Book – A Strategy for Europe on Nutrition, Overweight and Obesity Related Issues. The EU sees the regulation of marketing and advertising aimed at children as one possible way of resolving and preventing these problems. For this reason, the European Commission, in co-operation with the International Association for the Study of Obesity, London and a number of other institutions, has initiated research into the situation in advertising and marketing aimed at children in the individual member states of the EU, on the basis of which it should be possible to develop a joint strategy unifying the rules relating to advertising targeting children. The reason for the development of the project was the need for a detailed survey of the situation in the individual countries. The aim of the research was both comparison of legal standards regulating the advertising and marketing of food consumed by children, including ethical codes and voluntary self-regulation, and determination of the views of relevant stakeholders on the current state of regulation and on the issue of whether and how the issue of the marketing and advertising of food and drinks aimed at children should be resolved within the framework of a joint European policy.

There were two parts to the research conducted within the POLMARK project. The first was a comparison of the legal standards regulating the advertising and marketing of food consumed by children, including ethical codes and voluntary self-regulation applied by producers, advertising providers and the media in individual states. The second part took in questionnaire research in the form of personal interviews with key individuals and institutions (stakeholders). More than 100 interviews were planned in total, with around ten in each country. Fifteen interviews were conducted in the Czech Republic. The results will be published in a joint final report after all the data has been processed. This international comparative study will be used as a basis for decision-making by the European Commission in matters relating to the regulation of marketing and advertising.

The legislation relating to the advertising and marketing of food and drinks targeting children in the Czech Republic is stipulated by Act 468/1991 Sb. on the operation of radio and television broadcasting (*Section 6 The obligations of operators during the broadcasting of advertisements (1) Operators are obliged to ensure that the following are not included in the broadcasting of advertisements:*

- a) advertisements promoting behaviour threatening the morals or interests of the consumer or the interests of health protection, safety or the environment;*
- b) advertisements designed for children, or advertisements in which children appear, that promote behaviour threatening their health or psychological or moral development; Section 6a (3) Interrupting news reports, religious programmes or programmes for children with advertisements is not permitted.)*

and Act 40/1995 Sb. on the regulation of advertising and on the amendment and supplementation of Act 468/1991 Sb. on the operation of radio and television broadcasting in the wording of later regulations.

Other general provisions can be found in Act 634/1992 Sb. on the protection of the consumer.

The Code of Advertising Practice updated in 2008 and issued by the Advertising Council (10) can undoubtedly be considered the principal aspect of self-regulation. This code gives a detailed specification of the legislation and expands on it, and is respected by practically all commissioners of advertisements and producers.

The personal interviews with key individuals and institutions (stakeholders), selected on the basis of a methodology prepared by an international team within the framework of the project in such a way that all the categories given below were represented, were conducted in 2008 and 2009.

The selected categories of stakeholders were:

1. expert scientists and academics
2. consumer organisations
3. medical organisations and patient organisations
4. producers and retailers of food and drinks
5. creators and producers of advertisements
6. government officials
7. child and teacher organisations
8. the media
9. other (politicians, economists, psychologists, etc.)

The questions posed to the respondents related to their views on the present situation in advertising and marketing in the Czech Republic, the legislative regulation, industrial self-regulation, and the connection between advertising and lifestyle and nutrition. We asked them for their views on types of advertisement and their effect on children, whether and how to restrict advertising for children, and how they see the real possibilities for regulation.

The results of these interviews can be summarised in a number of basic points. We saw four basic attitudes from respondents corresponding to the above categories:

1. Medical professionals and academics, organisations promoting health and consumer organisations (categories 1, 2 and 3) would generally welcome a greater amount of regulation (legal and self-regulatory) and limitations on advertising, particularly advertising for excessively sweet, fatty and salty food and drinks. They also emphasise the importance of universal nutritional education for children and their parents.
2. Producers (category 4) agree with an extension of self-regulation, particularly among smaller producers who are not, as yet, engaged in supranational self-regulatory activities, though they believe that the current level of legal regulation is adequate. They also consider the consistent expansion of complete and truthful labelling of foodstuffs, comprehensible to the consumer, to be desirable.
3. Commissioners of advertisements, the media and children's organisations, teacher organisations and parent organisations (categories 5, 7 and 8) prefer education and instruction of children in the family and at school leading to responsible consumer behaviour and critical assessment of advertising campaigns and the marketing behaviour of producers to legal regulation. They support legal regulation in situations over which parents do not have direct control (the sale of food in schools, the internet, targeted SMS text message advertising).
4. Government organisations (categories 6 and 9) support self-regulation. They consider the current legislation adequate, but point to the problem of its enforceability, as jurisdiction in this area is divided between a number of entities. They generally prefer the educational influence of the family promoting a healthy lifestyle, and agree with legal regulation only in situations in which parents cannot intervene (school cafeterias, vending machines, the internet, targeted SMS text messages).

Regardless of category, the majority of respondents think that advertising and marketing targeting children is not excessively regulated in the Czech Republic, though they consider the legislation adequate and consider the situation in the Czech Republic more or less comparable with that in other EU countries.

The majority also believe, however, that there is a close correlation between advertising and the increase in child obesity, though a considerable number also consider the principal cause of increasing child obesity to be not so much greater consumption of unhealthy foods as a lack of physical exercise, an unhealthy lifestyle and poor upbringing within the family.

In terms of the influence of television advertising on children, the majority of respondents agree that this type of advertisement has a significant influence on the choice of food and drinks and increases the amount of food promoted by this type of advertising that is actually purchased and consumed. The respondents do not consider other types of advertising particularly effective.

The views held by individual types of stakeholder differ as to whether advertising should be regulated or not, and if so whether universally or merely partially. Many hold the view that further regulation over and above the existing legal regulation would not prove

effective. Even those supporting regulation (categories 1, 2 and 3) tend to favour industrial self-regulation, considering it more effective, more flexible and, to a certain extent, more enforceable than legal regulation. They are in favour of stricter legal regulation only where self-regulation fails or in cases in which parents can take no action or have no control, particularly where advertising is most intensive – television programmes for small children, advertising in schools (and primarily the associated sale of food and drinks in schools), advertising on the internet and unsolicited SMS text messages targeting children. They add that such regulation already operates and functions to a certain extent in the Czech Republic, both on the basis of the existing legislation (though not formulated specifically for children) and on the basis of the Code of Advertising Practice – the self-regulatory code respected by practically all commissioners of advertisements without exception.

Conclusion

The research conducted within the POLMARK project in the Czech Republic shows that the attitudes of the public and the experts considering these topics tend, with certain exceptions, to be liberal, and give greatest support to industrial self-regulation. They either hold a rather cautious attitude towards legislative regulation, or reject it completely. Advertising and marketing aimed at children represents an exception to this to a considerable extent. In this area, those taking part in the research agree on the necessity of regulating and monitoring advertising to a greater or lesser extent, even by means of legal measures. They do not, however, consider such regulation a fundamental means of fighting obesity or as protection against excessive advertising. Of far greater importance, according to respondents, is the education given to children within the family and at school, health education, a healthy lifestyle and a healthy diet, media instruction aimed at responsible consumer behaviour, and the cultivation of the capacity for critical thought.

Note

The project was financed by the European Union within the framework of the Public Health Programme, and coordinated by Dr. Tim Lobstein (The International Association for the Study of Obesity, London). The research coordinator in the Czech Republic was Prof. Derflerová Brázdová.

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VÝZKUM VLIVU REKLAMY NA STRAVOVACÍ NÁVYKY DĚTÍ

Abstrakt: Článek je věnován problematice působení reklamy na stravovací návyky dětí a informuje o výzkumu, který byl v této věci v ČR prováděn. Právě reklama je, kromě vlivu rodiny, školy a později vrstevníků, považována za jeden z hlavních faktorů, který ovlivňuje aktuální i budoucí způsob stravování dětí a jejich preference při výběru stravy. Proto také Evropská komise, která považuje za jednu z hlavních priorit řešení problému narůstající obezity a s ní souvisejících chorob, vidí jako jednu z možných cest právě důslednější regulaci marketingu a reklamy zaměřených na děti. V rámci přípravy vhodných opatření iniciovala proto rozsáhlý mezinárodní výzkumný projekt POLMARK (Assessment of POLicy options for MARKeting food and beverages to children), kterého se Masarykova univerzita zúčastnila jako zástupce ČR ve spolupráci s dalšími 10 zeměmi. Účelem výzkumu bylo nejen zmapovat právní úpravy, směrnice a regulace marketingu a reklamy v jednotlivých členských zemích, ale především získat informace o názorech klíčových zainteresovaných osob a institucí (stakeholderů) na tuto problematiku. Výsledky přispějí k revizi řízení marketingu plánované Evropskou komisí v roce 2010.

Klíčová slova: děti, obezita, stravovací návyky, prevence, reklama, marketing, autoregulace, POLMARK

NUTRITIONAL STATUS AND DIETARY HABITS OF HIGH SCHOOL AND COLLEGE STUDENTS

Magda TALIÁNOVÁ, Magdaléna ŘEŘUCHOVÁ, Gabriela SLANINOVÁ

Abstract: *This paper discusses the issues of nutritional status and dietary habits in adolescence. The main goal of the survey was to determine whether the nutritional status of today's adolescents is satisfactory for this age group. The study used a questionnaire approach, complemented by anthropometry. A total of 1,020 students aged 15-20 from high schools and colleges in East Bohemia participated in the project.*

Keywords: *overweight, obesity, adolescents, nutritional status, dietary habits*

Theoretical Background

The issues of nutrition and dietary habits are timely because nutrition plays an important part among the external environmental factors that may impact the health of an individual or the entire nation. A special situation arises in adolescence due to greater physiological need for food of high nutritional value. Obesitologists agree that there is a high probability that the youngsters who develop good eating habits in early childhood, and keep them into adulthood, will have a lower risk of chronic diseases that are, in some degree, related to food intake (such as atherosclerosis, diabetes mellitus, or osteoporosis).

With increasing frequency we now encounter imbalance in the nutritional state of individuals that manifests itself in eating disorders resulting in overweight (obesity) or, conversely, underweight (cachexia).

The main cause of obesity is the discrepancy between the intake of food and the output of energy. To a much lesser extent, contributory factors in the development of obesity may include endocrinopathies (e.g. hypothyroidism or hypopituitarism), Mendelian hereditary syndromes (e.g. Prader-Willi syndrome or Bardet-Biedel syndrome), gene mutation (e.g. leptin receptor gene mutation), a malfunction of the hypothalamic-pituitary system (e.g. leptin deficiency, Fröhlich syndrome, inflammation, tumors) or the consequences of taking certain drugs (e.g. psychotropics or corticoids). Also rising is the number of adolescents who are underweight to cachexic because of insufficient nutrition, inappropriate dieting, eating disorders (e.g. anorexia nervosa), the effects of oncology treatment or hospitalism.

Research Objective

The purpose of this research was to assess the nutritional status and dietary habits among 15-20 year old students. The nutritional level of students' eating habits was evaluated by comparing the two groups of adolescents on the basis of differing body mass index (BMI).

Research Methodology

The research part of the study intended to explore the area of nutritional status and eating habits. To collect the relevant data, we used the questionnaire method in combination with anthropometric measurements of weight, height and body fat. The measurements were taken on 1,020 students, who then completed a questionnaire about their physical activities. All questionnaires came back properly filled. The data were entered into charts showing the relative (%) values of key indicators in the two monitored groups. Statistical significance was checked by the chi-square test for goodness of fit.

The sample consisted of 1,020 respondents, 15-20 years old. They were high school students from the Pardubice and Hradec Králové areas and college students from the whole Czech Republic. In total, 835 boys and 185 girls took part in the survey. After handing out the questionnaire, we acquainted the respondents with the purpose of our work and briefly instructed them how to fill in the form. They had 25 minutes to do that.

Interpretation of Results

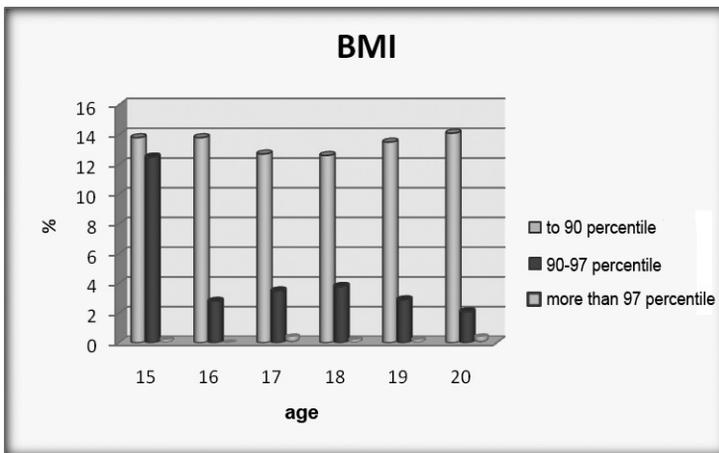


Fig. 1: Graphic representation of BMI by age

In percent of all measured, the largest underweight portion was in the 15-year old group (1.5 %) and the 16-year old group (1.5 %), the largest portion in the normal weight category was in the 20-year old adolescents (13.7 %), and the largest portion in the overweight category (4.0 %) were the 18-year old adolescents. The largest portion

in Level I obesity (0.4 %) was among the 17-year old adolescents, the largest portion in Level II obesity was in the 17-year old and 20-year old groups (both 0.2 %), and the only recorded values of Level III obesity were in the 20-year old adolescents (0.2 %). These numbers are irrespective of gender. Fig.1 shows the distribution graphically. The average BMI was 22.1 for girls and 23.1 for boys.

