Introduction

The current understanding of health crossed the borders of medicine and is strongly connected with pedagogical, psychological and sociological aspects. Health support and prevention are understood in more extensive, comprehensive and continuing correlations in contrast to traditional conceptions. The health of individuals is stated as the balanced situation of physical, psychological and social levels.

In the Czech Republic several changing are obvious in the education-system based on the education frames. These frames allow the schools a certain liberation in using free available hours introducing the new educational field “Individual and Health”. With this activity health-support and prevention will be a natural part of the ordinary school situation. The subject health education integrates elements of the areas of medicine, psychology, sociology, ethic in the same way as ecology. This will facilitate teachers and students to widen previous traditional didactic models arranging isolated themes like hygiene, nutrition, sexual education etc. for the acquisition of knowledge and skills. The educational strategies of the new lesson “Health-Education” are targeting the mutual activeness in methods, working conditions and activities in internal and external school-education leading to creation and development of key competences. The aims are the initiation of lifelong responsibility for the own health same as positive interhuman relations, creating practical viability supporting healthy mental and social living.

The instructional contents of health education are subdivided in the following areas:

• Relations between human beings and form of social life
• Changing in human life and their reflexion
• Healthy way of living and health care
- Health referring risks and its prevention
- Worth and support of health
- Individual and social development

Medicine was already successful in restraining infectious diseases being the main causes of death in the past. The main today’s threatening are however heart and circulatory disorders and several malicious forms of cancer. These two main lethal causes are not longer determined only by physical but in the same quantum by psychological factors. Psycho-somatic and psycho-neuro–immunologic studies point out the meaning of the negative influence of stress and show that the deeper reasons for the health status of the population should be searched in psychological area. A certain number of research projects are trying to find the reasons for health damages on physical and psychological levels and checking out ways of prevention.

**Psychological health and subjective wellbeing**

A great popularity got the concept “Wellbeing” in correlation with the definition of health created by WHO in 1948. The term wellbeing is hereby established as an important characteristic of health. It means not only the absence of disease or malfunctions but also the status of “complete physical, psychological and social wellbeing”. In 1982 the ability of “conduct the productive life in a social and economical way” was added (Kebza, 2005, in Blatny, Dosedlova, Kebza & Solcova, 2005) to this definition.

Some characteristic actually subjective factors are valid for the area of personal wellbeing, but could be influenced by objective conditions. The subjective meaning of the individual on the own status is decisive. The measuring of the subjective wellbeing is targeting on the conclusion of the positive factors in difference to the assessment of mental health, mostly orientated on the absence of negative factors. It contains therefore the entire assessing of all aspects of individual life. Although emotions and satisfaction can be objects of research on certain areas the global meaning on the living of the individual is mostly emphasised (Diener, 1984). Wellbeing is influenced in a certain degree by outlasted time-stable characteristics of the personality. Costa and McCrae (1980) emphasise that temperament related personal characteristics are long-term a more reliable predictor of satisfaction than objective features of life. Diener (1984) points out, that the personal characteristics determine 30 to 49% of the variability of the subjective perception of wellbeing and satisfaction. The authors agree with the correlation between high subjective wellbeing with a low level of neuroticism, high dominance and affiliation as well as a positive attitude towards the social environment. Experienced forms of subjective wellbeing are also dependent of cognitive factors (hope, disposable optimism) and of the way of individual perceiving of themselves and environment.

Socio-demographic features like age, sex, education, religion, income or environmental factors (local crime, quality of city, traffic...) are aimed in every life as indicators for subjective wellbeing, influencing however actually only in a slight degree. Schwarz and Strack show that social variables are responsible for the variance of subjective wellbeing only in roughly 5%, with just less influence on emotional com-
ponents of happiness (Argyle, 2001; Campbell et al, 1976).

We all are members of the same (materialistic) culture and have internalised in a certain way what is considered as important, wishful and worthwhile: individual success, popularity and financial prosperity. Kasser (2006) explored that living along external, often materialistic oriented values lead to personal, social and ecological losses. On the personality level the consuming orientation is connected with lower personal wellbeing, lower frequency of pleasant emotional experiences in everyday life, higher degree of depression, feeling of oppressiveness and narcissism as well as with a higher probability for drug abuse and physical symptoms like head-and stomach ache. Materialistic orientated individuals are more taking other people as an instrument for fulfilling their own interests than as persons with their own experiences, wishes and aims. The ecological sphere gets hurt by a low interest of the materialistic individuals concerning environmental protection and restoration of natural resources (Kasser, 2006).

