

HEALTH AS A MOTIVATIONAL FACTOR IN ENVIRONMENTAL EDUCATION

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Abstract: *In the paper we define the basic mental constructions of environmental education in the context of health education with an emphasis on the biophile orientation of school education. The curricular reform of the school system brought about a significant change in this area. It is based on an assumption that being “a cultural protector of health and the environment“ is an essential competence of an individual, which enables an awareness of the existing mutually causal, spontaneously realised relationships in the environment and thus influencing the quality of environment protection and consequently also health protection. Based on the hitherto research investigations the patterns of thinking about environmental problems are surveyed in student teachers and basic school pupils. Furthermore, perception of health related to environment protection is described. Special attention is paid to the environmental and health impact of transport, leisure and sport activities. The authors prove that health can become a significant motivational factor in the process of forming a relationship towards the environment.*

Key words: *transport, eco-therapeutic potential of nature, environmental education, quality of life, health promotion, sports activities, relaxation outdoors, sport, health education, health, environment*

Health, the environment, education and the biophile focus in education

Being “the cultural protector of health and the environment“ is a basic competence of an individual enabling understanding of the existing mutually causal, spontaneously operating relationships in the environment and based on this it also enables individuals to influence the quality of environment protection and thus also health. The vision of “life in harmony with nature“ corresponds with the demand on “*the transition from distancing oneself/becoming alienated from nature to the value rehabilitation of nature by imprinting life as the supreme value*“ (Šmajs 2008, p. 55). As mentioned by Koger and Winter (2009), the crises of the environment lies not only in endangered species of plants and animals, but also is “*the external symptom of the crises of mind and soul*“.

Education is traditionally seen as as a remarkable phenomenon, which can help

overcome the problems of humankind and promote the realisation of new necessary qualities of life by means of its biosocial and sociocultural function. It is becoming a regulator of human behaviour towards nature and the world as such and a determinant of modification and development of culture. From our point of view the most topical issues currently are those related to building the relationship towards the environment with an emphasis on the nature component, threatened by the development of civilisation and up-to-date lifestyle. The principal role in this process is played by environmental and health education, as they have several common features. Namely, leading a healthy lifestyle does not mean only the elimination of health risks related to human health, but it means to help improve the health of the environment too.

The overlap of environmental and health education is explicitly applied in key competences (The Framework Educational Programme for basic schools, p. 6-9). It assumes that a basic school graduate will:

- *understand basic ecological connections and environmental problems, respect the requirements on quality environment, decide for the sake of the promotion and protection of health and sustainable development of the society (the civic competence),*
- *approach the results of work also from the point of view of the protection of one's and others' health, environment protection and the protection of cultural and social values (work competence),*
- *employ the acquired communication skills to develop relationships essential for peaceful coexistence and quality cooperation with other people (communication competence),*
- *establish a positive image of himself/herself, based on thoughtfulness and respect while dealing with other people foster good interpersonal relationships (social and personal competence).*

Environmental problems in the content of education are presented and explained as the problems of the environment with the natural, cultural-symbolic and physical-civilisational dimensions and primarily as the “*problems of threat*” caused by human behaviour towards nature. In the educational context the fact is addressed in calling for “life-supporting, life-respecting and protecting“, or in other words biophile focus in education. It builds on the requirements of education (not only environmental) and develops them further aiming at:

- explanation of what nature, culture, evolution and its products are,
- the shift from factual information and passive acceptance of facts to the encouragement of process thinking and responsiveness to the relationships and interconnections in nature,
- explanation of the value priority of nature for human life including the fact that nature has a value as such regardless of human needs,
- overcoming the opinions that every value springs from humans and that it is enough to take only humans, not nature into consideration,
- reinforcement of the system and evolutionary way of thinking in the sense that humans are responsible for culture and actions that unnecessarily harms the natural system (Šmajš 2008, p. 58);