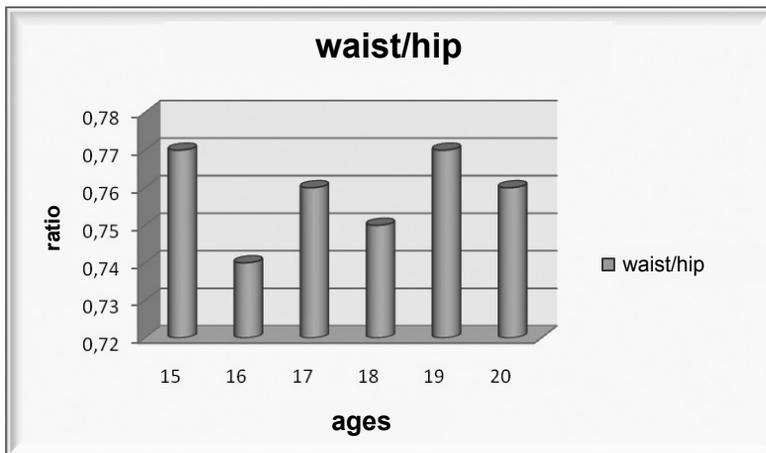


Fig. 2: Graphic representation of waist/hip ratio by age group

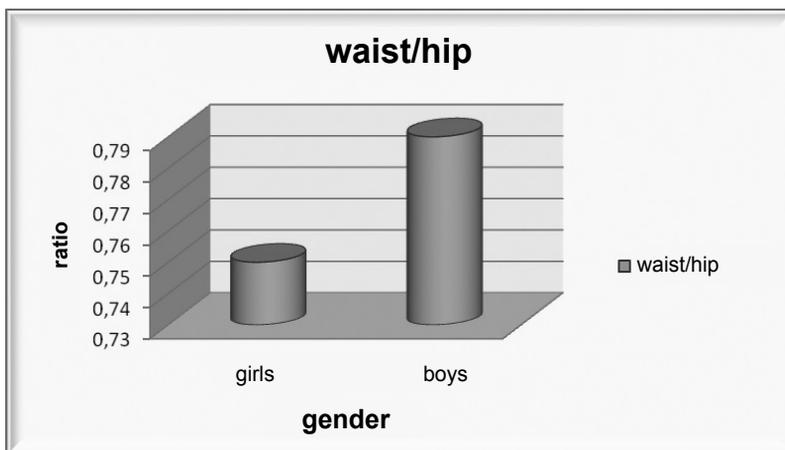


Fig. 3: Graphic representation of waist/hip ratio by gender (girls/boys)

The mean waste/hip ratio (WHR) was 0.758 (median 0.76). The highest mean WHR index was noted in 15 and 19 years old adolescents, the lowest mean WHR index was found in the group of 16-year olds. Fig.2 shows the results graphically.

The mean WHR in girls was 0.75 (median 0.74) and 0.79 in boys (median

0.79), see Fig. 3. The boys had a higher mean WHR index. The lowest WHR index (0.6) was recorded for a girl and the highest (0.99) for a boy.

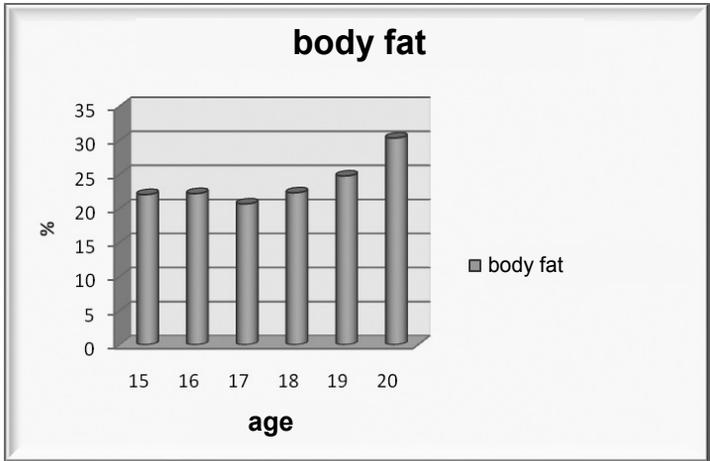


Fig. 4: Graphic representation of body fat by age

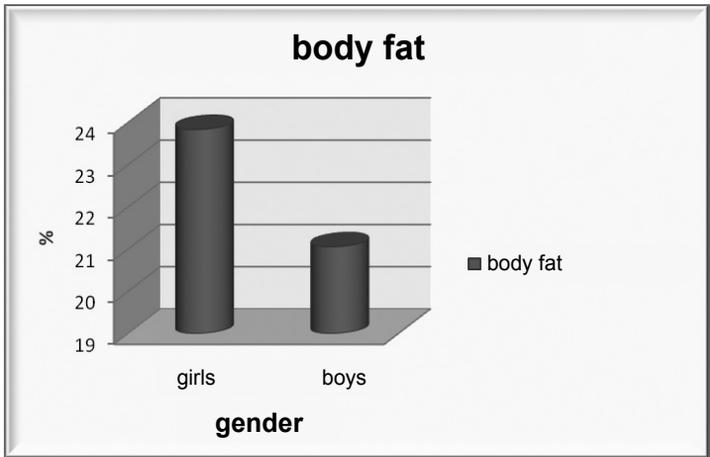


Fig. 5: Graphic representation of body fat by gender (girls/boys)

The average amount of body fat in adolescents was 23.71 % (median 21.85 %). The lowest body fat values (20.67 %) were measured in groups of 17-year old adolescents, while the highest values of 30.34 % were found in the 20-year old group, irrespective of gender. The results indicate that the percentage of body fat increases with age. The exception was the group of 17-year old adolescents which consisted mostly of boys who typically have less fat tissue (approximately 20 %). The average amount of body fat in percent for different age groups is shown in Fig. 4.

The average amount of body fat was 23.84 % in girls (median 24) and 21.06 %

(median 20) in boys, see Fig. 5. The highest value, 50.6 %, was recorded for a girl, while the maximum value for boys was 38.9 %.

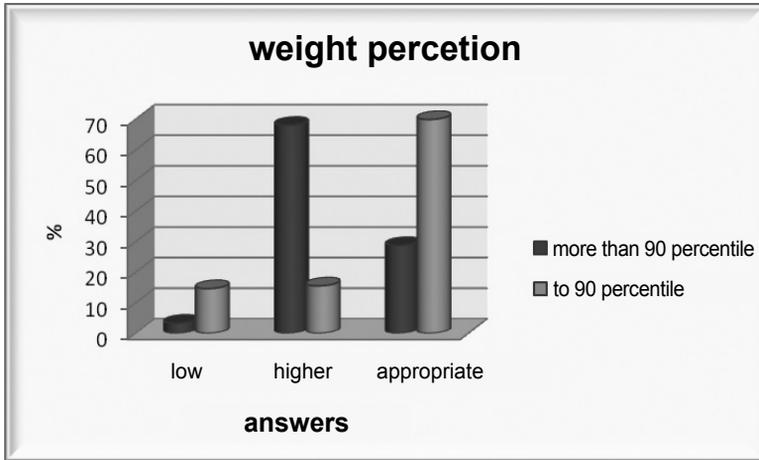


Fig. 6: Graphic representation of weight perception (low/higher/appropriate)

The results indicate that, in general, adolescents have an adequate perception of their body weight, because of those above the 90th percentile in BMI, 68 % perceived their body weight as higher, 28.7 % as appropriate, and 3.3 % as lower. Likewise, 69.9 % of those within the 90th percentile in BMI perceived their weight as appropriate, 15.5 % as higher and 14.6 % as lower. The resultant value was $p=3.405 \times 10^{-}$ which is a confirmation that a statistically significant difference exists between the two groups. The adolescents with the BMI above the 90th percentile perceive their weight more realistically.



Fig. 7: Graphic representation of numbers of adolescents observing a diet (yes/no)

When surveyed, 42.7 % of adolescents within the 90th percentile in BMI and 21.6 % of those above the 90th percentile followed a certain diet (see Fig. 7). The results indicate that more respondents on a diet were from the group above the 90th percentile. A significant difference between the two groups of adolescents has been confirmed statistically, resulting in $p=5.9 \times 10^{-10}$.

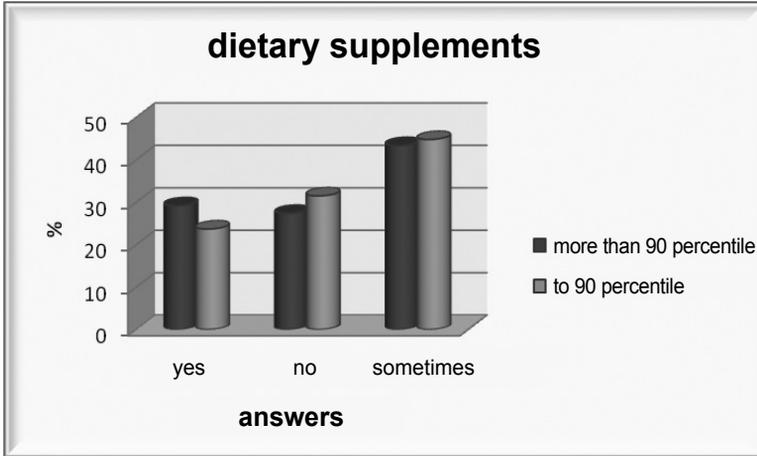


Fig. 8: Graphic representation of adolescents' use of dietary supplements (yes/no/sometimes)

When the adolescents with the BMI above the 90th percentile were asked about taking supplements (see Fig. 8), 29.2 % responded yes, 27.4 % no, and 31.5 % sometimes. The results for adolescents within the 90th percentile were similar. The yes option was chosen by 23.7 %, no by 31.5 %, and sometimes by 44.8 % of the respondents in that category. In this case, a statistically significant difference between the two groups was not confirmed. The resultant value was $p=0.2323$.

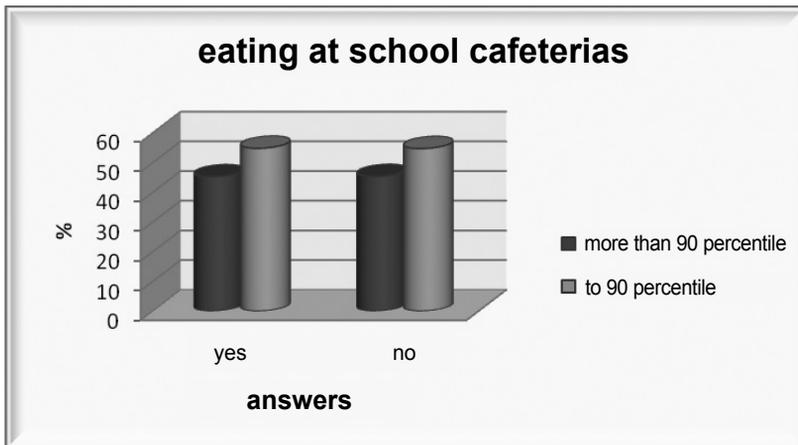


Fig. 9: Graphic representation of eating at school cafeterias

A total of 45.2 % of adolescents with the BMI above the 90th percentile and 45.3 % of those within it eat lunch in a school cafeteria (see Fig. 9). The results indicate that more than half of the adolescents take their meals elsewhere: at home, in a restaurant/bistro, or they do not eat lunch at all. The difference between the individual categories is minimal and there is no statistically significant difference between the two groups. The resultant value was $p=0.8734$.

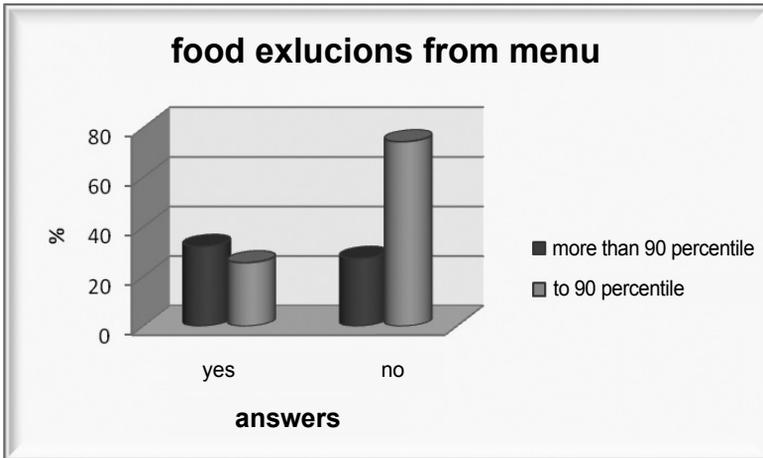


Fig. 10: Graphic representation of food exclusions from adolescents' menu

From all interviewed adolescents (see Fig. 10), 32.1 % of those with the BMI above the 90th percentile deliberately excluded certain foods from their menu, as opposed to 25.6 % of those within the 90th percentile. The statistical test did not find a significant difference between the two groups, the resultant value being $p=0.07364$.

Among the most commonly excluded foods were mushrooms, soy, fatty meats, nuts, spinach, offal, sweets, etc.

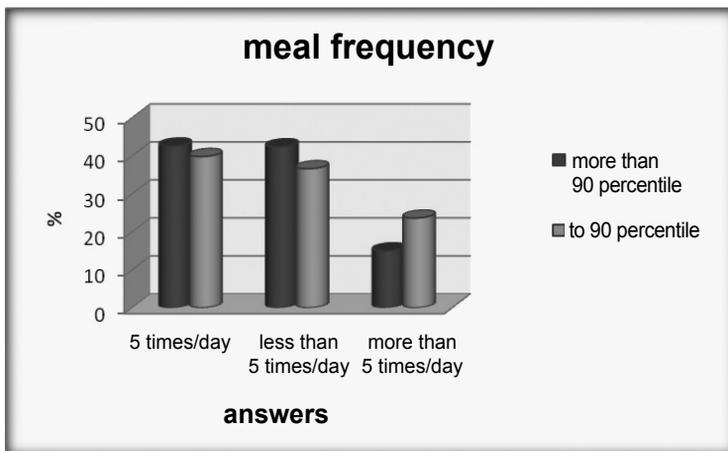


Fig. 11: Graphic representation of adolescents' main meal frequency

The results in Fig. 11 indicate that of the adolescents with the BMI within the 90th percentile, 39.8 % consume food 5 times/day, 36.6 % less than 5 times/day, and 23.6 % more than 5 times/day. Of the adolescents above the 90th percentile, 42.6 % take food 5 times/day, 36.6 % less than 5 times/day, and 15 % more than 5 times/day. Statistical analysis found a significant difference between the two groups. In the categories of 5 and less than 5 times/day, the adolescents with the BMI above the 90th percentile scored better. The resultant value was $p=0.03939$.

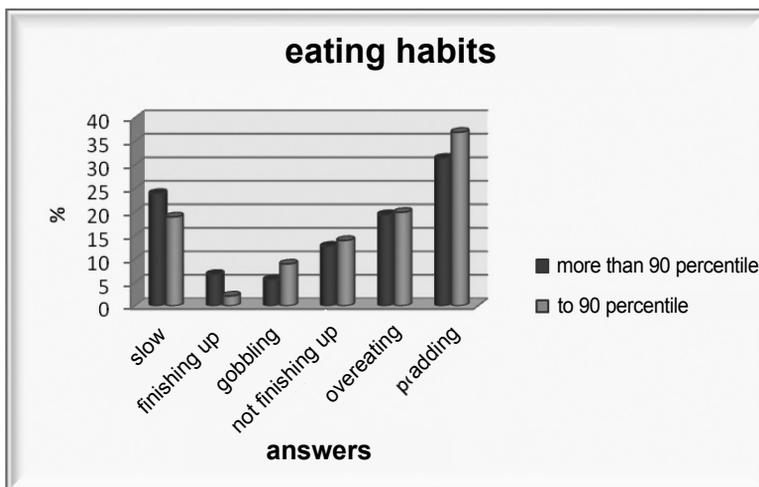


Fig. 12: Graphic representation of adolescents' eating habits

In the category with the BMI above the 90th percentile, eating habits occur in the following order: slow (36.4 %), finishing up (23.9 %), gobbling (19.4 %), not finishing up (12.7 %), overeating (6.7 %), adding (5.6 %). In the category within the 90th percentile, the habits rank as follows: slow (36.4 %), gobbling (19.8), finishing up (18.9 %), not finishing up (13.9 %), adding (8.9 %), overeating (2.1 %) (see Fig. 12).

