

# HEALTH EDUCATION IN TERMS OF RESPONDENTS IN THE SCHOOL ENVIRONMENT IN NITRA AND PREŠOV REGION

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*Miroslava LIŠKOVÁ*

**Abstract:** *In contemporary philosophy of a man as a bio-psycho-social being, health education is viewed as an important factor in promoting the health of individuals and society. Health education is defined with an emphasis on active access, motivation, and multidisciplinary. We interviewed 445 respondents from the school environment attending the sixth grade at primary school and the third grade at secondary grammar school in Nitra and Prešov Region on health education, and the focus of health programmes. The methods used were a questionnaire, and mathematic-statistical methods, Student's t-test in the program 11 for Windows. We conducted the research in 2007. The research indicates that health education is one of the priorities of the society. Active approach to prevention and responsibility for health were confirmed. Health status as number one value was recorded in more than half of respondent's answers. Considerable deficiencies were in health programs awareness. Health programs, according to respondents, focus on children, old people, and handle the issue of movement, nourishment, cancer prevention, and stress elimination.*

**Key words:** *health education, health, philosophy of health, health awareness, health promotion, nursing, nurse*

Health education is one of the areas of education, is the focus of educational curriculum, and is closely linked with health service. Health education or education for health? The controversy about whether it is preferable to use one or the other term was due to the English translation. There are several views and terminological expressions of health education in the literature. „Consciously constructed opportunities designed to gain the knowledge alleviating changes in health behaviour“ (WHO, 1999). Beniak (1993) presents a further definition of WHO „...health education is a special branch of medical sciences and health which aims to instil knowledge and develop pursuance aimed at preserving the health of individuals and population groups in society.“ The emphasis on influence is in the following definition: „Health education is a purposeful, deliberate, and systematic influence on pupils using pedagogic means to increase knowledge, influence their attitudes, and induce in daily life such behaviour to be healthy and to be able to fully develop their physical, mental, social potential“ (Broniš,

1995). Závodná (2002) regarding the work of professionals, states: „*Health education is a multilateral educational activity focused on creating conscious and responsible acting of a man with regard to support, preservation, and maintenance of health. Health education influences knowledge, attitudes, beliefs, motivation, and human behaviour in term of health and disease, and is a part of overall education, as well as of a particular health care system*“. The emphasis on improving the health of the population expresses: „*Health education is a part of efforts to promote health and improve health status of the current population*“ (Průcha, Walterová, Mareš, 2003). Payne (2005) understands health education as „...*support of all components of individual's health, thus not only status of physical, but also mental, and social well-being*.“ Increasingly we encounter the concept of health education; Liba (2000) uses the concept health education as a determinant of prevention, mean of optimizing the functioning, morphological, functional, and mental balance of the organism. He argues that health education presents health from biological side and education for health wider field of action. The purpose of education to health he sees in the creation of relationships, attitudes, and subsequent positive behaviour to own health and the health of the others as the value which is a prerequisite for fulfilling life. In the '80s of the last century health education was defined as a responsible use of primarily health information. Today, however, health education is viewed as a process focused especially on behaviour change. It follows that education for health and health education are identical processes. This can be demonstrated by comparing the content of health education topics by Liba (2000) and content domains of health education by Wiegerová (2005).

#### **Content topics of education for health by Liba (2000):**

1. Current health status of the population and developmental trends of children,
2. Basic knowledge of goals, objectives, content, forms, and methods of primary prevention,
3. Basic knowledge of proper nutrition,
4. Basic knowledge of environmental hygiene, quality of nutrition,
5. Rational use of leisure time,
6. Basic knowledge of structure and content of motion regime,
7. Basic knowledge of primary prevention of drug addiction,
8. Education for protection and care of nature,
9. Effective communication and verbalization,
10. Socialization,
11. Education for partnership, marriage, and parenthood,
12. Safe behaviour, traffic discipline.

#### **Content domains of health education by Wiegerová (2005):**

1. Regime strengthening health,
2. Use and abuse of medicines and drugs,
3. Sexuality and health,
4. Education for protection of health and safety at work,
5. Social aspects of health, life in a community, state,
6. Education for family life, family and its relationships, leisure time in family,
7. Exercise for health,

8. Personal health care,
9. Environmental aspects of health,
10. Psychological aspects of health.

Both content structures consistently respect bio-psycho-social level of health which is often used as argument in favour of education for health. Both concepts can be used. Education for health, however, evokes more active approach by the „educated“ and an element of the new and progressive.

The concept of education for health and the concept of health promotion are not identical in content or implementation. Health promotion is a process throughout society in which education has its significant place, but also health promotion has its place in education.

Purpose of health education is to increase health awareness of healthy and ill residents. **Health awareness** is primarily a certain level of knowledge related to health, it is an expression of the relationship of the individual and society to individual and social protection of health reflected in particular proceeding. „*Health awareness as a part of health culture is a set of subjective factors which are formed within education, culture, tradition, world view, religion, and political beliefs*“ (Závodná, 2005). Health awareness is influenced by objective (natural, social, economic, spiritual environment) and subjective (type of higher nervous system, genetic continuity, regulatory mechanisms, morality, character, education, personal voluntary characters) factors. The process of health awareness is affected by the quality of information, motivation, communication, way of persuasion, decision-making process, and respect for desirable behaviour. Conscious behaviour of individuals in relation to health requires appropriate conditions for the development of positive aspects of life. For one-self, education for health makes it necessary to take care of his/her health and the health of his/her children and relatives or distant mates, co-workers.

Health promotion is an awareness of the need for control over their health status and its enhancement. It means that the individual but also a group, a family strives to increase its knowledge for maintaining the health of their children, parents, extended family, but also society, at home, in neighbourhood, at work, at school. Society within health promotion sets out to achieve healthier lifestyle without risks and with permanent memory for sound health, therefore proposes programs of healthy diet, increasing physical exercise, ability to eliminate stress, maintenance of adequate weight, life without bad habits and addictive drugs, healthy family relationships, life without sexually transmitted diseases, reduction of mass non-infectious diseases, but also increase of quality of life at any age (Kaplun, Erbe, 1990, Lehtinen, 2004).

Protecting and strengthening of health as a part of working and living environment cannot exist without active, initiative, and systematic voluntary acting of people in favour of maintenance, promotion, and strengthening of health. A summary of educational activities focused on shaping the knowledge, attitudes, and acting of citizens towards promotion, strengthening or restoration of health presents health education. Its immediate task is to raise public health awareness and thereby achieve the higher activity and involvement in health care.

The basic role of health education is persuading a person to take decisions aimed at improving individual and collective health, to acquire healthy lifestyle and

maintain it and wisely and judiciously use health services. Tasks of health education of the population meet all the health facilities and their health professionals in close cooperation with family, school, economic and social organizations as an integral part of daily activities (Rovný et al., 1995, Bielsky, 1996). „*Health education is a complex concept characterized primarily by interdisciplinary character of branch of medicine, but also accepting the medical-andragogic-pedagogic level as well as the level of educational enlightenment activity aimed at active attitude towards health, enhancement of health awareness and health knowledge, expansion of care for healthy way of living and creation of healthy living environment aimed at enhancing the quality of life. The World Health Organization defines health education as a special field of medical sciences and health which aims to create knowledge and develop acting aimed at preserving the health of individuals and population groups in society*” (Hegyí et al., 2004). According to Bašková (2009) health education has an interdisciplinary character with an ambition to spread knowledge, form habits and attitudes focused on health protection and promotion of social character. Health education is an important part of nursing. According to Závodná (2002) its subject is the study of health status and development of knowledge, attitudes, motivation, and acting of individuals in individual and collective health protection and also it investigates the impact of environment on the health awareness of people from different social conditions. The range of health education is broad and may be classified into 7 dimensions:

1. It deals with the whole person and includes physical, mental, social, emotional, spiritual and social aspects.
2. It is a lifelong process, which lasts from conception to death and helps people to change and adapt during health and disease.
3. It focuses on people at every stage of health and disease, or disability to maximize their potential for healthy life.
4. It focuses on individuals, families, groups and communities.
5. It leads people to be able to help themselves and accept healthier choices.
6. It includes formal and informal teaching and learning using a range of methods.
7. It has a number of objectives including providing information, changing attitudes to behaviour and social change (Lemon, 1997).

The objective in intentions knowledge – attitude – behaviour is closely related to actual determination of health in general. In this context are: cognitive objectives focused on providing information to improve client/patient knowledge, affective objectives focused on attitudes, persuasion, evaluation, opinion, they have to provide emotional support to client-patient, objectives behaviourist focused on acquiring some competences and skills. „*In implementing the objectives in practice it is usually a combination of multiple goals. It should be noted that the achievement of one objective does not necessarily mean a shift to the other objective, it is also very important to set appropriate goal for particular client/patient.*“ (Závodná, 2002).