While exploring the possibilities of enhancing the effectiveness of education attention is paid to the ways of effective promotion of environmental behaviour by a change in the field of relationships towards nature, personality or the environment. Psychological research related to environmental topics offers a number of studies (mainly foreign). Especially inspiring are those that describe the context of behaviour towards the environment with general personality characteristics, e.g. qualities and values or aspects of human psyche, directly connected with nature and the environment (defined by J. Krajhanzl (2009, p.134) as “*relationship towards nature and the environment*“). Ecopsychologists characterise a complex system of stimuli, among them ranking *environmental attitudes* (such as that of a master, religious attitude, attitude of a partner etc.), *environmental responsibility* (the willingness to behave pro-environmentally in the environment where environment-friendly behaviour is not a part of social norms), *environmental inclusion* (the degree to which an individual considers himself/herself a part of nature and nature a part of himself/herself), *environmental identity* (the degree of identification of an individual with the idea and beliefs of environmentalism).

There are apparent differences in the *ecological awareness* of an individual, that is in the extent to which environment protection is considered in decision-making, why the environment is protected (Krajhanzl 2009, p. 134 according to Schmuck, Schultz 2002). The teacher respects also the so-called defence mechanisms (Koger, Winter 2009, p. 33), which hinder the acquisition of available environmental information. Individual’s experience, background, need of contact with the natural environment, environmental sensitivity have to be taken into consideration. Environmental interest as an aspect of motivation distinguishes the ways of directing our moral norms (egoistic interest, social-altruistic and eco-centric – cp. Nickerson 2003).

It is a well-known fact that actual behaviour is a result of a whole chain of biogenic, sociogenic, psychogenic motives, gained experience etc.

In the discussed topic it is important that motivational content is present in attitudes, needs, abilities, nature-oriented interests, as they influence experiencing and behaviour towards nature. The need of contact with nature is therefore significant regarding the quality of life and the physical, mental and spiritual health.

The source of motivation of humans for environmental-friendly behaviour can be the health risks brought about by environmental problems. This assumption was a stimuli for our investigation that examined thinking of student teachers and basic school pupils about environmental problems in the context of health care.

The overlap of healthcare and environment protection in research

In the course of our investigations we attempted to capture the relationship between healthcare and environmental education, or rather to find an overlap in the field of “healthcare“ and “environment protection“. Our motivation was the key imperative of the aim of environmental education, which is to act for the benefit of nature and the environment. This approach can be encouraged in various ways, we focused on the issue of “health“, more specifically on “health risks caused by environmental effects“. We can not assume that love for nature itself could be sufficient motivation for significant

changes in behavioral patterns and lifestyle for the benefit of nature in the majority of population. There are researches (e.g. Franěk 2004, Krajhanzl 2009), however, that demonstrate that people are willing to change the patterns of their behaviour only if they themselves or their close friends directly benefit from that.

We can not rely on the change of approach towards the environment solely on the basis on mechanical acquisition of humanistic ideals in environmental education. Rather, it is essential to focus on the people whom noble ideals do not affect. The centre of our attention was educational, or methodological identification of objective health risks generated by the damaged environment, which can represent strong motivation to rethink certain patterns of behaviour across the population.

In our investigation (Horká, Hromádka 2009) we primarily sought to determine whether in the sample of the students of the Faculty of Education Masaryk University (N=163) there is a relationship (such as a correlation) between an attitude towards the environment and an attitude towards one's healthcare.

We formulated the following research hypotheses:

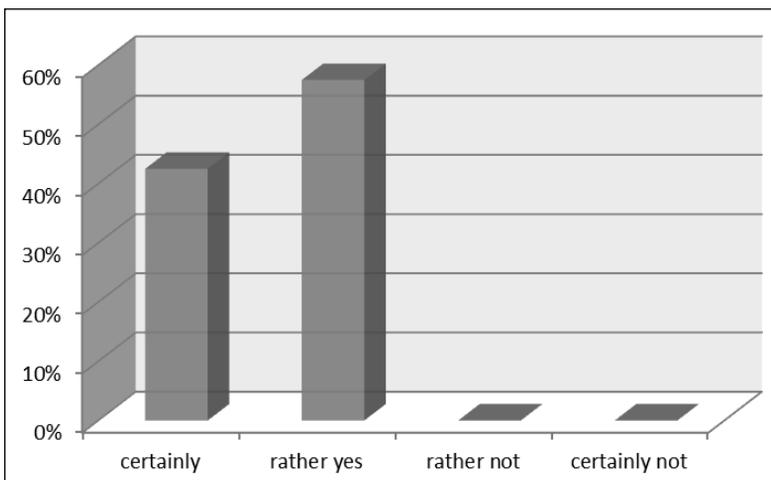
h1: There is a relationship between an attitude towards one's own health and an attitude towards the environment.