Discussion and Conclusion

The results show, in comparison with other studies, that overweight and obesity in fact begin already in the adolescent age. Some adolescents who have reached the BMI of 25 would be better categorized as marginally overweight, because these were mostly boys – strongly built athletes with body fat still within the norm. It is possible that some respondents in the marginally overweight category, after some additional measurements like skin folds, would fit better into the normal weight category. However, the increase also appears in the underweight band, by our observations amounting to 9 % (underweight is more common in girls). In terms of gender, boys tend to get obese more often than girls (but it is essential to differentiate between obesity and a robust figure).

It is good that nearly 70 % of both groups of adolescents perceive their weight appropriately. Almost 43 % of overweight adolescents have tried to go on a diet at some time, but the question is how long can heavier children stay on an intervention

program. In general, girls tend to overestimate, and boys underestimate, their weight. Over 30 % of adolescents exclude certain foods from their menu. Possible reasons may include food allergies or children's greater pickiness. In this age category, around 50 % of students eat their lunch in a school cafeteria, which is about 10-20 % fewer than the children in elementary schools.

The results of the survey also reveal that there is a large reserve in the area of correct adolescent nutrition. If we want to arrest the trend of increasing weight, or even reverse it in obese individuals, then these people need an opportunity to learn. Naturally, the family, and mother especially, have a major role to play. A pediatrician's involvement is also important. Educational institutions, inside or outside of school, can certainly have a positive effect when it comes to nutrition and exercise. For example, schools can influence individuals through subjects like Health Education or Physical Education, or through cross-curricular relationships among basic school subjects.

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VÝŽIVOVÝ STAV A STRAVOVACÍ ZVYKLOSTI STUDENTŮ STŘEDNÍCH A VYSOKÝCH ŠKOL

Abstrakt: Příspěvek popisuje problematiku výživového stavu a stravovacích návyků v adolescenci. Hlavním cílem šetření bylo zjistit, zda je výživový stav dnešních adolescentů dostatečný pro danou věkovou skupinu. Ve výzkumu byla použita metoda dotazníkového měření, doplněná antropometrickou metodou. Celkově se výzkumu zúčastnilo 1020 studentů středních škol a univerzity ve věku 15-20 let z Východních Čech.

Klíčová slova: nadváha, obezita, adolescenti, výživový stav, stravovací zvyklosti

THE ASSOCIATION BETWEEN SLEEP DURATION AND BODY WEIGHT IN ADULT

Zlata PISKÁČKOVÁ

Abstract: *Total sleep duration is still shorter in modern society, according to research to less than 7 hours per night. Conversely the number of obese individuals is increasing. Numerous epidemiological studies have confirmed an inverse association between sleep duration and BMI in adult population and in children. The paper presents results of survey involving 493 adults at the age of 18-65 years. In this group has not been shown statistically significant differences in duration of the sleep in relation to BMI. Although the sleep restriction is considered as a novel risk factor contributing to obesity, findings in this survey are probably influenced by other factors such as the presence of chronic diseases, genetic predisposition, dietary habits and lifestyle of the individual.*

Keywords: *sleep, sleep duration, body weight, BMI, obesity*

Introduction

Sleep is a natural physiological process, the need of which can differ individually; in average it ranges from 6 to 8 hours per night in the adult population. During the last 50 years material changes in the way of life took place in the developed countries. Pace of life in the modern society accelerates and sleep duration becomes shorter. In the USA 50 years ago the average sleep duration was 8 - 8.9 hours, but in 2008 the average sleep duration was only 6.7 hours per night (Van Cauter et al. 2008). Besides inadequate sleep duration, the modern population also suffers from another relatively frequent problem - sleeplessness, insomnia; according to carried our research 10 – 20 % population suffers from insomnia, depending on the age. The studies confirm that importance of the sleep does not consist only in compensation of psychical and physical fatigue, but sleep is important for activity of the body as a complex whole, in particular for correct function of the metabolic, endocrine, immunity and cardiovascular systems (Spiegel et al. 1999).

The studies concerning relationship between sleep duration and body weight can be broken down into the cross-sectional, long-time and laboratory studies. At the beginning the cross-sectional studies prevailed; they have proved either indirect relationship between sleep duration and BMI or, more frequently, relationship in the

form of the U-shaped curve on large population samples. These studies show that the individuals, sleeping in average 7 - 8 hours, have not only a lower risk of obesity development, but at the same time even a lower risk of development of hypertension and cardiovascular diseases (Buxton et al. 2010). The studies, monitoring long-time relationship between sleep duration and body weight, confirm in the majority of cases that it is not a random association. For instance in the known Nurses Health Study, incorporating the set of 68 183 women (21 – 64 years old), after 16 years of monitoring the scientists came to the conclusions that the risk of weight gain by 15 kg during 16 years is by 32 % higher in the women sleeping 5 hours and by 12 % higher in the women sleeping 6 hours, compared with the women sleeping the desirable 7 - 8 hours (Patel et al. 2006). The laboratory studies focused on clarification of the cause of this relationship refer mainly to disordered regulation of the hormones, secretion of which is subject to circadian rhythmicity and effect of which affects metabolism or food intake. The hormones leptin and ghrelin can serve as an example - both of them affect food intake (leptin – inhibits, ghrelin – stimulates food intake) and both of them at the same time show secretion in dependence on rotation of the sleeping and waking phases. Experiments in the healthy adults have proved that sleep deprivation leads to drop of leptin level by 18 % and to growth of ghrelin level by 28 % with a significantly higher hunger by 24 %, which fact results in a higher energy intake (Spiegel et al. 2004). These hypotheses indicate the way how lack of sleep can impair the basic physiological processes at the biological level. Besides the leptin and ghrelin hormones inadequate and poor-quality sleep can also contribute to glucose tolerance disorder and to development of diabetes mellitus (Spiegel et al. 2005).

Set and methodology

The set was represented by the volunteer respondents applied for, based on the advertised research intention in the printed mass media. The respondents were motivated by the objective to get to know certain information about themselves from the results of the study and by the possibility of short consultation with the professional staff. The individuals were included in the period 2005 – 2009. The exclusion criteria included gravidity, treatment by certain medicinal products (hormonal drugs, antidepressants or antipsychotics) and tumoral diseases in the medical history. The final set incorporated the respondents at the age ranging from 18 to 65 years.

The data were obtained, based on anthropometric measurements and on 7-day records of food intake, physical activity and sleep records. Physical activity was assessed objectively, using the pedometer attached on the body during the day. The anthropometric measurements, registration of medical history - diseases and drugs - clarification of correct filling-in of records and use of pedometers, were realized by a stable team of trained specialists. The records of food intake were assessed by the software NutriMaster (Abbott Laboratories).

Basic characteristics of the set can be found in the Tables 1 and 2 below.

Tab. 1 Set description: basic characteristics

Sex men	126 (25,6)1
women	367 (74,4)1
total	493 (100) 1
Age (years)	45 (18-65)2
Height (cm)	167,7 (8,9)3
Weight (kg)	91,4 (23,1)3
BMI (kg/m ²)	32,5 (7,8)3
KT systolic (mm Hg)	131,7 (19,7)3
KT diastolic (mm Hg)	87,0 (12,7)3
Body fat percentage (%)	36,9 (10,8)3
Waist (cm)	101,2 (19,1)3
Primary energy demand (KJ)	7231,6 (1335,9)3

1 – n (%)

2 – median (range)

3 – average (SD)

Tab. 2 Set description: presence of disease and nicotineism

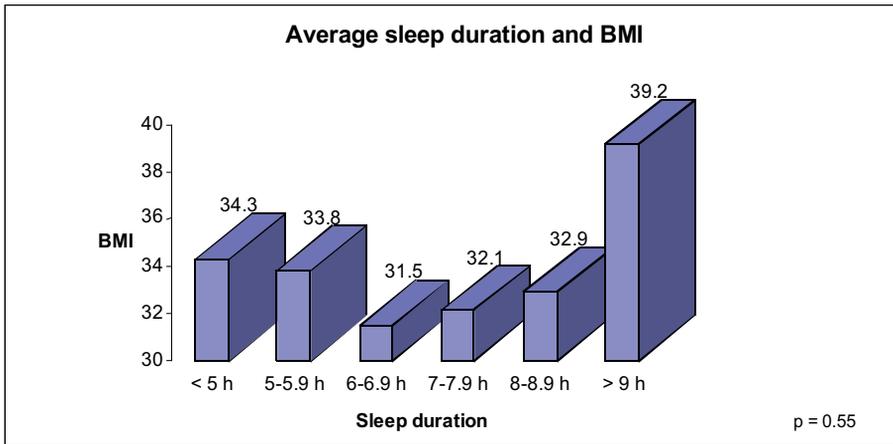
<i>Disease</i>	<i>n (%) of the total number of 493</i>
Esophageal reflux disease	11 (2,2)
cardiovascular system	16 (3,3)
Arthritis	24 (4,7)
Respiratory system	26 (5,3)
Diabetes mellitus	28 (5,7)
Thyroid gland diseases	173 (35)
Smoking Yes	79 (16)
No	414 (84)

Statistics

The Kolmogorov-Smirnov test was applied for assessment of data distribution. In case of normal distribution the ANOVA test and the t-test were applied, otherwise the Kruskal-Wallis test was used. The level of significance $\alpha = 0,05$ was set for all rests. The data were analyzed, using the programme Statistica 9.1.

Results

Relation between the average sleep duration and BMI can be found on the graph 1, where indication of dependence in the form of the U-shaped curve can be seen; statistic significance has not been proved ($p = 0.55$). The lowest BMI (31.5) was established in the group sleeping in average 6 – 6.9 hours.



Graph 1: Relationship between sleep duration and BMI

Relationship between the average sleep duration and other indicators is contained in the Table 3. Statistic dependence was proved only for the number of steps during the working days ($p = 0.03$), where significantly most step were established for the respondents sleeping in average 6 – 6.9 hours; this group made the maximum steps even during the weekend and therefore it is most probably not a coincidence that this group has at the same time the lowest BMI, irrespective of sleep duration.

Tab. 3 Relationship between sleep duration and certain parameters

	Sleep duration – average (median)						p
	< 5 (4.8)	5-5.9 (5.4)	6-6.9 (6.7)	7-7.9 (7.6)	8-8.9 (8.4)	9 > (9.5)	
Number of persons (%)	11 (2.3)	38 (7.7)	147 (29.8)	199 (40.3)	85 (17.3)	13 (2.6)	
Age (years)	51.0 (7.5)	45.3 (9.3)	45.6 (11.5)	43.6 (12.9)	43.1 (14.9)	44.8 (14.2)	0.29
BMI (kg/m ²)	34.4 (5.7)	33.8 (7.4)	31.5 (6.9)	32.1 (7.4)	32.9 (9.6)	39.2 (9.3)	0.55
% of fat	42.4 (3.4)	38.3 (9.6)	36.5 (10.4)	36.3 (10.9)	36.7 (11.9)	44.4 (11.6)	0.45
Waist (cm)	108.4 (19.6)	104.9 (18.1)	100.0 (17.4)	99.6 (19.1)	100.7 (20.7)	120.3 (20.1)	0.40
Primary energy demand	7 156.9 (1 869.3)	7 250.5 (1 211.6)	7 126.3 (1 350.0)	7 297.2 (1 344.2)	7 188.3 (1 272.2)	7 711.6 (1 395.6)	0.78
Blood pressure systolic	136.6 (11.7)	133.2 (19.9)	132.4 (21.4)	130.9 (18.4)	130.7 (21.2)	134.3 (19.2)	0.20
Blood pressure diastolic	89.2 (11.3)	89.0 (12.7)	87.8 (12.8)	85.9 (12.0)	86.0 (14.2)	89.0 (12.2)	0.14
Pedometer working days	7 628.4 (2 650.8)	7 520.3 (2 884.9)	8 124.3 (3 163.1)	7 733.2 (3 087.1)	6 808.4 (3 200.2)	6 483.5 (3 592.3)	0.03
Pedometer weekend	5 780.1 (2 634.6)	5 691.1 (2 997.5)	7 190.5 (4 006.3)	6 754.0 (3 714.6)	5 933.8 (3 107.5)	5 258.7 (3 617.1)	0.20

The values are reflected as the average (SD)

Other parameters only indicate possible relationship. As far as dependence of sleep and age is concerned, there is an explicit negative correlation: Age of respondents drops with reducing sleep duration ($p = 0.29$). Percentage of body fat and waist copy BMI values in a similar way without any statistic dependence. The primary energy demand also does not show a closer association with sleep. Blood pressure values indicate low dependence on sleep; the lowest systolic and diastolic pressure values were measured in the respondents sleeping 7 – 8.9 hours ($p = 0.20$ and/or $p = 0.14$).

Discussion

Relationship between sleep duration and body mass index (BMI) has not been proved statistically in this investigation ($p = 0.55$). One of the main reasons of the failure to prove the relationship between sleep and body weight can consist in composition of the research set itself which is not representative adequately. Women prevailed in the set (74.4 %), middle age generation (median of 45 years) and individuals with obesity according to BMI (average BMI - 32.5). Though the sample was not randomized and chosen randomly, we can speak about the population mean, because according to the statistics it is valid that there are 52 % adult individuals in the Czech population in the zone of excessive weight (Životní styl a obezita/Lifestyle and Obesity, 2005).