## **Health education in system of nursing education**

**Philosophy of health** is understood as a philosophy of life and attitude to it, and also active participation in it. It presents a state of harmony of body and soul by

own effort, using psychological, voluntary, character, and biological predisposition of a human. It means **to take responsibility for own health**. This model emphasizing the individual's own activity requires changes not only in the minds of nurses and other health professionals, but also in the minds of people - laymen, who even today still do not realize that their own behaviour and action may cause certain health problems. Lifestyle questions are becoming conscious prevention markedly participating in health. Developing the philosophy of health is necessary to support the idea that nursing is a discipline dealing with care for the ill and increasingly providing special information, help, and advices. „*Caring for own health has also social, economic, and ethic value.*“ (Závodná, 2002) Significant example is a nurse, who acts responsibly in order to maintain and promote own health. Nursing is both a science and an art.

Nursing applies different principles (physiological, psychological, social, spiritual, cultural – multicultural) in providing care to an individual, family, community in promoting and protecting their health. In **health protection** nursing focuses on a man during life, in a developmental period in continuity of two dimensions health – disease.

Education in nursing in the past and at the present time is undergoing a constant change. In traditional nurses' education, emphasis was put on technical skills, clinical aspects in nursing, disease and pathology. Little space was devoted to health issues and factors that preserve it. The mentioned objective and functions of nursing require a new view, concept, and content of curricula of nursing education, which is currently carried out in the form of bachelor, eventually master programs on academic grounds. The academization of nursing education represents the development of nursing in these attributes and tendencies. Education and training of nurses is increasingly focused on a healthy humans, disease prevention, health maintenance and promotion. Therefore, health care is one of the main responsibilities of a nurse. **Health promotion** is a process that allows a healthy individual a control of those factors that affect health and its maintenance.

*„Training and education of patients/clients include detection of individual knowledge and skills to maintain and restore health, preparation and information providing at appropriate level, organizing training and educational activities and their evaluation, aid to nurses to gain new knowledge and skills. Nursing objectives are focused on health care of an individual, family, groups, and communities to achieve physical, mental, and social health and welfare in accordance with their social and ecological environment, promote their positive health and promote a human as an active participant on health care, who is educated, informed, and willing and is willing to take care of own health, maximize human potential in the care of himself, and pursue disease prevention“ (Study programs of non-teaching fields of study, 2002).*

Multidisciplinary nursing education prepares nurses to support community health. Students acquire skills in protecting, health promoting, alleviating suffering in selected health facilities. It is necessary to learn to act ethically, emphatic, but highly professionally, to demonstrate communication skills, personal, emotional, and social intelligence. Graduate's task is to shape and educate others, attract them to cooperation in health maintenance and promotion. Health education is prepared as a specialized field within further training for nurses, which may be completed after the first eventually second university degree, or higher education. (Slezáková et al., 2005) For the

development and application of nursing objectives in health promotion and potential social contribution it is necessary to ensure in education:

- strengthening the teaching of nursing in community health care in promoting, health maintaining, and taking responsibility for health of individuals, families, communities on theoretical level, but also on practical, within implementation of clinical practice in non-hospital facilities,
- emphasizing the important role of the individual in personal responsibility for own health status,
- demonstrating responsible behaviour and action of future nurses, exemplary lifestyle in order to promote and maintain own health,
- active participation of future nurses in societal health promotion programs (Healthy City, Healthy School...).

Whereas health education is a complex process with problematic clear definition, in practice we go from the following approaches:

The medical model implies disengagement from medically defined disease and disability. Health promoting activities seek to promote medical interventions, preventions using persuasion, encouragement.

Behaviour change assumes that behaviour of individuals leads to the absence of disease and important is change of attitude, behaviour, promotion, and adoption of healthy lifestyles through persuading and information providing (Bartholomew et al., 2006).

Health promoting activities are based on the fact that only individuals with knowledge can make decisions followed by active involvement while respecting each individual. Nurse actively explores values and helps to make decisions.

Focus on client/patient creates the conditions to the individual to identify the problems by him and propose solutions which nurse will accept.

Social change focuses on change in physical and social environment so as to enable better lifestyle choices through political and social changes. (Lemon, 1997, Závodná, 2002)

Health education in the new philosophy of care for bio – psycho – social being within multispecialty action allows professionals to develop a range of activities for which they are trained within education process on theoretical and practical level. Health education is an integral part of the educators' and health professionals' work when they support positive, and eliminate negative aspects out of the human's life within dissemination of knowledge, awareness of the possibility of active participation in health protection and special programs implementation of the World Health Organization, and also national programs aimed at health promotion (Bašková, 2009, Fertman et al. 2010).

## **Opinions of respondents from the school environment on health education**

We surveyed the views of selected groups of respondents of health education in a broader context. We focused on health education, subjective health assessment, health-threatening factors, individual activities carried out in favour of health, information on programs supporting health and focus. We assumed that respondents' opinions on health

promotion in Nitra and Prešov Region will not significantly differ. Research was also based on the assumption about the conformity of legislative and program – presented priority of health education by society with respondents' replies. We assumed a stronger focus of health educational activities according to the respondents' replies to promotion and protection of health in children and the elderly rather than productive population.

## Methods and material

As a primary method for obtaining data about the issues we used a **questionnaire in selected, primary and secondary schools in Nitra and Prešov Region**. These regions were chosen for their similarity in terms of population structure and territorial location of the western and eastern part of the country. The questionnaire incorporated 14 items and its aim was to ascertain the views of respondents to health education, health assessment by respondents, individual activities carried out in favour of health, information on health promotion programs and their focus. The research was conducted from May to October 2007. After analyzing the questions we made out 500 questionnaires, of which 456 were returned, it is 91.2% return, we met the criterion of required minimal value for questionnaire method (Gavora, 2001). We approached the directors of selected schools in connection with the possibility to carry out research in their institutions. The questionnaires were distributed by post or in person. Class masters in primary and secondary schools completed the questionnaires. Data collection was followed by quantification using the statistical program for social sciences SPSS 11 for Windows. The findings in single items were processed graphically in comparing respondents' replies from each region (column chart with source data). Statistically significant dependence of examined characteristics we investigated by Student's t-test for two independent samples (Independent Samples Test) at significance level  $\alpha = 0.05$  (Sollár, Ritomský, 2002). In order to test the differences of two quantitative variables in one investigated population we used Student's t-test for two dependent paired samples (Paired Samples Test) in identifying the focus of programs on different age groups in respondents' replies.

**The sample** consisted of  $N = 456$  respondents. From Nitra Region  $n_1 = 227$  (49.78%) and Prešov Region  $n_2 = 229$  (50.22%). Representation of categories consisted of girls in absolute frequency  $n=308$ , representing in relative frequency the value 67.54% and by boys in absolute frequency  $n=148$ , representing in relative frequency the value 32.46%. Selection criteria for respondents from each school were following: pupils attending the sixth grade public primary school with more than 15 years of history involved in the project „Healthy School“, students attending the third grade at the four-year secondary grammar school with more than 15 years of history involved in the project „Healthy School“. The subsequent statistical analysis included the replies of  $n = 112$  (24.56%) students attending the sixth grade of Primary School of Prince in Nitra (ZŠ NR),  $n = 102$  (17.11%) students attending the sixth grade of Primary School in Lesnícka Street in Prešov (ZŠ PR),  $n = 115$  (25.22%) students attending the third grade of the Secondary Grammar School in Golianova Street in Nitra (G NR),  $n = 127$  (27.85%) students attending the third grade of the Secondary Grammar School in Konštantínova 2 in Prešov (G PR).

## Results

We presented and interpreted the findings according to the individual questionnaire items. For each question there is a graphical description of respondents' replies in dependence on the region (NR – Nitra Region, PR – Prešov Region). The questionnaire items were formulated so that the respondent chooses from the options provided within.