H2: The respondents appreciating their health want to get involved in environmental protection.

H3: The respondents who consider car transport to be a health threat intentionally choose more environment-friendly means of transport (Horká, Hromádka 2009).

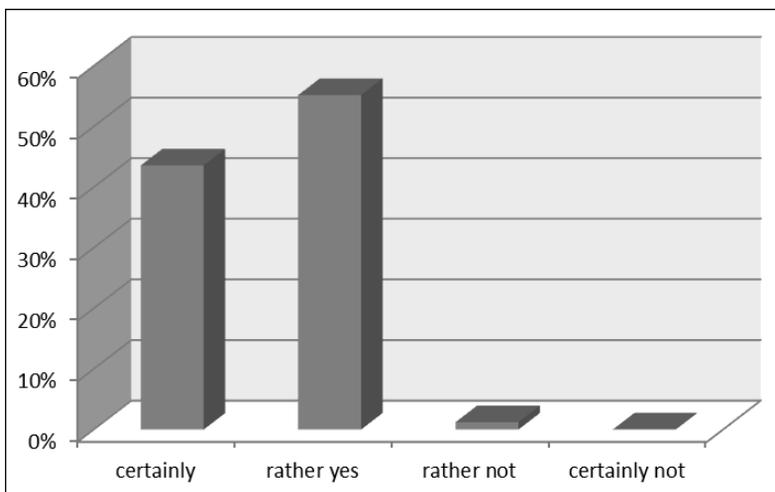
In all three hypotheses we had to accept zero hypothesis – a relationship between variables was not proved. Nevertheless, in our descriptive analysis we obtained interesting results. E.g. it is apparent from the following diagrams that students have a positive attitude towards environmental protection:

Diagram No.1; The degree of agreement with the statement: "I want to participate in environment protection."



(certainly: 42,5 %; rather yes: 57,5 %; rather not: 0 %; certainly not: 0 %)

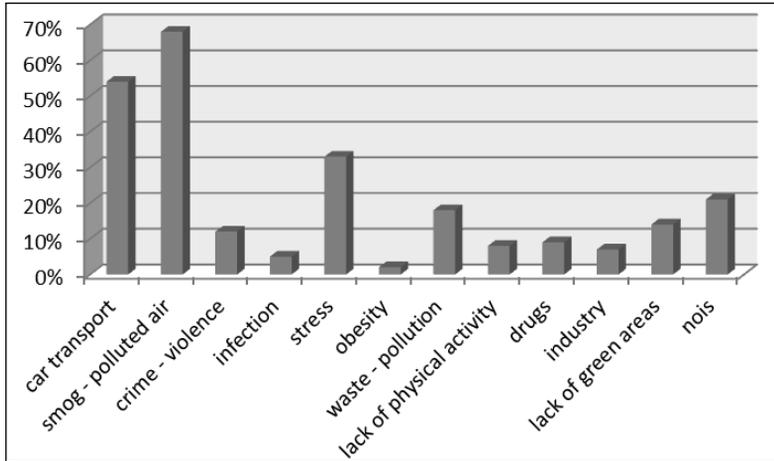
Diagram No. 2; The degree of agreement with the statement: “I want to live in an environmentally-friendly way.”