Size of the set can be another possible factor. Epidemiological cross-sectional studies, monitoring relationship between sleep and BMI comprised much more greater sets: Vorona et al. (2005) examined 924 individuals (at the age ranging from 18 to 91 years), Taheri et al. (2004) monitored 1024 individuals (at the age ranging from 30 to 60 years), Buxton et al. (2010) in the National Study in the USA analyzed the set of 56 507 individuals (at the age ranging from 18 to 85 years), in the Czech study Adámková et al. (2009) examined 3970 individuals (at the age ranging from 18 to 65 years); Buscemi et al. (2007) is the sole exception, because he has proved statistical significance in the mixed set of 200 individuals (at the age ranging from 18 to 49 years), but only in women. In our set less frequently represented were mainly the extreme groups sleeping < 5 hr and > 9 hr. Nevertheless, a similarly irregular representation with the highest number of respondents sleeping in average 7 – 8 hours could be found in the majority of large studies (Adámková et al. 2009, Patel et al. 2006, Bjorvatn et al. 2007), where in addition to it, the statistical significance was proved even with smaller BMI differences than in our set. In our case we can most probably find rather the relationship of obesity and physical activity, because the individuals with the lowest BMI (31.5) from the category of sleep duration of 6 – 6.9 hours have shown statistically significantly the most walked steps during the working days ($p = 0.03$) as well as during the weekends ($p = 0.14$).

Besides the active leisure/physical activity presence or absence of chronic diseases seems to be an important factor: presence of one or more diagnoses was connected positively with a shorter sleep (< 6.9 hr) ($p = 0.041$). A higher frequency of chronic diseases linked with a shorter sleep has also been proved by Buscemi et al. 2007 (patients with cardiovascular diseases had a shorter sleep duration compared with the patients that did not suffer from cardiovascular diseases), Singh et al. 2005 (sleep < 7 hr represented a higher risk for development of diabetes mellitus) and for instance Buxton et al. (2010) has proved that a very short sleep (< 7 hr) as well as a very long sleep (> 8

hr) are connected positively with the risk for development of not only obesity, but also diabetes, hypertension and cardiovascular diseases. Gangwish et al. (2006) has proved in his research that sleep deprivation is an independent risk factor for development of hypertension; in our research we have revealed a similar coincidence - the highest blood pressure values were measured in the individuals sleeping < 6.9 hours as well as in the individuals sleeping more than 9 hours, but without any statistical significance.

The issue of chronic diseases consists mainly in the fact that these diseases can mutually affect both the body weight and sleep duration and vice versa which fact can be supported by the laboratory studies, where lack of sleep for instance led to impairment of the glucose tolerance. In the studies with the cross-sectional design, which is the case of our research, it is not possible to establish what is the reason and what the consequence, whether the sleep, obesity or chronic disease. In this case a long-time monitoring of the set of respondents would be more advantageous.

In this set we have failed to prove statistically relationship between sleep duration and body weight; a certain role could be played here by minor, but not less significant factors. It is necessary to consider subjective answers of the respondents, seasonal differences in the course of data collection, because the season affects materially the dietary habits, physical activity, daily rhythm and well-being of the people. The following has not been for instance considered among the analysed data: socioeconomic background, marital status, overuse of legal stimulants (coffee, alcoholic beverages); the level of stress, mainly with respect to quality of sleep, plays nowadays a very important role. Kohatsu et al. (2006) has proved negative correlation between sleep duration and degree of depression, Stranges et al. (2008) and López-García et al. (2008) alike.

Genetic predisposition also plays a considerable role; literature sources show that genetic predisposition participates by 60 - 70 % in development of obesity, the remaining part is affected by the lifestyle of the individual. Sleep duration also has its genetic background, which fact can be supported by individual necessity of sleep duration within a wide range of 6 - 8 hours. Despite the genetic predisposition the scientific researches confirm that the lifestyle of the individual is decisive for mutual relation of sleep and obesity, where adequate weight and sufficient physical activity support high-quality sleep and, vice versa, high-quality and adequate sleep is the preventive factor reducing the risk for development of obesity, hypertension, diabetes mellitus, cardiovascular diseases and mortality.

Conclusion

Our own research investigation has failed to prove a statistically significant relationship between sleep duration and BMI ($p = 0.55$). Nevertheless even without statistical significance the relationship between these variables was very close to the U-shaped curve; the lowest BMI could be found in the individuals sleeping in average 6 - 6.9 hr, who at the same time have walked statistically significantly most steps during the working days ($p = 0.03$). Sleep duration in the examined set was connected closely with presence of chronic diseases; in presence of one and more diagnoses the respondents had more frequently sleep duration shorter than 6.9 hours ($p = 0.041$).

Body weight and sleep duration could be affected even by other factors, for in-

stance socioeconomic background, marital status, seasonal differences in the course of data collection, overuse of legal stimulants (coffee, alcoholic beverages), the level of stress that have not been considered during the research. The results could also be distorted by the bias caused by subjective answers or by incorrectly done records by the respondents. Last, but not least, the set might be neither representative adequately nor large enough for safe proof of statistical differences.

Though the causal link between sleep and obesity has not been clarified fully yet, conclusions of many studies agree that a very short sleep (< 7 hr) represents the risk factor for development of not only obesity, but also hypertension, diabetes mellitus and metabolic syndrome. Therefore sleep and correct sleep hygiene can be considered protective factor of the same importance like healthy dietary habits and adequate physical activity in preventing development of obesity and other chronic diseases.

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VZTAH MEZI DÉLKOU SPÁNKU A TĚLESNOU HMOTNOSTÍ U DOSPĚLÝCH

Abstrakt: Celková doba spánku se v moderní společnosti neustále zkracuje, podle výzkumů na méně než 7 hodin za noc. Naopak počet obézních jedinců stále narůstá. Nepřímý vztah mezi délkou spánku a BMI v dospělé populaci i u dětí prokázala řada epidemiologických studií. V příspěvku jsou prezentovány výsledky šetření zahrnující 493 dospělých jedinců ve věku 18-65 let. V tomto souboru nebyly prokázány statisticky významné rozdíly v délce spánku ve vztahu k BMI. Ačkoliv je zkrácený spánek nově považován za rizikový faktor přispívající k obezitě, v provedeném průzkumu jsou závěry pravděpodobně ovlivněny i jinými faktory jako jsou například přítomnost chronických onemocnění, genetické dispozice, stravovací návyky a životní styl jedince.

Klíčová slova: spánek, délka spánku, tělesná hmotnost, BMI, obezita

WATER AS AN INDISPENSABLE CONDITION OF LIFE

Drahomíra HOLUBOVÁ

Abstract: *The presentation surveys issues of project education, it outlines targets of environmental projects and shows the basics of mathematic environmental projects. Teachers and students can use tasks during the school year (on walks, trips, during school in nature etc.), demonstrate environmental findings in practise.*

Keywords: *water, life, projects, environmental education, teaching of mathematics*

Introduction

One of the main objectives of teaching mathematics is to teach students to use theoretical knowledge in practical life. This means that as early as in kindergarten and then grammar school, it is necessary to create such (model) situations in mathematics for the children, which are a true reflection of our surroundings and its environmental problems and which suggest possible solutions by mathematical means in real situations.

Because the Framework Educational Plan which applies to the schools since 2007 and the current students and future teachers will be already teaching according to the approved FEP, it is assumed that schools will devote more time to environmental education, addressing topical issues of contemporary environmental problems of the world not only as separate subjects of environmental education but also within individual subjects (i.e., also in mathematics).

Projects with environmental topics

The newly formulated education tasks for the 21st century put an emphasis on developing all aspects of the personality, so that students understand the world they live in, acquire the knowledge and skills essential for life in a rapidly changing world. They enable the introduction of various new teaching forms in mathematics, especially project teaching.

An important requirement of environmental education in mathematics is linking dispersed knowledge and forming an integrated view on the subject. Mathematics should provide students with a simple and visual means to describe the quantitative

aspects of the world, as we learn in everyday life and other subjects. It teaches to independently observe and describe the surrounding environment and people's relationship to the environment, to obtain and organize information relating to environmental issues, critically consider the knowledge gained in its contexts, infer the possible consequences of various human activities (both positive and negative), encourages creativity, imagination and interest in solving environmental problems. Mathematics thus leads students to actively participate in environmental protection.

To illustrate, here is an example of a mathematical project with an environmental theme.

Project: Reflections About Water

Project length: 1 week

Class: 5-6 grade

Task: Water is a condition for life on Earth

VVC:

- Extend the general overview with terms of economic, physical, environmental and mathematical relationships and understanding the relation of these concepts to the real world
- Compare, statistically evaluate these terms
- Mastering statistical skills, like drawing up a table, comparing data, evaluating the best and the worst in relation to the environment, the family budget, etc.
- Understanding the relationships between humanity and nature and the need to keep them in balance
- Application of acquired knowledge and skills in life

Mathematical goals:

- Basic arithmetic operations with decimal numbers (comparing, rounding up, writing on a numeric axis, addition, subtraction, multiplication, division) and whole numbers
- Use of decimal numbers in practical situations
- Solving practical verbal tasks using decimal numbers- Repetition of orientation in time

Inter-subject relations: Czech language, science, arts, music...

Motivation:

Write ten words or phrases that express what you need in order to live. Mark their importance from one to ten. Think about what you could give up. Select only the three most important things in your list and talk about human needs.

Working with text: Antonín Jiráček – A Treasure

In a picturesque valley below a high mountain, a small, ordinary village crouched to the ground. One day, little Michael found small translucent stones - diamonds at the foot of mount. The next day all the men went to the mountain behind the village, so that they

too could become rich. They were not interested at all that it has not rained in the past month and the grass in the meadows was dry and arid ground was breaking, that stones peak out from the bottom of the river and the water in the pond dries up. Only the mayor thought hard about how to bring the neighbours to their senses.

One evening he went to the pub and began to talk about the three consecutive days, when his grandfather appeared to him in a dream and always told him: “If you dig between the two oldest lime trees in the village green, you will find great treasure.” The second day since early morning, the villagers dug between the two oldest lime trees like in a race. When they hit rock before midnight, they gave up without further effort. Curiosity drove all to cast their eyes at the glittering gold as soon as possible. Instead, they saw pure spring water, but the mayor assured them: “It is the most precious treasure for the village. We can live without diamonds, but not without water!”

Did you see a well being dug? Describe a situation when a source of water is found. What do you imagine under the word “treasure”? Do you also have your “treasure”? How do you treat it? Are diamonds really more important than water? What were the people in the village like? Try to name their characteristics. If water is “the most precious treasure, we must protect it. Think about how we can protect the water. ... for example by trying to reduce its consumption.

Do you know any spring in your neighbourhood? What is its condition? Would it be appropriate to clean it? Did you notice that throughout nature, water supply often begins to be scarce? Why?

Mathematical part

Motivation

For a start, solve a mathematical riddle with the children that gives them a hint about the main objective of the project:

12	
8	
13	
14	
9	
15	
8	

$76 - 68 = \dots\dots \mathbf{E}$

$6 + 7 = \dots\dots \mathbf{T}$

$33 - 19 = \dots\dots \mathbf{\check{R}}$

$7 + 9 = \dots\dots \mathbf{P}$

$45 : 3 = \dots\dots \mathbf{M}$

$64 - 47 = \dots\dots \mathbf{R}$

<i>12</i>	<i>Š</i>
<i>8</i>	<i>E</i>
<i>13</i>	<i>T</i>
<i>14</i>	<i>Ř</i>
<i>9</i>	<i>Í</i>
<i>15</i>	<i>M</i>
<i>8</i>	<i>E</i>

16	
14	
9	
17	
10	
18	
11	

$54 : 6 = \dots\dots \mathbf{Í}$

$100 : 10 = \dots\dots \mathbf{O}$

$25 : 14 = \dots\dots \mathbf{U}$

$98 - 86 = \dots\dots \mathbf{Š}$

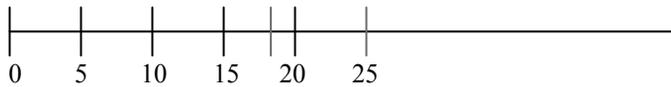
<i>16</i>	<i>P</i>
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<i>9</i>	<i>Í</i>
<i>17</i>	<i>R</i>
<i>10</i>	<i>O</i>
<i>18</i>	<i>D</i>
<i>11</i>	<i>U</i>

Revision task:

Think about whether you need to buy bottled water or simply drink healthy water

from the supply system. Estimate and then compare the prices of different water bottles. Enter these estimates on a numeric axis, add signs (=, <, >). Round up the price to whole CZK. When you go shopping with your mother, notice the result of your tip.

E.g. Pepsi – my estimation: CZK 25,- mineral water CZK 17,50.



$$\text{CZK } 17,50 = \text{CZK } 18 \quad 25 > 18$$

Mattoni, Poděbradka, Magnesia, tap water, Korunní, Dobrá voda, Kojenecká voda, Bonaqua, Vincentka

What will I find out from the next tasks:

How much warm and cold water do I spend in a month?

How much will I pay for water?

How do I calculate the price of warm water?

What do I need to know:

Volume unit: 1 m^3 (1 cubic metre) = $1\,000 \text{ dm}^3$ = $1\,000 \text{ l}$

Water and sewerage prices – cold, warm water

Task:

The block of flats houses 82 people. The water meter shows consumption of hot and cold water in the period from 1 April 2009 - 30 June 2009. What is the average daily water consumption? How much in average does one inhabitant of the block of flats for cold water, if the water and sewerage charge is CZK 35,- per m^3 ?

INVOICE

Day	Cold water consumption (in m^3)	Warm water consumption (in m^3)
1. 4. 2009	487	321
30. 6. 2009	1054	658

Cold water consumption in 3 months.....567 m^3 (1054 – 487)

Warm water consumption in 3 months.....337 m^3 (658 – 321)

Total consumption.....904 m^3 (567 + 337)

No. of days in the quarter..... 91 days

Daily consumption.....9,93 m^3 (904 : 91)

Number of people.....82

Cold water price per 1 inhabitant.....242 CZK (567 . 35 = 19 845 : 82 = 242 CZK)

Daily water consumption in the whole building is 9,93 m^3 .

One inhabitant will pay a cold water charge of CZK 242,-.

Task:

Sobek family consumes ca. 4 m^3 water daily. How much water they approximately consume in 3 months, if we consider that one month has 30 days. How much will they pay for water after 3 months, when water and sewerage charges are CZK 32.50 per m^3 ?

Daily consumption.....4 m^3

3-month consumption.....4 . 30 = 120 m³

Payment for 3 months.....120 . 32,50 = 3 900 CZK

Sobek family consumes ca. 120 m³ water in 3 months and will pay approximately CZK 3 900,-.

Environmental experiment

Tools: glass of water, celery stalk, red or blue food colouring

Instructions:

1. Trim the bottom of the celery stalk carefully.
2. Drip a few drops of food colouring into the glass of water. Think about it as a pollutant. Watch as it spreads until all the water is coloured. Likewise, pollution spreads too.
3. Put the celery stalk into the glass. Imagine that it is a small tree or another plant, or even a person who drinks water from groundwater sources. Leave the stalk in the glass for several hours.
4. Then, check the stalk. Slice off a piece and see that the polluted water came up into the stem and it is tinted inside.