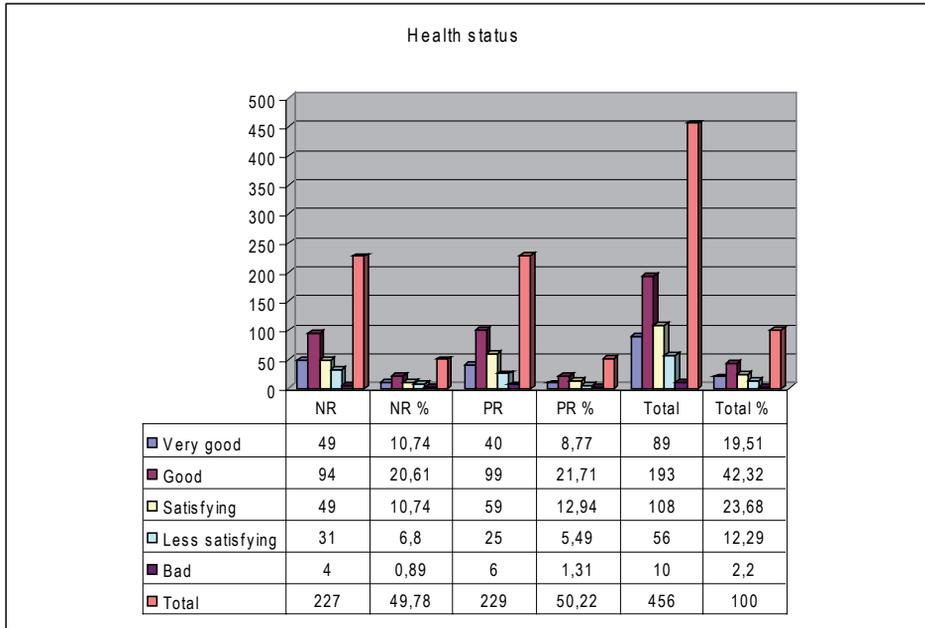


Figure 1 Health status assessment

In survey of own health status assessment the most frequently respondents' reply was the option *good*  $n = 193$  (42.32%). The next in order was the option *satisfying* which indicated  $n = 108$  (23.68%). The ultimate option *bad* indicated  $n = 10$  (2.2%) respondents. The findings correspond with the most frequently occurring response to the question of health status, which corresponds to category *good*. When comparing the respondents' replies from the two regions we did not find statistically significant differences within Student's t-test.

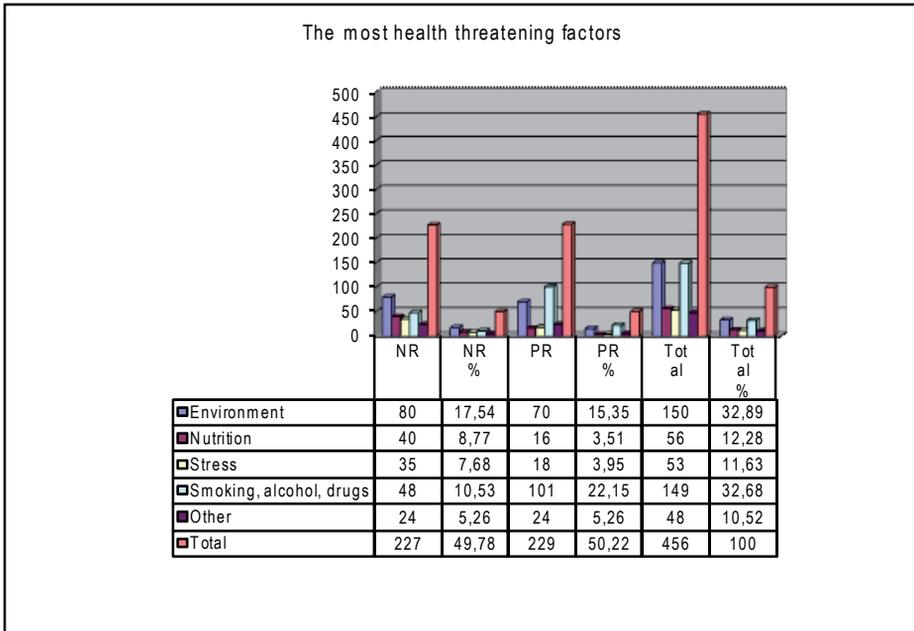


Figure 2 The most health threatening factors

Figure 2 shows the respondents' replies related to health threatening factors. According to  $n = 150$  (32.89%) respondents the most frequent factor is *environment*. Another factor is *smoking, alcohol, drugs*, as reported  $n = 149$  (32.68%) respondents. *Nutrition* is considered for a threatening factor by  $n = 56$  (12.28%) respondents and *stress* by  $n = 53$  (11.63%) respondents. The option *other* reported  $n = 48$  (10.52%) respondents. Within the option *other* respondents added hygiene, vaccination, sick children, society, sleep, dressing, viruses, immunity, and non-smoking.

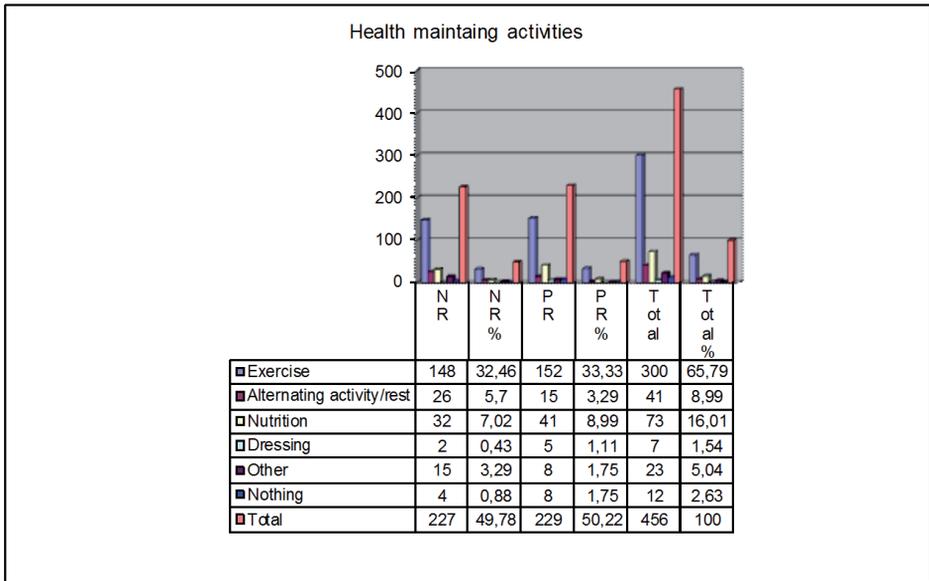


Figure 3 Health maintaining activities

Physical activity - *exercise* was the most frequent chosen option by n = 300 (65.79%) respondents. *Nutrition* was the second most frequent chosen option reported by n = 73 (16.01%) respondents. Next followed alternating of *activity and rest* reported by n = 41 (8.99%) respondents. In the category *other*, n = 23 (5.04%) respondents stated watching TV, health checkups, no alcohol, respecting parents, taking vitamins. N = 12 (2.63%) respondents do *nothing* to maintain health. Adequate dressing, as an activity for maintaining health reported n = 7 (1.54%) respondents. A comparison of respondents does not show any statistically significant differences.

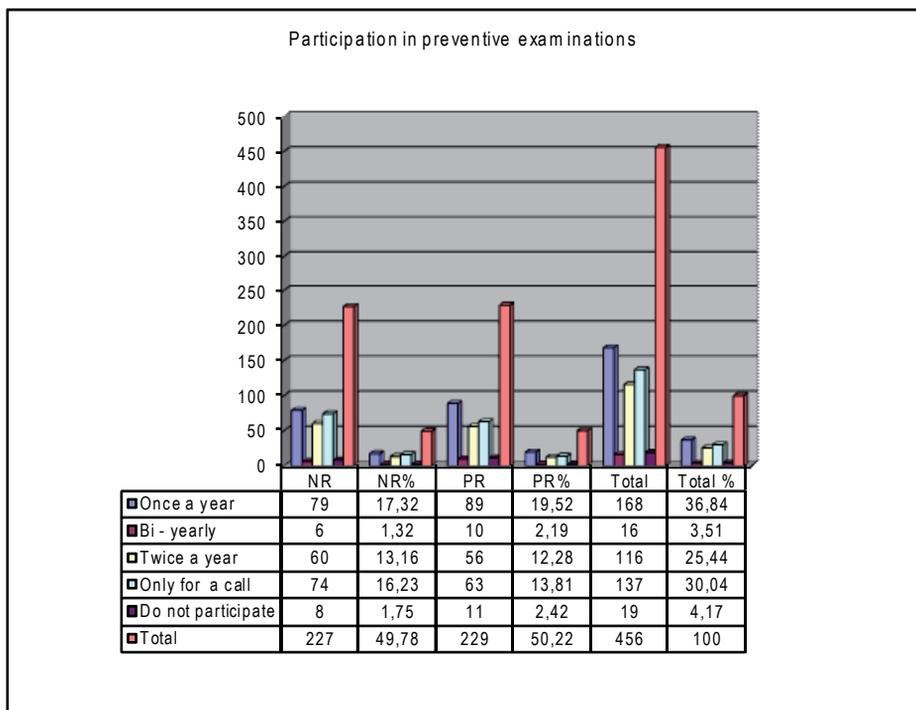


Figure 4 Participation in preventive examinations

Participation in health checkups is a significant factor in health education, so we asked how often the respondents undertake them. The most often chosen category was *once a year*  $n = 168$  (36.84%) respondents. This option implies a proactive approach of respondents to prevention. The second most often chosen option was *only for a call* by  $n = 137$  (30.04%) respondents. The given option informs about certain respondents' passivity as they participate in health checkups after the surgery call.  $N = 116$  (25.44%) respondents participate in health checkups *twice a year*. It is disturbing to find out that up to  $n = 19$  (4.17%) respondents *do not participate* in preventive examinations at all.