certainly: 43,6 %; rather yes: 55,2 %; rather not: 1,2 %; certainly not: 0 %

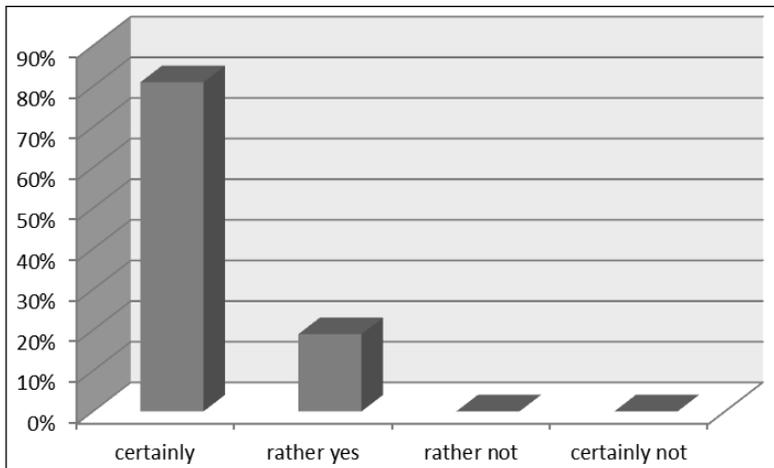
We obtained rather positive results in the area of concerns about one’s health as 50.3 % of all students ranked “own health“ first. Although we did not succeed in establishing a relationship between an attitude towards environment protection and concerns about one’s health, we did identify an area of overlap of those two topics. In our research we formulated an open question: “Write down what you consider to be the greatest threat to life in a city“. We found out that (as illustrated in diagram No.3) the respondents largely associate concerns about their health with environmental issues (*car transport, smog – air pollution, wastes – pollution, industry, lack of green areas, noise*). In terms of relative frequencies the most frequent was the category *smog – air pollution (68.4 %)* and *car transport (53.8 %)*. It is apparent that students feel threatened by what we consider a natural and probably also inevitable toll that civilisation takes – more specifically motoring and related dangerous exhausts (Horká, Hromádka, 2009).

Diagram No. 3



While in our previous investigation we attempted to find out whether respondents perceive damaged environment as a health threat, in the following investigation (Horká, Hromádka, 2010) we were examining whether undamaged environment represents positive contribution to human health. A pilot study indicated that the environment is from the point of view of human health interesting mainly as a platform for relaxation. Therefore, we tried to determine, whether the students of the Faculty of Education Masaryk University in Brno (N = 104) actually consider relaxation a significant activity in the context of health care – diagram No.4:

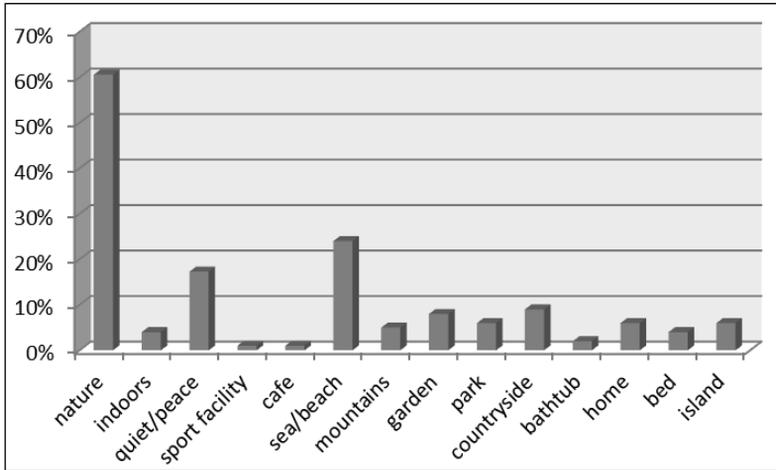
Diagram No. 4; “To what degree do you agree with the statement: Good relaxation is particularly important for human health“.



As illustrated in the diagram students consider relaxation to be an important activity. Subsequently, we attempted to find out what natural environment represents an