Result:

You will find that contaminated water also “contaminated” the plant. This means that whatever we do with water, we actually do to ourselves and all living creatures. A plant that takes water from the ground will also receive pollution from the water. A person who drinks from groundwater, also consumes pollution. Once the water is polluted, it is too late. We must prevent this in advance!

Task:

You are a detective and your task is to trace the hidden water leaks. The secret places are: the walls, dripping taps, leaky toilet tank, a garden hose. How to proceed? If you have a water meter in the house, ask your parents to teach you to read the meter and show you where it is. Then designate a time when nobody is home (no one uses water). You go to the cinema or for a walk. Before you leave, write down the meter reading. When you return, compare the numbers. If they changed, it means that there is water leaking somewhere.

Draw up a chart or table of water leakage and present your findings at school. Do not forget to tell your parents, to prevent further water leakage.

Place: Cottage in Brtník

Day: 25. 4. 2009

Time of departure: 14:00

Time of return: 17:00

Water meter at 14:00: 34567,8 m³

Water meter at 17:00: 34570,4 m³

Water leakage: 2,6 m³ (34570,4 – 34567,8 = 2,6)

Task:

If a dripping tap fills a coffee cup in 10 minutes, how many coffee cups of water are wasted from dripping taps in one week?

<i>Coffee cups</i>	<i>Minutes</i>
1	10
2	20
3	30
4	40
5	50
6	60

60 minutes = 1 hour

No. of coffee cups per day: 144 cups (24 . 6)

No. of coffee cups per week: 1008 cups (144 . 7)

1008 coffee cups of water are wasted in 1 week. .

Ideas for mathematics

A dripping tap which fills a cup in ten minutes means 12,000 litres of water wasted per year. Nineteen litres of water flow down the drain during one teeth brushing time, 120 litres of water during one dishwashing time.

If we want to drink cold water, it should be put in the refrigerator, not let it flow from the tap. We consume 20 litres of water per minute for a shower while there are about 190 litres for a bath.

Keep records of water consumption per day (washing, brushing teeth, cooking, washing, drinking, cleaning, watering plants, bathing, toilets, pet food). It is possible to reduce consumption? If yes, state how. Think about how to take care of this treasure.

Consumption table:

		Mon	Tue	Wed	Thu	Fri	Sat	sun
WATER	Morning							
	Evening							
	Consumption							

Riddle:

In one year, you can save up to 760 litres of water by not wasting it. This amount is sufficient to fill a a) dustbin b) truck, C) swimming pool.

Conclusion:**Confluence of streams**

- Listening, tempo, B. Smetana
 - Express music dynamically by conducting the first part of the Vltava piece from the cycle of symphonic poems „My Country“ by Bedřich Smetana.
 - Notice how the composer distinguished two different streams of the river.
- Art expression of a musical piece

- drawing, dry pastel, colour mixing, imprint of nature objects

Each person from a pair creates a single source. Draw the river together from the confluence of river streams.

Work at the river, continue in pairs.

Prepare your palette with blue and yellow tempera paint, note the plants that grow around the river. Collect leaves of certain plants, because you will try to mix a green colour corresponding to the leaves. Apply the colour on their vein side and imprint them on the drawing. Create “Stream Shores”.

The rivers are growing and children are trying to mix the corresponding green, print the plants growing around the water, which was painted in class.

Debate about water

- Children search for necessary information in encyclopaedias
- Protection of water sources –we do not wash cars near rivers and streams.

Those of you who have been by the sea have seen how much dirt there is in some places. Do people know that they must not discharge oil, diesel and other liquid waste in it? Why do they have sewers? And somewhere there is a dump right on the coast. Rust and wrecks of old cars. It is awful how some people behave in nature!

Cross-curricular topics in Framework Educational Plans

Cross-curricular subjects in FEP represent current problems in the contemporary world and become an important and integral part of basic education. They create opportunities for pupils’ individual exercise as well as for their cooperation, and they help developing their personality especially in their attitudes and values.

The content of cross-curricular topics recommended for primary schools is divided into topical areas. Cross-curricular topics involve multiple educational areas and allow the integration of their educational content. Thus they contribute to the complexity of the pupils’ education and positively influence the formation and development of their key competencies. The pupils get a chance to build up an integrated view on the topic and apply a broad spectrum of skills.

Cross-curricular topics are a compulsory part of basic education. The school has to include all cross-curricular topics set out in FEP in the 1st and 2nd level education. However, all cross-curricular topics need not be represented in each year. Cross-curricular topics can be used as part of the educational content of a subject or as separate items, projects, seminars, courses, etc.

Basic education defines these cross-curricular topics.

- Personal and social education
- Democratic citizen education
- Thinking in European and global dimensions
- Multicultural education
- Environmental education
- Media education

Environmental education in FEP – cross-curricular topic

Environmental - relating to the environment (from English, Environment = living environment).

Environmental science is a science of the environment, using knowledge of the scientific field, examines the mechanisms of the human impact on ecosystems, deals with the prevention of environmental pollution and remedy of the damage and prevention of unwanted interference; it also covers environmental conservation, environmental monitoring, use of natural resources, energy management, health care etc.

Environmental education according to the FEP leads the individual to understand the intricacy and complexity of the relationship between humans and the environment.

- It leads the individual to actively participate in protecting and shaping the environment.
- Provides knowledge, skills, and nurtures the habits necessary for citizens' desirable everyday behaviour towards the environment.
- Fosters collaboration development in caring for the environment at local, regional, European and international level.
- Teaches to communicate about environmental issues, to speak about and rationally defend and justify views and opinions.
- Leads to responsibility in relation to the biosphere, conservation and natural resources.
- Encourages activity, creativity, tolerance, openness and respect in relation to the environment.
- Leads pupils to realize the basic conditions of life and responsibility of the current generation for future life.

Conclusion

The aim of the project method is solve a task that is concrete, it makes sense, it is realistic, based on life and returns to it after elaboration. Work on the project gives students the opportunity to succeed according to their abilities, to cooperate with others and to be beneficial, to experience the feeling of success and the importance of education. Children learn not only for future life, but learn to live right now, at this point in time. They learn to know themselves and others, know their worth and be useful.

Using the project method can overcome the rigidity of stereotyped forms and methods of teaching, detachment from the realities of life, boredom of expert interpretations and memorization learning without context, and the resulting children's low interest in learning. Project learning is a demanding form of teaching which requires a lot of time to prepare and a lot of expertise and organizational skills in the work of the teacher.

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VODA JAKO NEZBYTNÁ PODMÍNKA ŽIVOTA

Abstrakt: Příspěvek pohlédne do problematiky projektového vyučování, nastíní úkol ekologických projektů a pro ilustraci naznačí námět matematických environmentálních projektů, ve kterých učitelé s žáky mohou na ukázkách určených k realizaci během školního roku (na vycházkách, výletech, ve škole v přírodě aj.) ověřovat i demonstrovat ekologické poznatky v praxi.

Klíčová slova: voda, život, projekty, environmentální výchova, vyučování matematiky

THE ROLE OF THE DOG IN HUMAN MEDICINE

Petr KACHLÍK

MOTTO

There are two types of dog owner: the ones who openly admit that they let their dog in the bed with them, and the ones who deny it, but do it anyway.

***Abstract:** This article deals with the role of the dog in human society and its relationship to human health. A long and deliberate process of breeding has brought out the properties in the dog regarded by people as positive and beneficial. The dog model is used to study a number of phenomena, particularly vocal and body language, psychology and behaviour. Manipulation of the dog's genetic material allows for human disease to be studied as well. On the basis of his olfactory capabilities, the dog can detect a number of illnesses in humans. Canistherapy is highly effective in helping treat the symptoms of people with health disorders; and it complements classical pharmacological treatment for a number of illnesses. Dogs can help seniors regain their will to live by becoming a friend and confidant. Even a perfectly healthy person can benefit from having a dog around, helping him to keep fit and enjoy a higher quality of life.*

***Keywords:** biology, canistherapy, diagnostics, genetics, illness, treatment, dog, prevention, health*

Introduction

The dog has long been more than just another wild animal. Several thousand years ago man learned to use the dog's abilities; he deliberately cultivated various breeds, and over time the man-dog relationship has proved mutually beneficial. The dog provides man with many gifts: as a companion and protector watching over his property. It plays an important role in the hunt; and as a beast of burden transporting people and cargoes. It provides assistance in time of natural disasters and catastrophes. The dog substitutes for the senses and motor skills of people with health problems, and takes part in diagnosis and treatment of a number of illnesses. In some parts of the world dogs are seen as an animal for slaughter; its meat serves for nutrition and its skin for clothing. Recent intensive study has been made of canine genetics, communication, and psychology. The dog has even made it into informati-

on technology and robotics. This article focuses on selected issues of the dog's role in human health.

Material and methodology

The article is conceived as a meta-analysis carried out on the basis of printed and electronic information sources. It contains no original research data, but instead attempts to offer a more comprehensive perspective on the role of the dog in human society, its origins, manifestations, properties, and the benefits it brings to man.

The dog's origins

Today there is a great variability among breeds of dog, larger than between the varieties of other mammals. Finding their roots (or rather their ancestors) is very difficult. Houser ([on-line] 2004), Osel.cz ([on-line], 2009), and Wikipedia.org ([on-line], 2009) tell us that all breeds of dog probably come from around 10 original varieties. The domestication of dogs took place 15,000 years ago. During the period 10,000-8000 BC the main breeds had been separated out according to the properties that determined their use by people. One of the first roles for the dog was to assist at the hunt; later came tracking and running down the game, guarding the flock, amusement and companionship for humans, etc. Around 5000 BC in Mesopotamia the class entertained themselves with hunting using specialized dogs. Tracking dogs with very sensitive noses were bred later, around 3000 BC. About the same time in Tibet emerged breeds meant for work and guard duty. "Toy" dogs (especially for children) first appeared on Malta.

The dog and genetics

According to Houser ([on-line], 2007), the enormous variability in dogs is caused by a very few genes. Within the relatively brief period since the domestication of the wolf there have appeared an enormous number of dog breeds. Genetic analysis shows that the first domestication may have occurred in eastern Asia. Archaeologists have found evidence of domestication in Israel around 10,000 BC in the form of a puppy buried with a person.

The dog had to have a number of properties for man to choose him: it had like people, and be liked by them; it had to possess certain skills, and have the ability to learn more; and it had to understand man's verbal and non-verbal messages. The dog had to adapt to man in what it ate as well – it was able to beg for food, and to eat much of what humans eat, unlike the wolf. As the human expanded from the equator to the poles, the dog went with him. The dog had to adapt to survive inhospitable climatic conditions; among other things in its size, and its type and thickness of fur.

Today's breeds of dogs are very close genetically, and almost identical to those of their wolfish ancestors; most of them are able to cross-breed. Scientists are trying to figure out how small changes in the genetic code can so markedly affect the phenotype. One of the most likely explanations is that during the growth and development of the wolf cub into an adult wolf, it is not only size that changes but physical proportions as

well; this does not happen with cats, for example. The main cause of this variability is a change in the genes that affect the rapidity of growth in the individual parts of the body.

We can characterize the dog as a neotenic wolf. For example, in nature neoteny (or “cuteness” helps obtain care and protection for the young, towards which parents and other members of the pack behave differently than towards mature individuals. Even adult dogs retain some neotenic characteristics, which disappear in wolves. Besides appearance, there is also method of communication. Adult wolves use mimicry in their communications, and use barking mainly in their communications with their young. People better understand a bark than the do body language; therefore individuals that used barking in their communications even in their adulthood were preferred. The effects of genes are linked; selection emphasizing a single desired characteristic usually carries with it other traits as well – for example, wolf cubs of more tame personality may also have had different fur, or particular bodily proportions.

It is speculated that the ability of dogs to understand human gestures may be genetically based. Some tests show dogs even quicker to solve certain problems than monkeys.

Houser ([on-line], 2009a) and Budiansky (2002) tell us that over just a few generations two different lines were bred among Dalmatians (carriage dogs), which differ according to how they follow the team of horses. This they do not as a matter of training or in imitation of other dogs, but as a genetically encoded trait.

The systematic breeding of dogs began relatively recently, in the 18th century. Until then it was mostly intuitive negative selection that was applied (for example rejecting dogs with undesirable temperaments). The tracking and herding instincts of sheep dogs are genetically based, as is the love of water in retrieving and rescue dogs. Even the kind of animal a dog herds, for example sheep or cattle, is genetically determined. Deliberate “re-education” of these types of dog yields no result. Herding dogs sometimes react to the approach of a predator otherwise than a person would expect, assuming a play-like stance. If the attacker is a canine, it is able to understand these signals, becomes confused, and the hunting activity is disrupted.

These traits might not be coded by a single gene; instead they might be changed by a mutation in a controlling gene, which leads to occurrence or change in the concentration of some neurotransmitter. The change then decides whether a certain type of behaviour (following the herd) is triggered.

In recent times dogs have begun to play another important role in the lives of humans by assisting in the study of genetic mutations, which cause a similar illness in humans. Marcinková ([on-line], 2008) reports on Swedish research carried out at the University of Uppsala. The findings were presented at a conference on functional genomics in Innsbruck, organized by the European Science Foundation. Functional genomics is an area of science that describes the ways in which genes and their products, proteins, mutually affect one another in the complex network of living cells. If this mutual interaction is abnormal, a disorder may develop.

Dogs suffer from a number of illnesses similar to those of people, such as allergies, tumours, eye disease, and disease of the motor system. The possibility of studying the genomes of canine breeds is opening up, using the findings for possible

treatment of some human illnesses; many diseases may well occur on the same genetic basis. With dogs the search for the problem is simpler than with humans – it is easier to find the genetic defect leading to the development of an illness, because dogs were bred in the isolated populations of the individual breeds. If a defective gene in a dog is discovered and described, then it becomes easier to find its mutation in humans. For example, there is an analogy between human illnesses and impaired vision during the day that affects dachshunds, while golden retrievers are susceptible to cancer. Research on the genome of Springer Spaniels may contribute to better understanding of the development of breast cancer in women. Increased risk of malignant tumours of the mammary glands has also been found among other breeds, such as Cocker Spaniels, German Shepherds, and Boxers, which indicates that these breeds may carry in their genes an increased risk factor for this type of cancer. Identification of risk genes and understanding of the mechanism by which they affect the etiopathogenesis of illnesses may provide an instrument for timely diagnosis, treatment, and prevention of cancer among humans.