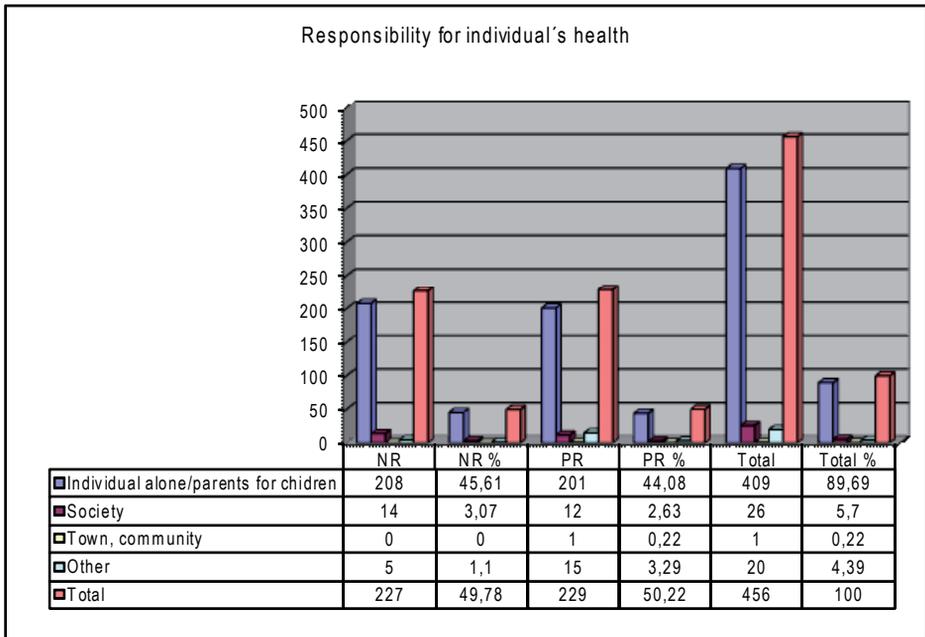


Figure 5 Responsibility for individual's health

In the next item we were interested in responsibility for individual's health. With a pleasure we can state the result, that  $n = 409$  (89.69%) respondents are responsible for their own health. Within the option *other*  $n = 20$  (4.39%) respondents wrote a physician, God, sport, teachers, catering establishments and conveniences of modern science and technology. According to the research there were no statistically significant differences in respondents' responses.

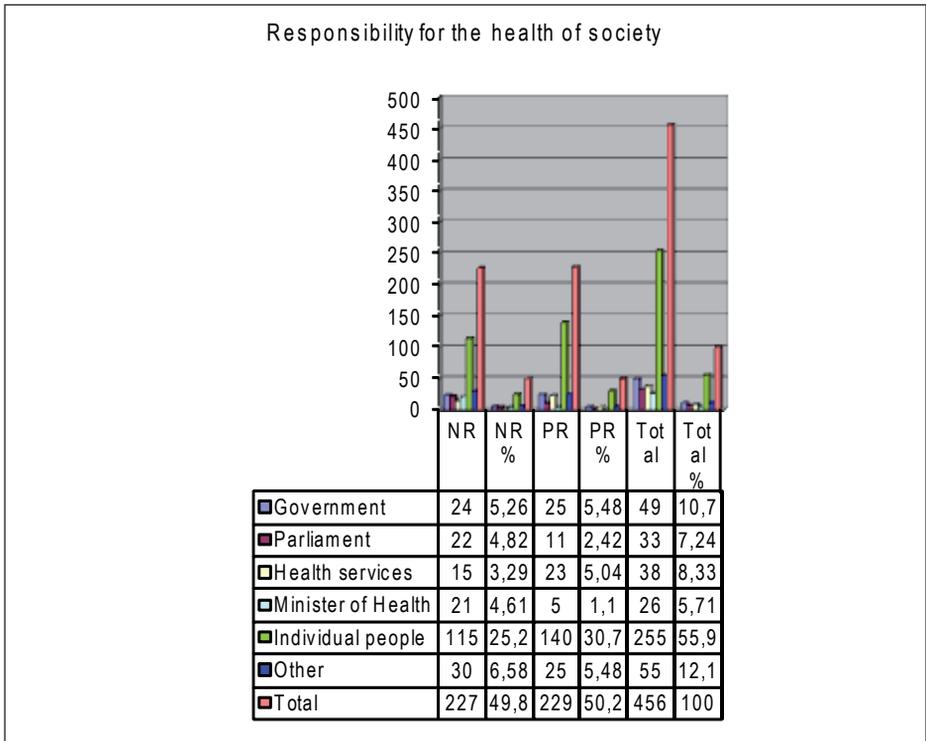


Figure 6 Responsibility for the health of society

We were also interested in respondents' attitude to responsibility for the health of society. From the offered options the most frequent choice was *individual people*  $n = 255$  (55.92%). In the option *other*  $n = 55$  (12.06%) respondents wrote insurance companies, doctors, God, power stations, scientists, media, companies producing food products, lifestyle, sufficiency. Other options were *government* according to  $n = 49$  (10.74%) respondents, *health service* according to  $n = 38$  (8.33%) respondents, *parliament* according to  $n = 33$  (7.24%) respondents, and *Minister of Health* according to  $n = 26$  (5.71%) respondents.

The item focused on respondents' value orientation included the options: *money, health, love, family, God, school, happiness*. *Health* as the value number one was reported by  $n = 248$  (54.40%) respondents. Total score values of health in a sample of respondents was 1.83. As the value on the second place by  $n = 108$  (23.70%) respondents, on the third place by  $n = 47$  (10.29%) respondents, on the fourth place by  $n = 41$  (9.01%) respondents, on the fifth place by  $n = 5$  (1.10%) respondents, on the sixth place by  $n = 4$  (0.88%) respondents and on the seventh place by  $n = 3$  (0.32%) respondents. The second, most frequently reported value was *family* with the score of 2.87, the third was *love* with the score of 3.02, the fourth was *happiness* with the score of 4.6, the fifth *God* with the score of 4.75, the sixth *money* with the score of 5.36 and seventh *work* with the score of 5.49.

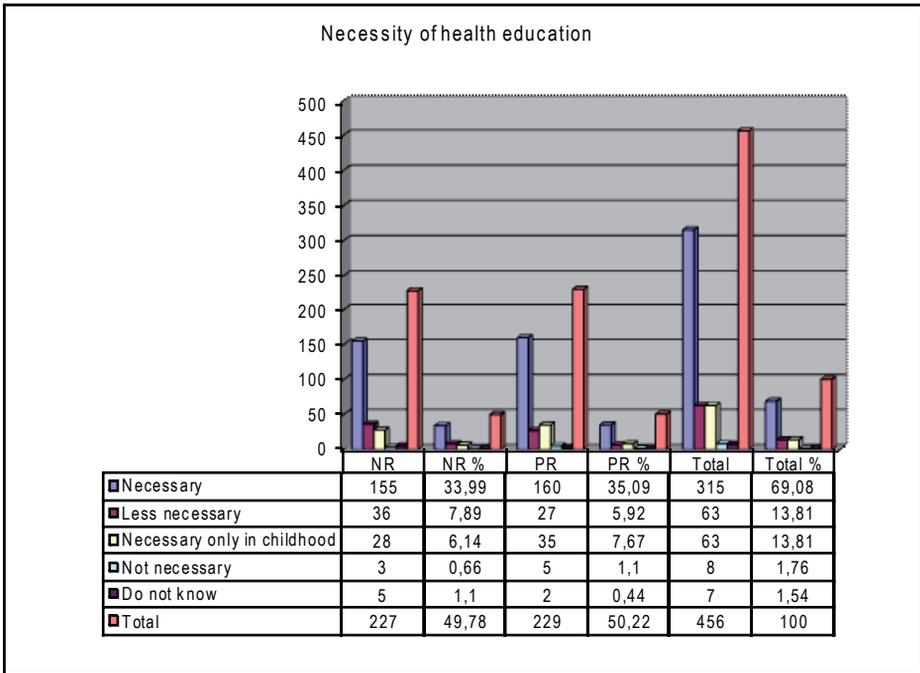


Figure 7 Necessity of health education

In respect to the set objectives we asked the respondents about the necessity of health education for human. We found out that  $n = 315$  (69.08%) respondents think that health education is necessary for people. *Less necessary and necessary only in childhood* think congruently  $n = 63$  (13.81%) respondents, *not necessary* according to  $n = 8$  (1.76%) respondents and  $n = 7$  (1.54%) respondents *did not know*. There are not significant differences in responses by regions.