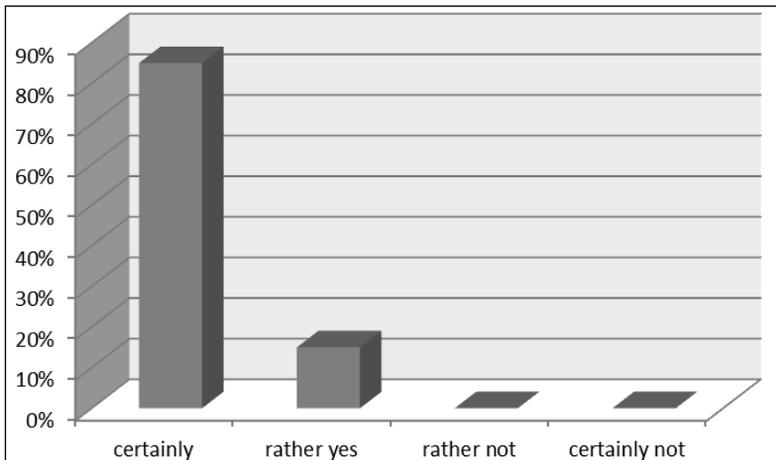
interesting place for relaxation within the sample. In our investigation we formulated an open item: “Imagine a place (or places) where you would most like to relax and describe the place briefly“. Relative frequencies of the categories formed from the answers are featured in diagram No. 5:

Diagram No. 5



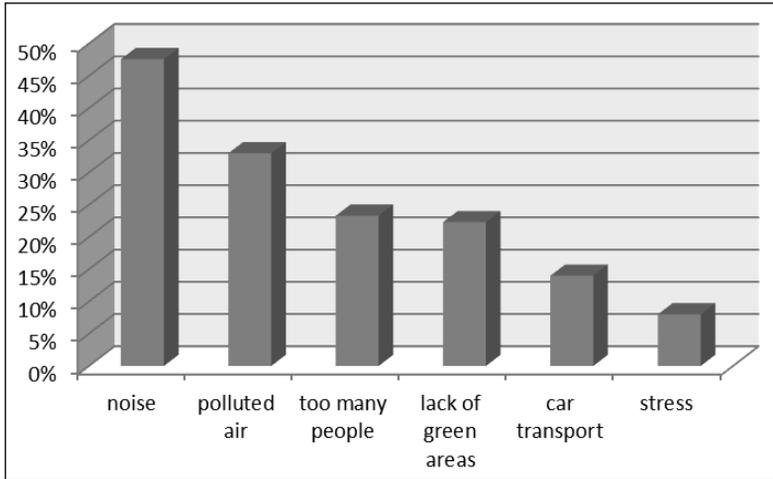
The most frequent is category *nature* with 60.6 %. Other significant categories are: *sea/beach* (24 %) and *quiet/peace* (17.3 %). Although the term “nature“ is rather general and we can not strictly define how the respondents understand it, we consider this a confirmation of the assumption that students perceive nature mostly as a place suitable for relaxation. To specify we used the following closed item (its results are displayed in diagram No. 6):

Diagram No. 6; “To what degree do you agree with the statement: Nature (green areas, park, forest, etc.) is a suitable place for quality relaxation.“



In our investigation we were attempting to find out, whether the respondents perceive any obstacles to quality relaxation and whether these have environmental context – see diagram No. 7:

Diagram No. 7: “If you think that life in a city places obstacles to quality relaxation, write down which“.



It seems that obstacles to quality relaxation often have environmental context – on the first place there is *noise* with 47.6 %, then *polluted air* with 33 %, on the next position there is a category (rather social than environmental) *too many people* with 23.3 %, but next is *lack of green areas* with 22.3 %.

It is apparent that quality relaxation is an important component in health care and also, that respondents often associate it with relaxation in natural environment. It has also been found that obstacles to quality relaxation are often attributes of the damaged environment (Horká, Hromádka 2010).

In the relational part of our investigation we tested these hypotheses:

h1: There is a relationship between the place of residence and perception of conditions for relaxation in a city.

(We assumed a zero hypothesis – no relationship.)

h2: There is a relationship between a place of residence and the choice of environment for relaxation.

(Kendall's tau = - 0.29. The relationship is low, but significant).

H3: There is a relationship between the choice of environment for relaxation and attitude towards environment protection.

(We assumed a zero hypothesis – no relationship.)

h4: There is a relationship between subjective evaluation of one's relaxation and subjective evaluation of one's health care.

Kendall's tau = 0.30 The relationship is low, but significant.