In Europe an organization called LUPA has been founded, within which 20 veterinary faculties from 12 countries have the task of collecting 10,000 DNA samples from purebred dogs. The purpose is to compare the genes of healthy animals with those affected by various illnesses of the type also found among people. Identification of the genes involved in the etiopathogenesis of illnesses, and the identification of genetic markers for canine illnesses, may be of help in lowering the high levels of inherited illness among purebred canines.

The dog and cloning

In genetics and other scientific fields cloning has become buzz word; a number of animal species have now been replicated in this way. Houser ([on-line], 2009b) notes that the first cloned dog was Snuppy in 2005 (Byeong-Chun Lee et al.). Lee (Seoul National University in South Korea) also took part in cloning the first transgenic dog – a female beagle named Ruppy (short for Ruby Puppy). Its genetic equipment includes genes from the sea anemone, which produce florescent proteins that glow red under ultraviolet light. Besides this beagle, four other dogs of hunting breeds have also been likewise “modified” in the same way.

Transgenic organisms have foreign genes that have been introduced, for example from bacteria, jellyfish, or sea anemone. This is more than just a spectacular demonstration for effect, but rather a technology that will allow a number of human illnesses to be studied on the canine model (cardio-circulatory, tumours, sensory, CNS, inherited developmental disorders, etc.). Cloning allows this artificial “construct” to be maintained and copied. However, the procedure brings with it a number of issues and mixed reactions, especially in the areas of ethics and law. Part of the public and scientific world place great hopes on cloning and transgenic organisms; others fear its abuse.

Petr (2003) and Houser ([on-line], 2003) point out some reasons for introducing human genes into animals. These are research on human illnesses, and possibilities that for various especially ethical standpoints cannot be applied to humans. We need organisms similar to humans, into which for example we introduce a defective copy of a

gene that causes a certain illness in humans. We can thus increase our understanding of the mechanisms of the outbreak and development of a disease, and develop effective vaccinations and medicines.

The dog, communication, and the canine mentality

The dog has been living alongside man for over 140 centuries. According to Koukal ([on-line], 2009) dogs can understand the sense of more than 40 words or sentences of its master's orders. Dog and man communicate on three basic topics: emotional state, social reactions (expressions of social status and territoriality), and their needs and desires. The number of repetitions of these is directly proportional to their excitement and urgency. Deeper tones and growls indicate warning and anger. High tones are expressions of concern and fear.

Ethologists are researching whether the dog in certain situations is possessed of feelings of guilt and shame, or fear of punishment instead. They were interested in whether the behaviour of a dog falsely accused of some transgression differs from that of one justly accused. De Waal (2006) and Houser ([on-line], 2008a) described the case of a female Husky that, while its master was away, tore to pieces everything made of paper, despite being repeatedly punished. When the man came back, the dog acted "guilty". So an experiment was made in which the owner of the paper objects tore them up himself, then let the dog in among them and left. When he came back the dog again acted "guilty", even though it had done nothing wrong. The dog behaved the same in both cases. "Guiltiness" is therefore probably an anthropomorphic projection; the dog was apparently afraid of the punishment that would follow after being found among the "incriminating evidence": scraps of paper and destroyed objects. Another explanation for the dog's behaviour is an attempt at appeasement, deflection of an attack by an individual that stands higher up in the hierarchy.

Lorenz (1997) and Houser ([on-line], 2009c) state that dogs are able to understand the mimicry and the voices of other members of the same or similar species – other dogs and wolves. This ability is lacking among the cat family, for example. Previously it was thought that the dog understands man only generally, reacting to changes in tone and gesture. It turns out that the dog is able to understand individual words in speech, and even subtle differences between words. For example, one owner has 3 dogs with similar names – Harris, Paris, and Aris. The right one always reacts to the orders, without being otherwise influenced by gestures or facial expression.

Lorenz (1997) also notes that a dog can learn to distinguish between members of the family according to name or appellation (mommy, daddy), can elect a certain manner of behaviour upon order (it chases a cat around; its hair stands up, it expects resistance; it looks for a hedgehog in a pile of leaves, or looks for a squirrel in a treetop). Dogs are also capable of reacting to the sense of entire sentences, even though the individual words produce no reaction.

Coren (2007) and Houser ([on-line], 2008d) also speak of the dog's deductive and mathematical capabilities. A dog is able to compare quantities, to choose the dish that contains the most food, to count its young, or animals in a herd. One dog was to fetch some items but was unable to pick them all up at once, so he put one inside

the other and brought them back together, which may indicate a certain talent for geometry.

A dog can remember a number of items that a person has placed around in various places. He is then ordered to fetch them one by one. After the dog has brought the last object the master continues to give orders. The dog then sits and looks questioningly at the person giving such orders. To verify this, the experiment was repeated but this time the person did not know how many objects had been placed. The dog again was able to “add up” the objects. A different experiment was set up: a dog was shown an object, which was then placed behind a screen, and the same was done with another object. Unseen by the dog, one of the objects was then taken away or added: the dog recognized that the number of objects did not add up.

According to Coren (2007) a dog can be trained to associate words with individual objects. For example a dog learns to bring various things upon order. If we add to the objects the dog is familiar with an object he is not familiar with, and then we tell the dog to bring it using the word for it, the dog uses some kind of logical deduction and accomplishes the task, ruling out the items he knows one by one until concluding that the remaining thing he does not know must be the right one. He now associates the new word with the unknown item. If we order the dog to bring a new item that is not in the set, the dog will do nothing because he will not find the asked-for thing. The dog uses the process of elimination (counting off), and from then on associates the new object with the new word. The association is conditional, and long-lasting.

Such experiments, however, are often difficult to realize in the laboratory, outside the dog’s familiar (home) territory, where the dog behaves with interest and motivation. Another obstacle to independent evaluation is the fact that the dog’s owners often exaggerate their dog’s abilities. Some canine skills are possessed only by selected and especially capable individuals, while other skills (for example the mathematic skills) are possessed even by “untrained” dogs, and could therefore be inborn.

Lorenz (1997) notes that the domestication of wild animals usually leads to a decline in their intelligence. This trend has not been observed with the dog, however; although compared to wolves the dog has lost some of its abilities, it has gained others. The “IQ” of dogs varies between individuals of the same breed, and is also strongly dependant on the breed itself.

Lorenz (1997) and Houser ([on-line], 2008c) describe the aspects of canine communication. They seek an answer to the question of whether dogs have something similar to a human language, or only an expression of the emotions and social role of the animal; and whether dogs possess an audible grammar and syntax. According to recent observations dogs evidently have rules for how to connect and combine its vocal expressions: for example, dogs never combine growling and whining. It also depends on sequence. The resulting ensemble of sounds carries a different meaning than an isolated incidence of the individual parts of dog messages. For example a growl may mean a warning, or a defence of territory or food; a short bark reports on something new and interesting; the combination of a growl and a bark is an invitation to play, but reverse the order and it becomes a threat, an expression of determination to defend, or of fear and concern. The dog’s sound expressions are complex and highly variable. At present we understand them very little, and the same goes for a dog’s body language. The domesti-

cated dog is an example of neotony and natural selection; individuals that could communicate with man acoustically won out (unlike among adult wolves, which communicate with one another by physical gesture, and by barking with their cubs).

Dennett (1997) believes that the dog is very close to man in its ability to suffer; its perceptive abilities may exceed those of primates or of dolphins. For dogs the experience of suffering is very intense; unlike many other mammals (including the wolf) evidently because man has shaped dog “in his own image” so as to resemble him emotionally as much as possible. The dog responds to humans in a “human” way: he has a name, we treat him as we would a child; he is a kind of “humanized wolf” coming out of the process of intensive, initially negative selection over a period of 4000 generations (at least 12,000 years).

Even though the brains of humans and dogs differ in anatomy, during the process of breeding they became functionally more similar. Dennett (1997) uses the term “virtual machine” to label the superstructure to anatomical structure itself, and the similarities between humans and dogs in their expression of intense suffering.

There is speculation (Dennett, 1997; Houser, [on-line], 2005) over whether dogs are capable of abstract thought. Humans and dogs may have in their mind a certain image of the cat if a cat is actually present. But apparently the dog is not capable of working with this image in the abstract, in thought only, and to consider the cat as abstract object. It is possible, however, that abstract or theoretical thought (counting the sheep in the herd) has been awakened by selection. Přeučil ([on-line], 2009) describes the extraordinary abilities of the Border collie. Experiments were conducted in which the dogs were supposed to fetch a certain object (a toy) after being shown the same object or a miniature. Some dogs managed the tasks right away without training. After brief training all the dogs brought the items correctly. The next task was much more difficult – they had to bring the objects after being shown a photograph, which only a fifth of the dogs were able to do. Even so, this is a remarkable result compared to those of primates or dolphins, which were unsuccessful. The result of thousands of years of deliberate selection and intercommunication allows the Border collie to very quickly understand what a person is asking of it, and try to please. This may be evidence of the dog’s ability to think in an abstract way, which otherwise pertains only to humans.

The dog and information technology

Houser ([on-line], 2008b) reports on experiments carried out by Hungarian scientists from the University of Budapest. They recorded the barking of herding dogs in various situations (at play, fighting, solitude, danger). Samples of the sound recordings were fed into an artificial neural network which learned according to the bark to identify individual dogs, and the situation the dogs were in. The bark of being threatened was the most easily identifiable; recognition of individual dogs was most successful when they were at play, but practically indistinguishable when they were fighting. The artificial neural network was itself displaying behaviour close to that of a living person – for whom the signal of being threatened by a dog was also the most important. The variations on the dogs’ barking carry with them much important information, and influence

human behaviour (if dogs are playing humans will join in; if they are fighting humans will separate them or flee to avoid being injured themselves).

Havrda ([on-line], 2001) describes an advance in robotics presented 10 years ago at the Robodex exhibition in Japan: the robotic dog Aibo. Its constructors and programmers studied the anatomy and physiology of human and animal bodies and their movements. A number of studies and models have been created on the basis of these observations, which were designed as expensive high-tech toys not only to entertain, but also to show how advanced information and communications technology has become. Over the course of time robots are acquiring credible human or animal proportions, and the old lumbering monsters are changing into gracefully-moving and communicating companions, which in the future might be able to carry out many household chores.

Canisterapie – healing by dog

Canistherapy is an adjuvant therapy based on the positive effect of dogs on the health of the client. However, it is necessary to take into account the seriousness of the diagnosis, the age of the client, the environment, and access to the patient (Hyperlink.cz [on-line], 2009).

Canistherapy is beneficial for persons with various types of health disorder. What is important to understand is that a dog is not a toy, it is a living being that has its needs which must be met; it must be cared for, and yearns for love from humans. If a dog is treated well it will behave just the same towards people with health problems as people without them (Doktorka.cz [on-line], 2001).

For those with mental problems canistherapy helps train the attention span, self-help, and can be a certain form of rehabilitation (exercise of the motor system, relaxation of spastic conditions, play, relaxation, development of the imagination, communication, responsibility, and self-confidence. With physically handicapped people dogs provide a form of rehabilitation and motivation; they strengthen communication, independence, feelings of security, responsibility, and bridge the divide between the patient and society and prevent isolation. Taking care of an animal diverts the mind away from one's own pain and troubles.

Through canistherapy persons with sensory impairment gain a greater sense of independence and security, as well as contact with other people, self-confidence, relaxation, and perception of risks. The vision-impaired use dogs to warn them of obstacles, gain information about their surroundings, and help them feel more secure in a crowd or an unfamiliar place. They are better able to make contact with their environment; they recognize that dogs differ in their pedigree, appearance, character, etc.; they learn how to take care of someone, and have less of a feeling of their own unimportance. Through canistherapy non-hearing people can again gain a higher degree of self-sufficiency and self-confidence. People with damaged olfactory apparatus use dogs to get timely warning of various dangerous substances nearby (gas, smoke). People suffering from damaged vocal cords are able to react through the dog using various orders conveyed by gesture alone or by gesture along with a certain sound signal (Doktorka.cz [on-line], 2001).

In the case of people with autism, the dog fulfils the role of intermediary (link) to the outside world, helps to maintain mental stability, eases loneliness, gives them

love, and calms them through physical contact. Canistherapy is effective in easing the symptoms of autism. For epileptics the dog is a companion and friend; it can be used in rehabilitation and play, and is stress-easing factor (lowering the frequency of seizures), increases the sense of overall security, freedom and autonomy. Some dogs are able to detect an approaching epileptic seizure and give warning while there is still time to react. In speech therapy canistherapy can be used to help train of correct pronunciation, expand the vocabulary, and help teach proper cadence of speech. For persons with a psychiatric diagnosis, a dog can help improve communication between personnel and patient, divert attention from their own illness, help with re-socialization, and emerge from passivity, apathy, and numbness. They also help in therapy for drug addiction and CAN syndrome (Doktorka.cz [on-line], 2001; Doktorka.cz [on-line], 2004).

Canistherapy also plays in important role in geriatric medicine. If a senior lives at home, care for a dog helps increase feelings of usefulness and responsibility; a dog offers love and a relationship, and imposes a regular daily routine. As a companion a dog substitutes for missing contact with people, increases feelings of security, relieves the loneliness, the sorrow and pain resulting from loss of a partner, improves communication with one's surroundings, and gives back to seniors a reason for living. If a senior is living in a retirement home, a dog can be a means of coming to terms with loneliness, escaping from nostalgia and depression, and substitute for the missing physical contact, tenderness and comfort, which is also reflected in better communication between clients and personnel. Canistherapy as a form of rehabilitation often leads to a reduction of the amount of medicines used (especially those with tranquilizing effects) because it relaxes the clients and helps them find better mental balance. A dog makes no distinction among people according to age, appearance, or diagnosis, but acts according to its internal value system – and it has a good strong relationship with a good master (Doktorka.cz [on-line], 2009).

The dog and diagnosis of human illness

Both expert and popular sources speak of cases in which dogs have been able to diagnose a number of serious illnesses in time to save their masters' lives. These are often cases which the human senses failed to detect, or else the detection methods used were insufficiently sensitive.

The server Pamenyzdravi.cz (2008) presents the case of a middle-aged woman in Great Britain whose Labrador diagnosed her breast cancer. Closer examination revealed a tumour, and the treatment was successful. The dog tried to touch the place where the tumour was; his behaviour was evidently instinctive, as he smelled the odour of the cancerous cells.