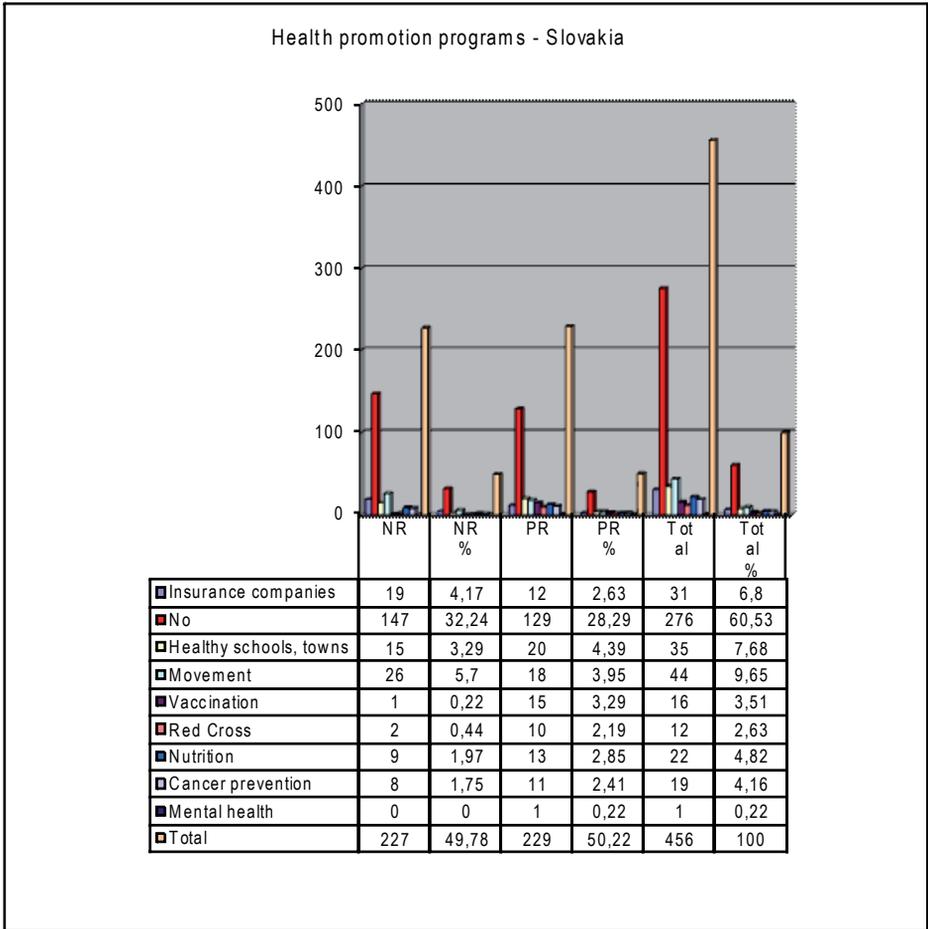


Figure 8 Health promotion programs – Slovakia

We wanted to know which health promotion programs implemented in Slovakia are respondents aware of. Negative finding is that up to  $n = 276$  (60.53%) respondents do not know *any* programs. Programs focused on *movement* stated  $n = 44$  (9.65%) respondent and *Healthy schools, healthy towns*, stated  $n = 35$  (7.68%) respondents. Health promotion programs identified with *insurance companies*  $n = 31$  (6.80%) respondents. Programs focused on *nutrition* stated  $n = 22$  (4.82%) respondents. *Cancer prevention* in programs mentioned  $n = 19$  (4.16%) respondents. *Vaccination*, as health promotion program, stated  $n = 16$  (3.51%) respondents. *Red Cross*, as health promotion program, wrote  $n = 12$  (2.63%) respondents. Program of *mental health* promotion stated only  $n = 1$  (0.22%) respondent. Respondents had the possibility to write all programs they know, so we expected higher number of responses. None of the respondents wrote more than one program.

Health promotion programs implemented in respondents' surrounding

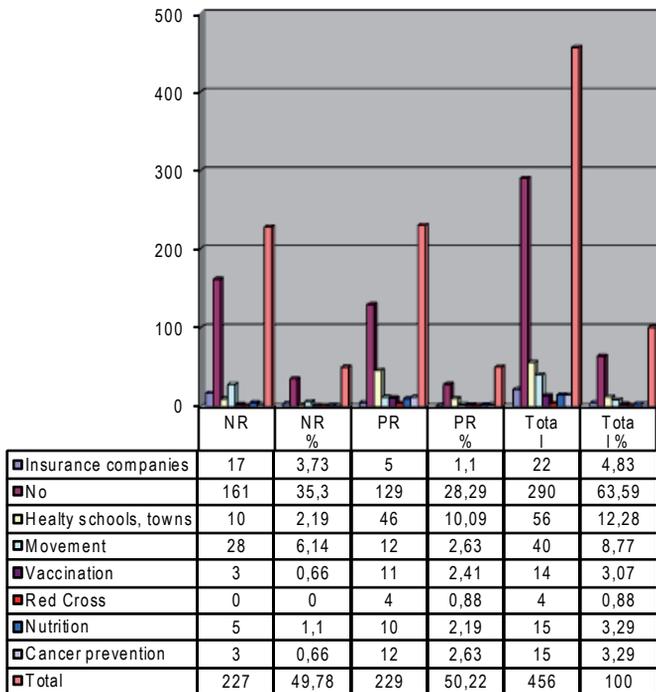


Figure 9 Health promotion programs implemented in respondents' surrounding

We asked about the programs implemented in respondents' surrounding. Up to n= 290 (63.59%) respondents wrote *no* programs. N = 56 (12.28%) respondents wrote *healthy towns*, n = 40 (8.77%) stated *movement*, n = 22 (4.83%) stated *insurance companies*, n = 15 (3.29%) respondents wrote *nutrition* and *Cancer prevention*, n = 14 (3.07%) wrote *vaccination* and n = 4 (0.88%) respondents wrote *Red Cross*.

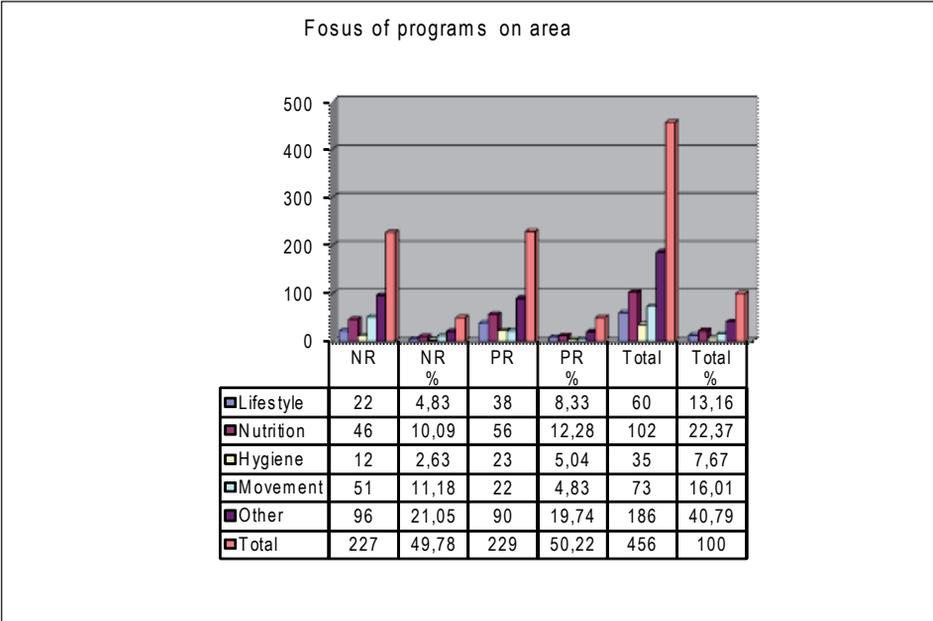


Figure 10 Focus of programs on area

In accordance with the objectives of our work we were interested in which area of health education are the programs focused on. Respondents were asked to write only one possibility. Figure 10 shows respondents' responses by regions. N = 186 respondents (40.79%) marked *other* and did not write any area. N = 102 (22.37%) respondents think that programs focus especially on *nutrition*. N = 7 (16.01%) respondents marked *movement*, n = 60 (13.16%) respondents *lifestyle* and n = 35 (7.67) respondents *hygiene*.