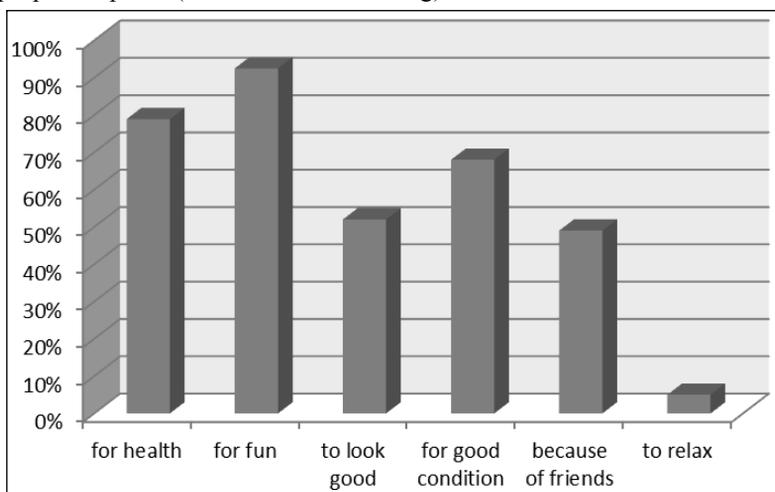
h5: There is a relationship between popularity of cycling in the country and relaxation outdoors.

Kendall's tau = 0.39. This relationship is (almost) of middle strength and significant (Horká, Hromádka 2010).

What we find interesting in the context of the discussed problem are especially the results showing the absence of relationship between the choice of the environment for relaxation and the attitude towards environment protection, which can be interpreted in the way that if one enjoys natural environment as a place for relaxation, it does not necessarily mean the person has more positive attitude towards environment protection. The result of the last hypothesis can be interpreted in the sense that a more active form of relaxation can be associated with the preference for natural environment for relaxation.

Another investigation we are dealing with in this paper is focused on a situation when one's personal health care (such as physical activity in this case) contradicts environment protection. In the sample of students of the Faculty of Education MU (N=133) we were initially examining why the students have physical activity and whether there are connotations with one's own health care – diagram No. 8:

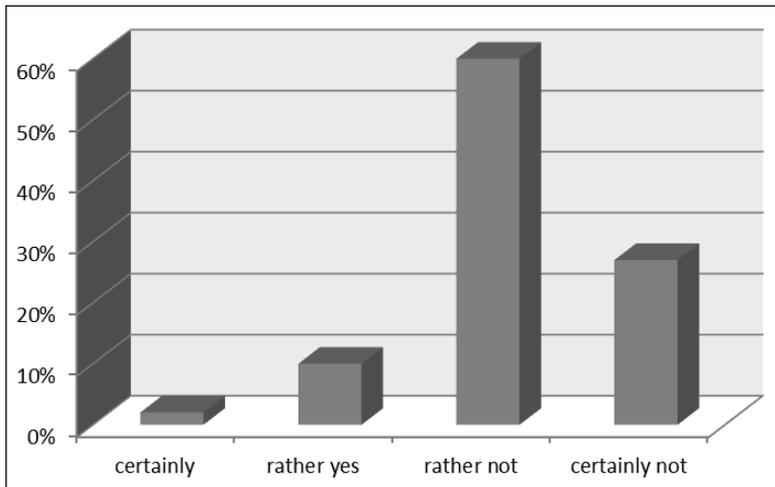
Diagram No. 8; “If you come across a reason or reasons for having physical activity, tick the appropriate spaces (or add others if missing).“



As demonstrated, the respondents on the one hand most often do sports or have physical activity for fun (92.5 %), but the second most frequent category is the category “for health“ - 78.9 % (Horká, Hromádka 2010).

We were further examining whether the respondents take possible effects on the environment into consideration (we admit that this may sound absurd in some cases and validity of the item is therefore problematic). For results see diagram No. 9:

Diagram No. 9: the degree of agreement with the statement: “When having physical activity, I take into consideration what effect this might have on the environment.”