Pazdera [on-line], 2004), server Zdravi4u.cz ([on-line], 2004) and Darius ([on-line], 2004) sum up the findings of British clinicians published in the British Medical Journal on the detection of bladder cancer. Dogs can be trained to detect volatile substances in the urine of patient with cancerous illnesses of the bladder, which are of a different character than with bleeding, infection, or inflammation, which are the secondary characteristics of a disorder. Researchers came to this finding on the basis of the previ-

ous case of a woman whose dog was persistently interested in one spot on her leg – he sniffed it, and tried to take it between his teeth. Soon afterward a malignant skin tumour developed on the same spot, and the patient had to undergo an operation. Doctors tested 6 various breeds of dog (Spaniel, Labrador, Cocker Spaniel, mixed breeds) and for about six months the dogs were to smell the urine of people with bladder cancer. After training they were able to recognize 22 out of 54 cases; a diagnostic success rate of 41%. Scientists have tried to determine which volatile substances in the urine the dogs are detecting. They found that urine samples from cancer patients contained higher concentrations of formaldehyde, alkenes, and benzene derivatives, though not all of these are common to every type of cancer. Tumours, then, must produce some other volatile substances which the dogs are detecting.

Training dogs for this task has proven to be very complicated. At first the dogs were asked to smell urine samples containing cancerous tissue removed from patients. This method was abandoned because the chemicals used in the process (preservatives, disinfectants) altered the trace odours beyond the dogs' recognition. No chemical could be found that would reliably preserve the sample without altering its properties. But not using disinfectant put the dogs' handlers at risk. It was finally decided to work with fresh (more accurate) or dried, untreated urine. The dogs had to learn to ignore the odours that were not related to the tumour, for example in the case of menstrual blood, or diabetes. Likewise, aromatic or spicy food, drinks, or medicines can significantly change the properties of urine. The British study used samples from 108 healthy and ill patients of both genders.

In the case of 36 ill people the urine sample was taken shortly before their operation. The samples were cooled, divided up into smaller ampoules, and then frozen. They remained usable for up to 5 months. Before the tests the samples were thawed and the urine was removed by pipette and put onto filter paper in a Petri dish, which the dogs were then asked to sniff. There was one case of a man from the control group who had not been diagnosed with anything, but the dog evaluated his sample as positive. Later the man developed a kidney tumour.

These experiments are intended to help chemists identify the substances that are indicative of tumours, which will assist in timely diagnosis. Poor countries that cannot afford expensive laboratory methods (such as gas chromatography) will be able to use the services of canine diagnosis. It has been shown that dogs should be able to identify other types of cancer, for example of the intestines or skin; from the stool, perspiration, or breath.

Darius ([on-line], 2004) points out the fact that dogs exhibit uneasiness, and a desire to lick or sniff the place on the body of a patient who is developing a tumour. Even some untrained dogs will exhibit this behaviour. Another possibility is to use specially-trained dogs to search for people with tuberculosis, not only in the hospital, but among the general public.

The server Doktorka.cz ([on-line], 2006) and Lynch ([on-line], 2009) have presented the results of an American study that used dogs for timely diagnosis of malignant tumours even before they were discovered by today's advanced methods. Experts at San Anselmo, California trained 3 Labradors and 2 Portuguese water dogs. They were given breath samples from 55 patients with lung cancer, 31 with breast cancer, and 83 healthy

persons. The dogs correctly identified 99 % of the samples from lung cancer patients and 88 % of those suffering from breast cancer.

The server *Doktorka.cz* ([on-line], 2004) also published the findings of Canadian research using 60 dogs concerning the prediction of epileptic seizures in children. During seizures there is the danger of injury or suffocation. At first there were only guesses about the chances for dogs to be able to predict an epileptic fit beforehand. The Canadian scientists began to seek a relationship between the behaviour of the family dog and epileptic seizures in children. In the sample of 60 dogs, 9 of them (15 %) were reliably able to warn the family of a seizure several minutes to an hour before its outbreak, by whining, licking, and constantly attending to the child. Their success rate was 80 %. The dogs were not specially trained; they began on their own to spontaneously react after about a month living with the afflicted persons. The exact mechanism of their predictions is still unknown. It may possibly be minute electric charges in the brain of the patient which precede the seizure and might change the external parameters of the organism, which the dog perceives either by smell or sight. At present there is a canine training program intended to protect epileptics during the seizure itself; a project for seizure warning dogs is also underway. A weak point in the observation was the fact that the family of the ill child was reporting on the abilities of their own dog, and thus may have overestimated them. Therefore a similar study will be undertaken in controlled clinical conditions so that the predictive powers of dogs can be impartially verified.

The server *Doktorka.cz* (2004) also reported on the use of dogs in helping patients with Alzheimer's disease. One 62-year-old Israeli suffered from an early stage of Alzheimer's. Because he liked animals, he was included in a pilot project unique in the world for "pairing" animals with people. A female Collie was trained for him, and as a result his quality of life was much improved. The Collie always guides his disoriented master home, and gives him a certain feeling of security when moving around outdoors. It is more than just a guide dog, but also a guardian that watches over its man practically the entire day, motivating him to activity, and sounding the alarm if there is danger. Around a tenth of seniors suffer from dementia, and those that do feel very isolated and lonely. A trained dog can boost people's self-confidence so that they are able to conduct many tasks much as they could before the onset of disease, and communicate with their surroundings. Meanwhile the dog is constantly improving in his training, and becomes literally a member of the family. Dogs have been equipped with a device that is able to determine its position with the help of the GPS. If the master becomes lost or is not heard from for a time, the family can find out where he is. It is also possible to activate a "dog cellphone" which sends the dog an acoustic signal to bring the man home. Patients in the early stages of Alzheimer's disease can live a normal life thanks to these specially trained dogs. Without them they often find themselves in danger, and if they are not found within 12 hours after they disappear, they have greatly reduced chances of survival. The senior is also motivated to take care of the dog, but his family must keep tabs to make sure he is carrying out his routine tasks (walking the dog, feeding it, and giving it water).

The dog as healer and helper

The server Doktorka.cz ([on-line], 2000) gives a number of reasons why it is good to get a dog. For reasons not yet completely clear (some have already been scientifically proven and described, others await the same), a dog is able to perceive the incidence of negative factors in so-called geopathogenic zones and avoids such places, which could be taken advantage of by humans as well (finding a suitable place to rest or sleep). On the other hand, some animals (like cats) are actually drawn by such phenomena.

The dog has a demonstrably positive influence on the physical fitness of his master; it motivates him to take walks and other activity. This improves physical fitness and the condition of the motor apparatus, the circulatory and respiratory systems, reduces body weight, stimulates the metabolism, and removes a number of harmful substances and waste materials from the body, which helps prevent the development of cancer or metabolic illnesses. Emotional tuning and readjustment after suffering stress has an important influence on the harmonization of the motor system and mental processes. The calming of the nerves overlaps into the physical sphere, and positively influences the immune system; it is the prevention of more serious health problems known as the “civilization diseases”, or more correctly, non-infectious diseases occurring on a large scale.

Today’s hurried and over-technologized society demands high performance from humans over long periods, which in time leads to social, psychological, and physical problems; in other words, disruption of the balanced, holistic model of health. To this add superficiality, alienation, anonymity, and lack of good interpersonal communication, which make the situation even worse. Getting a dog helps break down the barriers between people; at minimum the dog’s owner becomes part of the community of “dog people”; he begins to take more interest in the lives of his fellow citizens and the community where he lives. He stops being indifferent to a number of negative phenomena that can threaten the safety of the community. For isolated people the dog becomes a dependable comrade and an avenue to search for friends or a life partner. The dog returns the love and care given to it many times, providing him with company and devoted friendship at any age regardless of status, race, gender, creed, or handicap. The owner must not forget the basic needs of the dog – drink, food, walking, health maintenance, vaccination, checkups, and a suitably stimulating environment. Even a “senior” dog has the right to a dignified old age and good treatment.

Conclusion

The dog has lived with man for over 140 centuries, during which many breeds have been bred, and the dog has become companion, protector, and helper of man. With developments and changes in our way of life, the role of the dog has changed, too. Today’s science studies not only the origin of the dog, but his methods of communication, expressed in various situations, behaviour, and mentality. In information technology and robotics the dog is a model for the development and programming of artificial intelligence. The dog helps people whose health, lives, and property are threatened; it returns lost abilities to people with disabilities. Study of the dog genome and the introduction of foreign (even human) genes allows us to model a number of health disorders, describe

them, and find a suitable cure. Timely diagnosis of illness (especially tumours) thanks to dog's abilities allows the beginning of treatment and saves patients' lives. Canistherapy stimulates and assists the motivation of patients, relieves spasms, and psychological blocks; it increases the degree of independence, communication, self-confidence, security, and re-socialization of persons with health problems or diseases. For a healthy person as well, the dog is important, helping him to maintain physical, mental, and social health; this is especially true in the case of seniors. If we make an effort to understand the dog, we will begin to better understand ourselves as well.

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ROLE PSA (NEJEN) V HUMÁNNÍ MEDICÍNĚ

Abstrakt: Příspěvek se zabývá úlohou psa v lidské společnosti a její souvislosti s lidským zdravím. Dlouhý a cílený proces šlechtění psů vyzvedl vlastnosti, které lidé považovali za pozitivní a výhodné. Na psím modelu je studována řada jevů, zejména aspekty hlasové a tělní komunikace, psychiky, chování. Manipulace s genetickým materiálem psa dovoluje studium lidských onemocnění. Pes rovněž může na základě svých čichových schopností predikovat řadu chorobných stavů u člověka. Canisterapie významně přispívá ke zvládnání poruch u osob se zdravotním postižením, napomáhá klasické farmakologické léčbě u řady onemocnění. Staří lidé díky psovi získají novou motivaci k životu, přítele a důvěrníka. I naprosto zdravý člověk může těžit ze vztahu ke psovi, a to udržením dobré kondice a vysoké kvality svého života.

Klíčová slova: biologie, canisterapie, diagnostika, genetika, nemoc, léčba, pes, prevence, zdraví

DEPENDENCE BETWEEN LEVEL OF TERRORISTIC THREAT AND PARAMETERS OF PSYCHOLOGICAL WELL-BEING AT SCHOOLCHILDREN¹

Yulia V. BYKHOVETS, Nadezhda V. TARABRINA

Abstract: *Dependence of parameters of psychological well-being on the level of terroristic threat at indirect victims (those who were confronted with acts of terrorism by means of MASS MEDIA) was investigated. SUBJECTS: 84 schoolchildren (52 girls and 32 fellows). The age average was 16. METHODS: a questionnaire of terroristic sensitivity (QETT-50) (J.V.Byhovets, N.V. Tarabrina, 2010), a questionnaire of “The Scale of psychological well-being» (SPW) (adapted by T.D. Shevelenkova, P.P. Fesenko, 2005), a method of motivational induction (MMI) (in Tolstyh N.N.'s adaptation, 2005), a questionnaire «Prospect of my life» (E.A. Misko, N.V. Tarabrina, 2004). RESULTS: girls are more troubled under a threat of terrorism acts, than fellows. Sexual differences are absent in assessment of psychological well-being. Terroristic sensitivity is correlated to such scales of psychological well-being as «the Person as an open system» and «Life comprehension» in senior schoolchildren ($R_s=0,25$ and $R_s=0,22$ $p<.05$). Results show that terroristic sensitivity is correlated to components of psychological well-being.*

Keywords: *psychological well-being, terroristic sensitivity, mental health, indirect victims, schoolchildren, terrorist acts.*

Problems of mental health of children are among most acute in modern science. Experts of the World Health Organization observe a significant growth of psychological frustration in children and teenagers. Neurotic states make up 63 cases out of 1000 children. In Russia permanent mental disorders are registered in 15 % of children. According to the Institute of sociopolitical research of the Russian Academy of Sciences, the number of schoolchildren who are mentally absolutely healthy decreases from 30 % in 1-3 grades to 16 % in 9-11 grades. Thus, as the Ministry of Health of the Russian Federation reports, pupils' health worsens 4–5 times during school years and 85 % of poorly performing children are sick with this or that disease.

Mental health is a multidimensional construct which is studied at different levels:

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genetic, biological, clinical, social, etc. Experts use different definitions of this term. From our point of view, the concept of «psychological well-being» most adequately corresponds to the psychological level of mental health research (N. Bradburn, C. Ryff, P.P. Fesenko, A.V. Voronina, L.V. Kylikova et al.).

Russian and foreign psychologists are inclined to consider psychological/subjective well-being either as “experience”, sense of happiness, satisfaction, pleasure (the hedonistic approach), or as level of achievements, a degree of success, self-actualization (the eudemonic approach).

Both these directions supplement each other. Any component of psychological well-being (social, material, etc.) always has objective indicators: objective characteristics of life quality, health indicators, social, psychological and other development opportunities, presence/absence of outward features of well-being and social success.

Estimation of one’s own well-being against social standards depends on subjective criteria. These criteria have individual differences. Criteria are generalized, concretely specified and acquire a steady character in the course of life. Understanding of this relationship is crucial for solving real life problems of optimization of social, psychological, economic relations in a society and improving quality of life. However, outward parameters cannot cause well-being experience as such, as this is how the nature of mentality works. They operate only through subjective perception and assessment of a person. Hence, any component of well-being can be characterized as subjective.

The most well-founded modern concept of psychological well-being is a model by Carol Ryff. She has defined a structure of psychological well-being and has designed a psychodiagnostic questionnaire - «The Scale of psychological well-being» (C. Ryff, 1989). The questionnaire is focused on measurement of six basic components of psychological well-being: self-acceptance, positive relations with people, autonomy, management of environment, life aims, personal growth. These components integrate structural elements of various psychological theories (A.Maslou, G.Olport, K.G.Jung, E.Erikson, S.Bjuller, M.Jahoda, D.Birren). It is possible to assume that each of six components is an aspect of positive functioning of a person. They can reach a different degree of expressiveness and define unique structure of psychological well-being of each person.

Determinants of psychological well-being/trouble of an individual compose a whole complex of interconnected internal and external components (personal, sociocultural, political, sociopsychological determinants, etc.). Results of some research studies make it possible to assert that neither political, nor economical factors can form a constant basis for psychological well-being. For example, in the research case of ethnosocial well-being of individuals it is shown that one can meet people who feel happy more often in India and most rarely — in Sweden (L.V. Kulikov). In the given research, the concept of “happiness” is identical to the concept of “psychological well-being». Hence, it is possible to assume that ethnic and cultural factors influence the well-being level.

However there is evidence, proving that such fact of modern sociopolitical life as the terrorist act adversely impacts mentality of population (L.E. Delisi et al., 2001; S.Galea et al., 2003; Gordon H. Cormick, 2003; R. Pangi, R.C. Silver et al., 2002; A. Speckhard, 2003; N.V.Tarabrina, J.V.Bykhovets, 2006). There are people who realize an act of terrorism as a direct threat to their life and to psychological well-being, though they have not suffered from an act of terrorism directly. We assume the following hypothesis:

high level of psychological well-being can be a restraint factor of intensive terroristic sensitivity. Psychological well-being can activate coping resources through a self-efficiency increase. People with a high level of psychological well-being have a much higher level of comprehension of life. The structure of their terminal values has a more concrete character. They have a sense of competence and a more mature coping strategy.