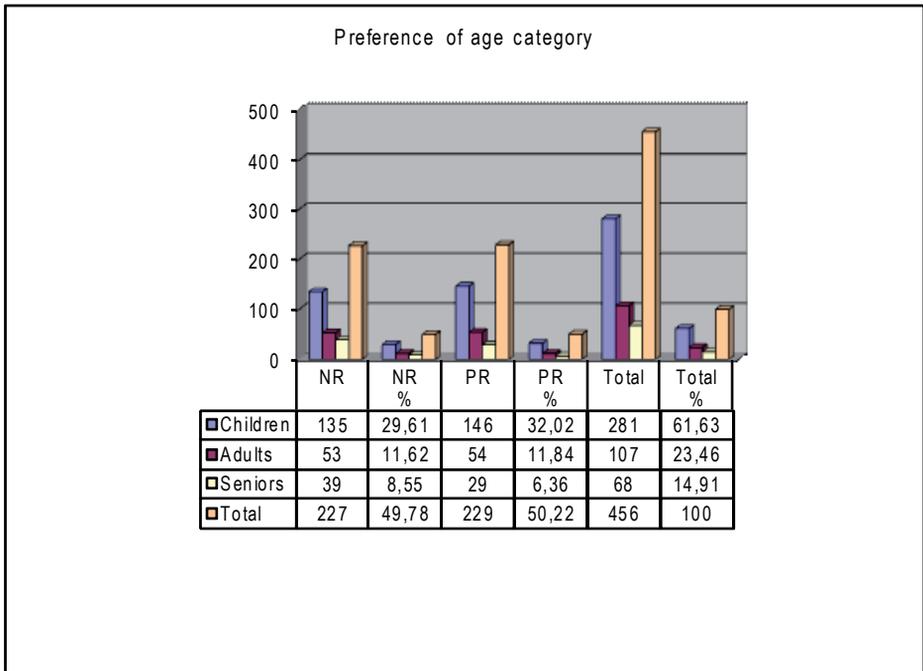


Figure 11 Preference of age category in health promotion programs

We wanted to find out which age category are health promotion programs designed for. According to  $n = 281$  (61.63%) respondents these programs are designed especially for *children*.  $N = 107$  (23.46%) respondents think that health promotion programs are designed for *adults*.  $N = 68$  (14.91%) respondents think that they are designed for *seniors*.

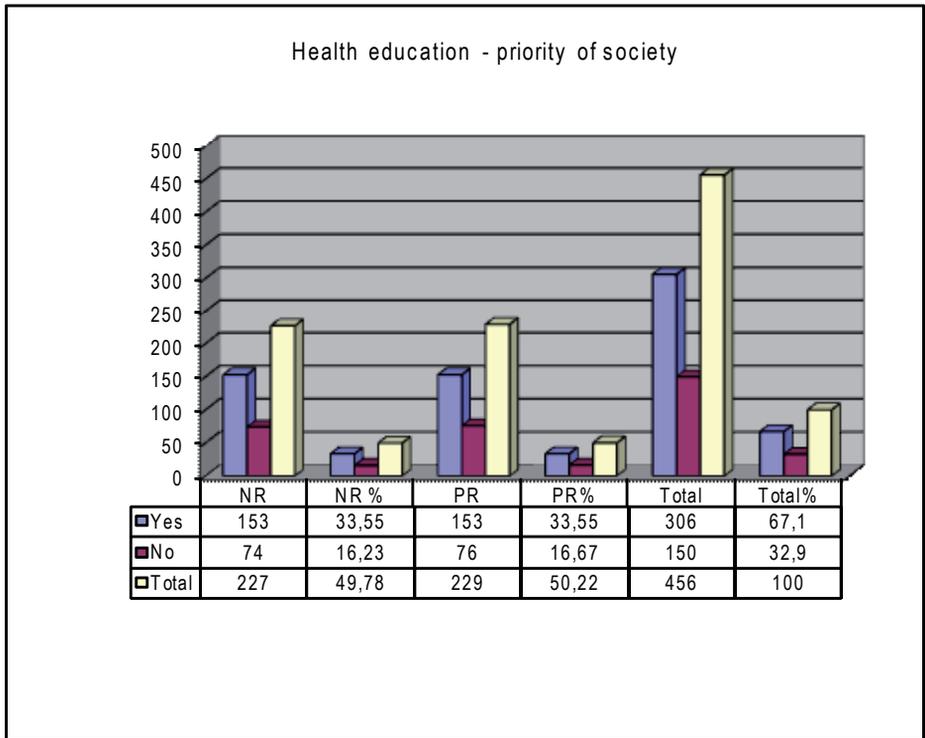


Figure 12 Health education as a priority of society

Corresponding with the focus of work, participants were asked for their opinion whether health education is a priority of society. Figure 12 shows their responses. N = 306 (67.10%) respondents answered *yes* and n = 150 (32.90%) respondents answered *no*. Respondents' responses *yes* were completely identical in comparison of regions; responses *no* were almost identical in favour of respondents from Prešov Region.

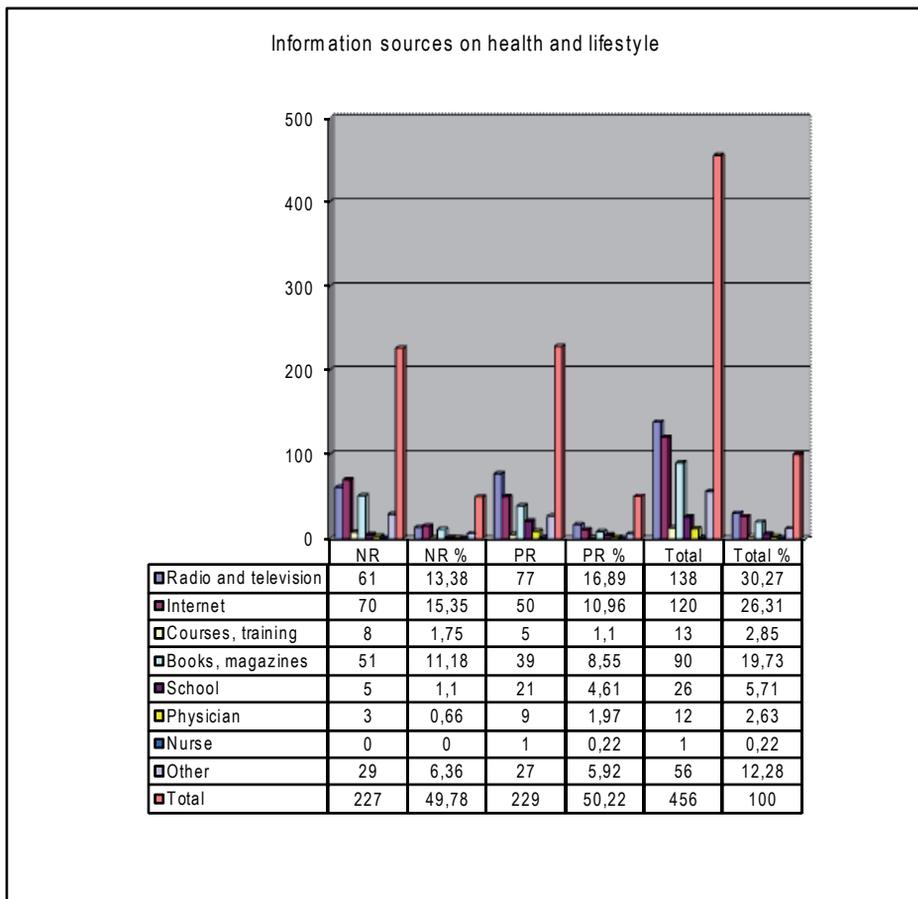


Figure 13 Information sources on health and lifestyle

Information relating to health is one of the prerequisites of health education, so we wanted to find out which sources respondents use for obtaining information. As the most common source of information respondents stated *radio and television*  $n = 138$  (30.27%), followed by *internet*  $n = 120$  (20.31%), *books and magazines*  $n = 90$  (19.73%), *other*  $n = 56$  (12.28%) – in this scale respondents did not specify their response, *school*  $n = 26$  (5.71%), *courses and training*  $n = 13$  (2.85%), *physician*  $n = 12$  (2.63%), *nurse*  $n = 1$  (0.22%).