Modal category: rather not

Our focus on potential environmental dimension in doing physical activities was represented also by a variable in the form of the degree of agreement with the statement “I look after my health in such a way not to damage the environment.” The modal category was: *rather yes* (61.6 % valid). Thus, the surprising majority declares that they look after their health in such a way that damages the environment as little as possible. A similar trend is reflected also in the results of the evaluation of another variable: the degree of agreement with the statement: “Nature should not be an obstacle to projects developing facilities for physical activities“, where the modal category is the choice *rather not* with 82.7 % (Horká, Hromádka 2010).

Concerning the applied indicators, in the relational part of the investigation we found an interesting correlation between “responsible attitude towards one’s health“ and “effort to act in an environmentally-friendly way“ (correlation Kendal’s tau $t_b = 0.32$). That is to say that in our research sample we eventually discover low (but significant) relationship between concerns about one’s health and environment protection (Horká, Hromádka 2010).

Conclusion

An analysis of three conducted investigations about the possible relationships between “concerns about one’s health“ and “environment protection“ yielded a number of overlaps – a whole range of areas where these topics overlap and influence each other. It seems that nature is perceived as a platform for health care and the damaged environment is perceived as a serious health risk. We assume that these are quite interesting starting points for the motivation of environmental education. Health can become

a significant motivational factor in the process of establishing the relationship to the environment. It can play a pro-environmental role in the so-called internal focus of control which indicates the extent to which an individual feels to be an active agent in the world around him/her (Krajhanzl 2009, p. 138 according to Allen, Ferrand 1999). These people feel that “*it is in their power to change things, in contrast to the people with the external focus who believe the world controls their life absolutely*“ (Krajhanzl 2009, p. 138). It is suggested that the realisation of the value of health of people will affect human indolence which is ranked among obstacles to pro-environmental behaviour.

Although we are aware of the fact that it is time-consuming and challenging to develop a personality pro-environmentally, it is our duty to strive for environmental awareness purposefully and systematically. While building it we accept that sufficient and true information is available, however, there is a contradiction between people’s attitudes or held values and observed behaviour. Also, we take into consideration that a special role is played by unconscious preferences of individuals and pressures placed on individuals by their social circles, social norms and the situational distortion we succumb to in our decision-making.

Professional training (in specific disciplines, educational science, psychology, philosophy, etc.) enables a synergy of the outputs of individual disciplines focused on nature, culture, society and individual. Each discipline deals with the rich, complex and integrated phenomenon of life differently and each of them finds the true meaning only in the complexity of cognition, which is an orientational constant for a person and his/her life. If the expectation of coherence, mutual cooperation or consilience is not met, then according to Wilson (1992, p. 322) what follows is “*disintegration, separation and fragmentation leading to a dangerous imbalance and uncoordinated tendencies and attitudes.*“ System learning brings about the aspects significant for environmental education and subsequently for the management of human development and the whole planet.

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ZDRAVÍ JAKO MOTIVAČNÍ FAKTOR ENVIRONMENTÁLNÍ VÝCHOVY

Anotace: Ve stati jsou vymezena základní myšlenková schémata environmentální výchovy v kontextu výchovy ke zdraví s akcentem biofilní orientaci školního vzdělávání. Kurikulární reforma ve školství přináší v této oblasti významný posun. Počítá s tím, že být „kulturním ochráncem zdraví a životního prostředí“ je základní kompetencí jedince, která mu umožňuje orientaci v existujících vzájemně příčinných, spontánně se uplatňujících vztazích v životním prostředí a na tomto základě ovlivňování kvality péče o prostředí a potažmo o zdraví. Na základě dosavadních výzkumných šetření je mapováno uvažování a přemýšlení studentů oboru učitelství a žáků základní školy o environmentálních problémech a je popsáno vnímání zdraví v návaznosti na péči o životní prostředí. Zvláštní pozornost je věnována environmentálním a zdravotním důsledkům dopravy, rekreace a sportovních aktivit. Autoři dokazují, že se zdraví může stát významným motivačním faktorem v procesu utváření vztahu k životnímu prostředí.

Klíčová slova: doprava, ekoterapeutický potenciál přírody, environmentální výchova, kvalita života, péče o zdraví, pohybové aktivity, relaxace v přírodě, sport, výchova ke zdraví, zdraví, životní prostředí