Complex research of the link between of the level of terroristic sensitivity and psychological well-being is done in the Laboratory of Psychology of Post-Traumatic Stress Institute of Psychology RAS. In the given article a part of this research is described. The current research was conducted in senior-grade schoolchildren. The selection of the given age group is not occasional. The teenage period is one of the crisis ages when one intensively develops abilities of self-knowledge (L.I.Bozhovich, N.I.Gutkina, I.S.Kon, V.A.Alekseev, E.Ericson). At this age influence of various external socio-political threats has a vital importance. A terrorist threat is considered as a threat to realization of life plans and prospects.

Some authors have shown that the acts of terrorism which occurred in Moscow brought about a lot of unpleasant and disturbing experience (N.V.Tarabrina, J.V. Byhovets, 2008, 2010; V.V. Znakov, 2010; E.B. Batueva, 2005). This event loses its emotional saturation in the course of time (V.V. Nurkova, D.M. Bernstein, E.F. Loftus). One remembers not only the image of terrorism attacks and the experience related to it, but also the relation to this image in the future. It is not the visual images of terrorism attacks (destruction, weapon, capture of hostages, death of innocent people, etc.) broadcast by mass-media that one’s mind captures first, but it is more the prospect of life under a terrorist threat that stays firmly in one’s consciousness (fear, horror, feeling of helplessness, etc.).

The **goal** of this research is to reveal the correlation of the level of sensitivity to a terrorist threat and psychological well-being at indirect victims (witnesses of acts of terrorism by means of mass-media). According to this purpose following tasks have been identified:

- 1) to study dependence of an indicator of terroristic sensitivity on scales of psychological well-being in schoolchildren;
- 2) to study features of a psychological well-being structure in groups with various intensity of terroristic sensitivity;
- 3) to reveal sexual distinctions in terroristic sensitivity and evaluation results by scales of psychological well-being.

Methods

Participants of research - 84 pupils of 11 grades Korolev city (the Moscow region)

Table 1. The descriptive statistics of age of respondents

	Age				N
	Mean	Median	Range	Std.Dev.	
Girls	16,08	16	3	0,68	52
Fellows	16	16	2	0,62	32

Authors thank N.N.Bakuseva for participation in research.

The following Questionnaires have been used to attain the purpose and goals of the research: a questionnaire of terroristic sensitivity (QETT-50) (J.V.Byhovets, N.V.Tarabrina, 2010), a questionnaire of “The Scale of psychological well-being» (SPW)(adapted by T.D.Shevelenkova, P. P. Fesenko, 2005), a method of motivational induction (MMI) (in Tolstyh N.N.’s adaptation, 2005), a questionnaire «Prospect of my life» (E.A. Misko, N.V. Tarabrina, 2004). The results of two questionnaires are studied in this article - SPW and QETT. SPW is a questionnaire whose main objective is to study actual psychological well-being. Indicators of the SPW are general points:

- In a classical variant of the questionnaire (by C.Ryff) there are 6 evaluation scales: «positive relations», “autonomy”, «management environment», «personal growth», «the purposes in life», “self-acceptance”;
- In the new adapted variant (by T.D. Shevelenkova, P. P. Fesenko) there are 4 scales: «balance of affect», « life comprehension», «the person as an open system», “autonomy”.

Processing of the statistical data was carried out by means of software packages «SPSS-10», «STATISTICA 6.0.» It included Spearman’s rho (rs); Mann-Whitney U.

Results

1. The dependence analysis between level of terroristic sensitivity and parameters of psychological well-being in schoolchildren.

We have used nonparametric coefficient Spearman’s rho because of a small number of participants under study. The result of the analysis is presented in table 2.

Table 2. Significant coefficient of Spearman’s correlation between indicators of QETT and SPW

Indicators	N	Rs	p-level
QETT – scale «life comprehension» (SPW)	84	0,22	0,04
QETT – scale «the person as an open system» (SPW)	84	0,25	0,02

Respondents with an expressed terroristic sensitivity are sure that the future has prospects in a greater degree, they assess themselves as goal-oriented to a larger extent, they show a greater ability to acquire new information, have a complete and realistic outlook in life and are open to new experience.

2. The analysis of features of psychological well-being structure in groups with various levels of terroristic sensitivity.

According to some research an especially sharp and deep character of sensitivity to a terrorist threat is observed in children and teenagers. Unlike in adults, their mentality has not yet developed protective mechanisms. These protective mechanisms allow people to “hide” from danger, to forget it, to be absorbed by household problems. In 2001 Schuster with co-authors (M.A. Schuster, B.D. Stein, L. Jaycox, R.L. Collins, G.N. Marshal, M.N. Elliot et. al.) conducted research to define a level of terroristic sensitivity in children. The data the authors have obtained show that about 1/3 of adult

respondents who were parents did not notice presence of stressful reactions in their children after 9/11.

The information about acts of terrorism in mass-media and other communication media can be considered as a traumatic stressor. It can lead to loss of life prospects and ability to cope with vital difficulties in indirect victims (D. Simeon, 2002).

We have singled out three subgroups by a terroristic sensitivity level to verify this assumption. The bottom quartile of distribution QETT included estimations: for girls from 67 to 112 points ($M=95,77$; $SD=14,09$) and for fellows from 54 to 97 ($M=72,71$; $SD=14,55$); top quartile – for girls from 144 to 212 ($M=161,34$; $SD=19,56$) and for fellows from 132 to 168 ($M=146,22$; $SD=14,48$). The respondents who have scored on QETT from 112 to 144 points for girls ($M=128,62$; $SD=8,64$) and from 97 to 132 for fellows ($M=116,71$; $SD=10,13$) have entered a group of «inclined to intensive terroristic sensitivity».

The sample of respondents has been divided into 3 subgroups:

- 1) subgroup “resilience” ($n=21$, 13 girls and 8 fellow). They have low values of indicators on QETT. They are psychologically steady against psychotraumatic influence of acts of terrorism;
- 2) subgroup «inclined to intensive terroristic sensitivity» ($n=41$, 26 girls and 15 fellows). They have average values of an indicator in QETT;
- 3) subgroup “vulnerable” ($n=22$, 13 girls and 9 fellows). Their level of terroristic sensitivity is most expressed. They have high values of the indicator in QETT.

We have obtained the following data: the mean of SPW in subgroups «inclined to intensive terroristic sensitivity» and “vulnerable” stays within a corridor of average estimations. In the “resilience” subgroup the dispersion of estimations on each scale in SPW was is in the range of average values. However, the fellows have shown low values in the scales of «life comprehension» and «the person as an open system». It is obvious that fellows resistant to a terrorist threat are characterized by lack of life comprehension. The past and the present are perceived by them as senseless. The feeling of boredom and aimlessness of existence prevail in them. It is typical of them to have a fragmentary, insufficiently realistic perception of various aspects of life. However, the respondents of subgroups «inclined to intensive terroristic sensitivity» and «vulnerable» are characterized by prevalence of positive self-appraisal, acceptance of themselves with their merits and drawbacks. They are capable to resist social pressure and are able to defend their own opinion.

As a next step we evaluated distinctions in scales of psychological well-being between the defined subgroups. On the scale «the Person as an open system» the group “vulnerable” ($M=66,14$; $SD=4,04$) surpasses the group “resilience” ($M=60,67$; $SD=9,41$) (value of Mann-Whitney U criterion $U=138,5$ and $p=0,024$). Distinctions are not revealed on other scales of SPW between the selected subgroups.

The results have shown that the level of terroristic sensitivity is connected with some components of psychological well-being - «The person as an open system» and «Life comprehension». The senior schoolchildren intensively perceiving terrorist threat in a greater degree assess themselves as goal-oriented, comprehending life, capable to acquire new information.

3. Distinctions of level of terroristic sensitivity and assessment results by the scales of psychological well-being in groups of girl and fellows.

The value of Mann-Whitney U criterion has been calculated to compare those groups (tab. 3). For this particular age group the results are presented for the first time.

Table 3. Comparison of terrorist sensitivity level in the groups of girl and fellows (Mann-Whitney U criterion)

Indicators	Group 1				Group 2				U	P		
	m	M	R	D	m	M	R	D				
QETT	Girls	130	131	145	722,08	Fellows	Mult	Mult	154	1147,43	609,5	.04

Note: m – median, M – Mode, R – Range, D – Dispersion, U- Mann-Whitney U criterion.

Higher values of QETT indicator are found in the group of girls as compared to the group of fellows. However, the group of girls and the group of fellows do not differ on the scales of psychological well-being ($p > 0,005$).

Discussion

The data obtained in our work supplement the results of foreign research of the influence of age and sex on psychological well-being. C.Riff has shown that a category of woman had higher indicators on all basic components of psychological well-being in the age from 20 till 35, except for the scale of «Personal growth». Self-assessment results on this scale were identical in both sex groups. The data of our research show that senior schoolchildren (middle age - 16 years old) do not have sex distinctions on the scales of psychological well-being.

Our results manifest that sensitivity to a terrorist threat is related to some components of psychological well-being – «the person as an open system» and «life comprehension». These components reflect either presence or absence of life ultimate goals and ability to acquire new experience. The following regularity has been noticed: intensity of terroristic sensitivity is high in those respondents who have life goals and beliefs and are capable to perceive new information, have a realistic life perception. They are open to new experience. Whereas terroristic sensitivity is not expressed in the respondents who feel lack of life comprehension, the past and the present are perceived by them as senseless. The sense of boredom and aimlessness prevail in them. They show an inability to effectively integrate separate aspects of their own life experience.

Psychological well-being is characterized by an orientation degree on positive aspects of functioning and an intensity degree of this orientation. The data on similarity of psychological well-being structure in persons with various intensity of terroristic sensitivity are obtained in the course of this research. This structure can be described as follows: close, confiding and cordial relations with people feature the respondents of this study. They are capable to resist social pressure in their thoughts and acts. They are

able to satisfy their personal requirements and cherish values. They appear to practice continuous self-development. They recognize and accept the diversity of their personalities. Positive self-appraisal prevails in them. They prefer their own internal standards. Distinctions in structure of psychological well-being have appeared between the groups with high and low level of terroristic sensitivity on the scale of «the Person as an open system». Senior schoolchildren with high level of terroristic sensitivity possess a realistic and complete life perception which is combined with openness to new experience.

Similarity of psychological well-being structures and one distinction between the groups in the level of terroristic sensitivity allow us to make a conclusion about lack of dependence of psychological well-being and terroristic sensitivity. Subjective judgment about psychological well-being/trouble is an individual criterion. This criterion allows one to assess and analyze the degree of self-efficiency and satisfaction with quality of life on the whole. This statement is essentially important from the point of view of psychology. Well-being of a person depends not so much on biological factors, material prosperity, a social status, sociopolitical events, but on perception and self-evaluation of success and degree of self-realization measured against individual standards. There are persons especially vulnerable to terrorist threat both among psychologically healthy and unhealthy groups to an equal degree. A high level of psychological well-being can not be considered as the only terrorist threat coping resource. Probably, there is a third variable which mediates and increases a buffer influence of psychological well-being under a terrorist threat.

Awareness of one's well-being and its assessment (cognition and emotional components) limit/expand the possibility to enjoy life. They influence the ability of a person to function comprehensively, to actualize oneself successfully and to adapt in a society (N.G. Novak, 2009). Terroristic sensitivity can be considered as a factor of psychological well-being decrease. This argument, unfortunately, has not been confirmed in our research. Some data obtained in this research indicate that the more goal-oriented a person is and the more indirect and natural his feelings are, the greater is the degree of his terroristic sensitivity.

The result of the study allows us to make assumptions about further research. Firstly, it is necessary to study psychological influence of terrorism on civilians at different levels of inner organization of an individual. Secondly, it is necessary to consider sexual and age characteristics while studying psychological terrorism impacts. The most obvious psychological consequence of the influence of terrorist acts on a person is actualization of fear. It leads to development of different forms of mental disadaptation and to a decrease of a level of psychological well-being in a vulnerable part of the population. The present research is a part of continuing complex research whose results will allow a wider coverage of a topic in question.

Conclusion

- 1) terroristic sensitivity is correlated to such scales of psychological well-being as «the Person as an open system» and «Life comprehension» in senior schoolchildren;
- 2) the structure of psychological well-being is identical in groups with various expressiveness of terroristic sensitivity. Lower values on SPW scales - «the Person as an open

system» and «Life comprehension» are an exception in fellows from a group with a low level of terroristic sensitivity.

- 3) there are sexual differences in intensity of terroristic sensitivity in senior schoolchildren: girls are more troubled under a threat of terrorism acts, than fellows. Sexual differences are absent in assessment of psychological well-being.

ZÁVISLOST MEZI ÚROVNÍ TERORISTICKÉ HROZBY A PARAMETRY DUŠEVNÍ POHODY U ŠKOLNÍCH DĚTÍ A MLÁDEŽE

Abstrakt: Studie se zaměřila na zkoumání souvislosti mezi parametry duševní pohody a úrovní teroristické hrozby u nepřímých obětí (tedy těch, kdo byli konfrontováni s teroristickými činy prostřednictvím MASOVÝCH MÉDIÍ). **SUBJEKTY** studie: 84 žáků (52 dívek a 32 chlapců). Věkový průměr byl 16 let. **METODY:** dotazník zjišťující citlivost vůči terorismu (QETT-50) (J. V. Byhovets, N. V. Tarabrina, 2010), dotazník „Stupnice duševní pohody“ (angl. zkratka SPW) (upravili T. D. Ševelenkova, P. P. Fesenko, 2005), a metoda motivační indukce (angl. zkratka MMI) (v úpravě Tolstyh N. N., 2005), dotazník „Perspektiva mého života“ (E. A. Misko, N. V. Tarabrina, 2004). **VÝSLEDKY:** dívky hrozba teroristických činů znepokojuje víc než chlapce. V hodnocení duševní pohody se neprojevují rozdíly mezi pohlavími. Citlivost vůči hrozbě terorismu koreluje s těmito měřítky duševní pohody: „Osobnost jako otevřený systém“ a „Chápání života“ u starších žáků ($R_s=0.25$ a $R_s=0.22$ $p<.05$). Výsledky ukazují, že citlivost vůči terorismu koreluje se složkami duševní pohody.

Klíčová slova: duševní pohoda, citlivost vůči hrozbě terorismu, duševní zdraví, nepřímé oběti, žáci, teroristické činy

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