We assumed that the respondents' opinions on the area of health education from Nitra and Prešov Region will not significantly differ. Verification of the assumption was made by Student's t-test for two independent samples. We tested the respondents' answers to 11 items in the questionnaire. Using Student's t-test we analysed monitored variables (respondents' opinion on area of health education in two independent samples of respondents from Nitra and Prešov Region); results are presented in table 1, N – presents number of respondents, AM – mean of responses in set codes in individual items, SD – standard deviation, df. – level of freedom, t – test criterion, p – reached significance

Questionnaire	N	AM	SD	df	t	p
Health status	NR 227	2.326	1.017	454	-0.576	0.543
	PR 229	2.379	0.982			
Health threatening factors	NR 227	2.541	1.421	454	-3.157	0.278
	PR 229	2.969	1.47			
Activities for health	NR 227	1.775	1.289	454	-0.229	0.455
	PR 229	1.803	1.331			
Preventive examinations	NR 227	2.674	1.336	454	0.977	0.322
	PR 229	2.55	1.367			
Responsibility for individual's health	NR 227	1.127	0.494	454	-2.219	0.001
	PR 229	1.266	0.802			
Responsibility for health of society	NR 227	4.193	1.553	454	-0.783	0.350
	PR 229	4.305	1.496			
Importance of health education	NR 227	1.533	0.918	454	0.106	0.931
	PR 229	1.524	0.891			
Programs Slovakia	NR 227	2.669	1.616	454	-2.967	0.001
	PR 229	3.165	1.939			
Programs surrounding	NR 227	2.444	1.251	454	-4.102	0.001
	PR 229	3.03	1.753			
Focus of programs	NR 227	3.674	1.435	454	2.605	0.001
	PR 229	3.305	1.579			
Preference of age group	NR 227	1.577	0.768	454	1.27	0.040
	PR 229	1.489	0.71			
Health education as a priority	NR 227	1.326	0.469	454	-0.133	0.790
	PR 229	1.331	0.471			
Information source	NR 227	3.101	2.24	454	-0.403	0.122
	PR 229	3.187	2.33			
Value - money	NR 227	5.039	1.717	454	-4.281	0.159
	PR 229	5.681	1.474			
Value - health	NR 227	1.823	1.221	454	-0.291	0.378
	PR 229	1.855	1.136			
Value - love	NR 227	3.057	1.125	454	0.514	0.451
	PR 229	3	1.249			
Value - family	NR 227	2.788	1.435	454	-1.26	0.151
	PR 229	2.952	1.331			
Value - God	NR 227	5.352	1.964	454	6.19	0.077
	PR 229	4.165	2.125			
Value - work	NR 227	5.405	1.266	454	-1.502	0.996
	PR 229	5.585	1.29			
Value - happiness	NR 227	4.519	1.619	454	-1.093	0.331
	PR 229	4.681	1.532			

Table 1 Results of Student's t-test for two independent samples in responses

Taking into account conditions of chosen statistical test, we did not record in 15 items significant differences  $p > 0.05$ . These items concerned opinions on health status  $p = 0.543$ , health threatening factors  $p = 0.278$ , activities for health  $p = 0.455$ , health checks  $p = 0.322$ , responsibility for health of society  $p = 0.350$ , importance of health education  $p = 0.931$ , health education as a priority  $p = 0.790$ , information about health  $p = 0.440$ , information source  $p = 0.122$ , value - money  $p = 0.159$ , value - health  $p = 0.378$ , value - love  $p = 0.451$ , value - family  $p = 0.151$ , value - God  $p = 0.077$ , value - work  $p = 0.996$ , value - happiness  $p = 0.331$ . There were no significant differences in respondents' responses. Only 5 items showed statistically significant differences: responsibility for individual's health, program Slovakia, programs surrounding, and focus of programs with  $p = 0.001$  and preference of age group with  $p = 0.040$ .

**We assumed** that compliance with legislation and program presented priority of health education by society with respondents' answers by regions. To verify the assumption we used the relative frequency with values of significance from Student's t-test in selected items. We chose an item that is related to the participation in health checks that is directly regulated by the Act No. 577/2004 Coll. on the scope of health care coverage on the basis of public health insurance and on the reimbursement of healthcare-related services, as amended by later regulations. Maintaining and improving vaccination level is a permanent priority task of health service (Elaboration of the Manifesto of the Government of the Slovak Republic for department of health service, 2008). Participation in health checks is a significant factor in health education, so we asked how often respondents participate in health checks. The most frequently chosen category was *once a year*  $n = 168$  (36.84%) respondents. This option implies a proactive respondents' approach to prevention. The second most frequently chosen option was *only for surgery appointment* in  $n = 137$  (30.04%) respondents. Value  $p = 0.322$  indicates that there is no significant difference in respondents' responses by regions. Then we selected the item concerning responsibility for the health of society. Program declaration of government of Slovak Republic since its inception in 1993 declared responsibility for the health of residents on the level of government, parliament, Ministry of Health with the appeal to proactive approach of citizens themselves. In this issue we were interested in the respondents' opinion on responsibility for the health of society. From the offered options respondents chose the option *individual people*  $n = 255$  (55.92%) *most often*. Other options were in order *government* according to  $n = 49$  (10.74%) respondents, *health service* according to  $n = 38$  (8.33%) respondents, *parliament* according to  $n = 33$  (7.24%) respondents, and the last one was *minister of health* according to  $n = 26$  (5.71%) respondents. Value  $p = 0.350$  indicates that there is no significant difference in respondents' responses by regions. The next question verifying the assumption focused on the necessity of health education for society and we were interested in conformity on the level of health legislation -need of respondents. We found that for  $n = 315$  (69.08%) respondents is health education for society *needed*. *Less needed and needed only in childhood* is identically according to  $n = 63$  (13.81%) respondents, *not needed* is according to  $n = 8$  (1.76%) respondents and  $n = 7$  (1.54%) respondents *did not know* to answer. There were no statistically significant differences in responses by regions  $p = 0.931$ .

We selected also respondents' responses to health education as a societal priority; n = 306 (67.1%) respondents stated that health education is priority of society. Value  $p = 0.790$  indicates that there is no significant difference in respondents' responses by regions. There is a compliance with legislation and program presented priority of health education by society with respondents' responses to selected items by regions.

**We assumed that** health promotion activities will be, according to respondents' responses markedly focused on health promotion and protection of children and old people as the productive population. To test the differences of two quantitative variables (measured by mean) in one examined population (all respondents from the questionnaire) we used Student's t-test for two dependent paired samples (Paired Samples Test) while finding programs' focus on individual age categories (children - adults, seniors - adults) in respondents' responses to the item.

Data source	pair	N	AM	SD	t	p
questionnaire	Children - adults	456	0.377	0.840	9.588	0.001
questionnaire	Seniors - adults	456	0.085	0.614	2.973	0.003

Table 2 Results of paired t-test

We found that there are statistically significant differences in respondents' responses to health promotion activities in favour of children and seniors. The category of seniors we assigned in connection with the increasing proportion of seniors in population.

## Discussion

*The first area* on which we focused presented the problems of respondents' opinions to the health education in a more complex context. Respondents were chosen from Nitra and Prešov Region for their geographical and historical similarity and also for their similarity in the number of habitants and the structure of industry. We used questionnaire to investigate the opinions of the respondents in 6<sup>th</sup> grades at the primary schools in the city. These pupils are comfortable within their class surroundings and even though they are going through a difficult pubescence period, they can express their own opinions. We were interested in the opinions of the respondents in the 3<sup>rd</sup> grades of the four year grammar schools in the city. These pupils are "on the threshold of adulthood" and their opinions are both cognitive and behavioural. Our assumption about the similarity of the respondents' opinions was affirmed. Self-evaluation of the health condition was mainly considered to be good by 42.32%, similar to the relative quantity found out in the research by Valentová (2007) on a smaller sample of respondents 47.00%. High school students were more critical to the perception of health conditions. Significant differences among the answers according to the regions were not observed  $p = 0.543$ . Commenting on the factors threatening our health in general, it can be concluded that 32.89% of respondents indicated the environment. Hegyi et al. (2004) state in objective 13 Health for everyone in the 21<sup>st</sup> century that by the year 2015 people should have had more opportunities to live in a healthy social environments at home, in school, at workplaces

and local community in the region. The most frequent chosen option of the environment indicates that it is necessary to improve the quality of environment. It corresponds with the mentioned objectives and the priority areas of the new form of state health policy of the Slovak Republic (2008), in which priority 3 is environment and health. The last mentioned document describes that the influence of environment on health is 20–30%. Another factor in the order of the respondents' point of view is smoking, alcohol, drugs 32.68%. Tobacco and alcohol are the fourth priority of the state Health policy of the Slovak Republic (2008). Lately, according to information from that document, there are about one third of Slovakian citizens older than 18 years of age smoking. Although the situation in comparison with previous years has slightly stabilized, the National Council of the Slovak Republic has agreed to conclude the Framework Agreement on Tobacco Control of 4<sup>th</sup> December 2003 Resolution No 667, followed with ratification by the United Nations, and we were among the first 14 countries which handed it in.

Alcohol Action Plan deals with the alcohol problems. The Alcohol Action Plan was approved by the government in 2006. Our findings correspond with the objective 12 Reduce damage caused by alcohol, drugs and tobacco, from Health 21 (Hegyí et al., 2004). Activities to maintain health 67.79% of respondents indicated physical activity – exercise. Nutrition prevailed as activity carried out for maintaining family health. Valentová (2007) states similar findings too. In The Concept of national health policy of the Slovak Republic (2008) is reflected in the priorities and objectives in the field of cardiovascular health an appeal to improve the conditions of regular physical activity and improve the access to healthy food. According to the findings 36.84% of respondents undertake regular health checks once a year 30.04% respondents have it arranged by a doctor and 25.44% respondents undertake it twice a year. We feel that above results are quite satisfying and we may state the similarity with the findings of Valentová (2007). In the question to the health status in the respondents' scale of values we found out the overall score of 1.83 and as the absolute value was chosen by 54.40% respondents. Koldelová (2007) states the overall measured score (average value) and the ranking of health by the sample of 190 high school students in Slovakia and 120 in Germany 4.8 and 4.7 which was always the number-two in both countries. We explain the differences of the measured quantity in our results by the age of respondents, whereas the author Koldelová worked only with high school students. We found out in the direct investigation about the field of health education that for 69.08% respondents it is important. Our findings are supported by the scientific discussions written by Farkašová (2005), Hegyí (2004), Koňošová (2000), Krišková (2003), Závodná (2005) and also the Framework of the branch of Health Education by the Ministry of Health Official publication MZ SR (1996) and the Framework of State Health Policy of the Slovak Republic (2008). In accordance with the work objectives we were interested whether respondents know which health supporting programs are implemented in Slovakia. Very negative observation is that up to n= 276 (60.53%) of respondents do not know *any*. Most of the respondents indicated programs on *exercise* n = 44 (9.65%), followed by *healthy schools, healthy cities* n = 35 (7.68%) of respondents. *The Health Insurance companies* were identified with the health supporting programs by n = 31 (6.80%) of respondents. Programs focused on *nutrition* indicated n = 22 (4.82%) of respondents. *Oncological problems* in the health supporting programs noticed n = 19

(4.16%) of respondents. *Vaccination*, as a health supporting program, indicated n = 16 (3.51%) of respondents. *The Red Cross*, as a health supporting program indicated n = 12 (2.63%) of respondents. *Mental health* supporting programs indicated just n = 1 (0.22%) respondent. We expected a higher number of responses, because respondents could have listed in this question all the programs they know. Unfortunately, none of the respondents indicated more than one program. Our findings correspond to the findings of Valentová (2007), who found out the ignorance of the health supporting programs reaches up to 70% of respondents. Programs, which respondents knew, were the healthy cities and schools. Further to the previous question, we asked about the programs carried out in the respondents' environment. Up to n = 290 (63.59%) of them indicated *none*. Valentová (2007) in her work states up to 80%. N = 56 (12.28%) of respondents indicated *healthy towns* and *schools*, n = 40 (8.77%) indicated *exercise*, n = 22 (4.83%) indicated *The Health Insurance companies*, n = 15 (3.29%) of respondents indicated *nutrition* and n = 15 (3.29%) of respondents indicated *oncological problems*, n = 14 (3.07%) indicated *vaccination* and n = 4 (0.88%) indicated *The Red Cross*. We were interested in what health education area are the health supporting programs mainly focused on. Respondents had to choose only one of the options offered. N = 176 respondents (40.79%) chose the option *write in* and did not write any other area, n = 102 (22.37%) respondents supposed that the programs are mainly focused on *nutrition*, n = 173 (16.01%) respondents chose *exercise*, n = 60 (13.16%) of respondents indicated *lifestyle* and n = 35 (7.67%) respondents indicated *hygiene*. We were interested in what age group are the health supporting programs especially meant for. According to the n = 281 (61.63%) of respondents we found that these programs are especially meant for *children*. Another issue for us was to find out from what sources respondents look up the information about health. As the most frequent source of information respondents indicated *radio* and *television* n = 138 (30.27%), followed by *internet* n = 120 (20.31%), *books* and *magazines* n = 90 (19.73%), *write in* n = 56 (12.28%) – in that scale respondents did not provide any concrete formulations, *school* n = 26 (5.71%), *courses* and *trainings* n = 13 (2.85%), *physician* n = 12 (2.63%), *nurse* n = 1 (0.22%). Valentová (2007) states that up to 67% of the category *often*, which is probably caused by the scope of the research sample and also of the chosen method (interview). Nurse as a source of the information about health has similar results in research of Hanzlíková (2004). We see correlation with the achieved progress of information and communication technologies and their availability. On the other hand, up to 46% respondents, teachers at the primary schools, according to the study carried out by Řehulka (2010) stated that prevention should be the responsibility of the medical staff.

The objective of the second research area was the verification of the postulate of legislative and program agreement of the priorities of health education with the respondents' answers by regions. Our hypothesis was affirmed in some parameters related to the prevention, needs of health education, health education as a social priority, and in statements of responsibility for the health of the individual and the whole society. We used the Student's t-test, which did not show any significant differences among the answers according to the regions. However, we have noticed an active approach to devolve the responsibility for health to individuals.

The priority of health education is legislatively declared in the Act No 576/2004 Coll. on health care, health care related services and on the amendment and supplementing of certain laws as subsequently amended, Act No 578/2004 Coll. on health care providers, health workers and professional organisations in the health service, and amending and supplementing certain laws, as amended by later regulations, Act No 132/2010 Coll. on the protection, support and development of public health and on the amendment and supplementing of certain laws, as subsequently amended, Act No 577/2004 Coll. on the scope of health care covered by public health insurance and on the reimbursement of health care - related services, as amended by later regulations, in the Government provision program of the Slovak Republic and the Framework of State Health Policy.

The third research area included the findings related to the focus on health-educational activities according to the age in terms of respondents who answered the questionnaire, which we implemented by paired t-test. We found out that the main focus is on children and the elderly group.

## **Recommendations for improving research problems**

Results of work provide impulses for further research and also have significant educational and social implications. We are clear about the need for an indication of selected initiatives that would be useful to enhance theoretically and empirically. We recognize that the research findings have some limits. To improve research problems we recommend:

1. To emphasize continuous deepening of theoretical knowledge in the field of health education in area of institutional, non-institutional, but mainly lifetime education.
2. To present activities related to various health programs on the level of all-society, regions, and communities in close cooperation with the municipality.
3. To continue in efforts to transfer responsibility for the health of individuals.
4. To continue in active approach to disease prevention from aspects of individual age categories.
5. To lay stress on the senior population in activities dealing with health.
6. To deepen knowledge of health education by research findings within the field of nursing.
7. To heighten practical autonomy fulfilment of nursing profession with the accent on positive image of nursing.
8. To establish grant agency aimed at acquiring and reallocation of financial means for projects related to health promotion in connection to existing structures of European Union.
9. To intensify cooperation of individual components in society aimed at increasing health awareness and improving health care within the program Health 21.

## **Conclusion**

The most important prerequisite for full-life is health. It is the right, the source and the basis of life. Health care should be the top priority of the society and each

individual. In this context arises the need for educational activities in the field of health. The issue of health education is terminologically not simple because of its broad and complex approach. Health promotion activity has its own historical, political, demographic and geographic particularities. It is always bound to a specific time and space. Therefore we focused on health promotion and maintenance by implementing health education and its perception as priority in selected respondents as members of contemporary society. According to respondents' responses we found that health education is needed and belongs to priorities of society. From other findings resulted active approach to prevention, responsibility for health and finding information related to health, even though the nurse as the source of information was placed on the other position. Health as the value number one was reported in more than half of respondents' responses. Considerable deficiencies we saw on the awareness of health programs and their implementation, where it would be appropriate to think about their targeted propagation.

## **VÝCHOVA K ZDRAVIU VO VYJADRENÍ RESPONDENTOV ZO ŠKOLSKÉHO PROSTREDIA V NITRIANSKOM A PREŠOVSKOM KRAJI**

**Abstrakt:** V súčasnej filozofii človeka ako bio-psycho-sociálnej bytosti sa stretávame s výchovou k zdraviu ako dôležitým faktorom v prospech podpory zdravia jednotlivcov aj spoločnosti. Výchova k zdraviu je definovaná s akcentom na aktívny prístup, motiváciu a multidisciplinárnosť. Zisťovali sme názory 445 respondentov zo školského prostredia 6. ročník základnej školy a 3. ročník gymnázia v Nitrianskom a Prešovskom kraji na oblasť výchovy k zdraviu, zameranie programov zdravia. Použité metódy boli dotazník, a matematicko-štatistické, Studentov t-test v programe SPSS 11 pre Windows. Výskum sme realizovali v roku 2007. Z výskumu vyplýva, že výchova k zdraviu patrí k prioritám spoločnosti. Bol potvrdený aktívny prístup k prevencii a zodpovednosti za zdravie. Postavenie zdravia ako hodnoty číslo jeden sme zaznamenali u viac ako polovici respondentov. Výraznejšie nedostatky boli v informovanosti o programoch zdravia. Programy zdravia sú podľa respondentov zamerané na deti, seniorov a riešia problematiku pohybu, výživy, prevencie onkologických ochorení a eliminácie stresu.

**Kľúčové slová:** výchova k zdraviu, zdravie, filozofia zdravia, zdravotné uvedomenie, podpora zdravia, ošetrovatel'stvo, sestra