The present materialistic orientated culture proclaims the accumulation of property as the praised way for luck. On the basis of the found search results we can surely say, that the individual wellbeing will be not increased by a new car or a villa on the sea.

Health supporting behaviour

The discussion on health supporting behaviour is enriched by Kasl and Kob (1966 after Sarafino, 1990) making a distinction between three different types of health related behaviour. The health status of the individual is regarded as the criteria for classification in that case: Health behaviour, illness behaviour and sick-role behaviour.

Wickers et al (1990) are of the opinion that health related behavior can be divided in several independent dimensions. By means of a factor analysis they are defining four main areas: Wellness behavior, accident control, traffic risk taking, substance risk taking. The education at school and family has to help to prevention of the risk behavior.

A great amount of the population in developed countries is currently suffering from the lack of exercise. 100 years ago our forefathers had to work physically for their daily living in a more heavily way. The fact that manual work is decreasing leads in one view to an improvement of life, but causes on the other hand negative results for the human health, expressed in increasing of cardio-vascular diseases, diabetes, overweight and obesity, trouble with the movement apparatus as well as in symptoms of depression and feeling of apprehension. It is necessary for stabilizing the physical and psychological health to create a lifestyle considering regularly exercise. The present soma-physical research projects are assuming that the functionality of our body is influencing our thinking, feeling and acting. Fox, Boucher, Faulkner, Biddle (2000) differences four basic functions of physical activity concerning psychological health and subjective wellbeing:

- Physical activity is a preventive measure against psychological troubles
- Physical activity is one of the cure for psychological troubles
• Physical activity can increase the quality of life for psychological patients

• Physical activity can raise the personal wellbeing of the whole population

Improvements of the present mood, the total emotional attitude as well as the subjective wellbeing through regular physical activity are confirmed by different meta-analyses as well as extensive epidemiologic studies carried out in the United States and Great Britain (Biddle, 2000 after Mutrie & Faulkner, 2004). The same authors are quoting additional research results confirming the following influences of physical activity: It increase the ability for stress balance (Taylor & Brown, 1994), influencing positive self-awareness and self-esteem as important indicators of wellbeing (Fox et al. 2000; Mrazek & Fialova, 2005).

Along with the improvement of physical efficiency and fitness the positive influence on mood and the achievement of a feeling of satisfaction is an important result of physical activity. Rewarding the creation and the fall-out of endorphins and encephalin subjective pleasant feelings are originated (Vonruska & Bartak, 2002).

Physical activity is influencing the psyche not only short-termed but also with a long-term effect (Solcova & Kebza, 2006). Physical active people are showing more positive attitudes than people in a mainly sitting lifestyle. They are feeling less stress, apprehensiveness and depression and are better able to cope with stress (Biddle & Mutrie, in Steptoe & Wardle, 2004). Because of a lower weight, a more attractive appearance as well as achieving of sportive successes it comes to a better self-image with people being regularly physical active. This all helps them to a higher self-assessment and to a higher degree of self-respect (Sarafino, 1990). How can we educate the citizens with a good life style and health habits? What can change the school education? First of all we need the answer on the question: How is the common absolvent of our educational system, what is right and what is wrong in his life style?

Methods

Target

The aim of our empiric study (Dosédlová, Fialová, Kebza, Slováková, 2008) was the research of correlations between health supporting behavior and selected personality characteristics within university students as well as the analysis of mistakes in their lifestyle. The initial point was the assumption that the stage of development of the cumulated adolescence and the changing towards the young-adult-age get a particular importance for the forming of a hierarchic value system and the consolidation of responsible behavior, targeting the own person and in the same way the society. The supposal of the important role of health and its values in that stage of development can open the chance for a desirable actual behavior in the same way as for regulations of the individual lifestyle in the future. If not getting a stable classification of health into the basic values in that phase it will be very difficult to find ways into a healthy lifestyle.
Sample

The sample covers students of the three major universities of the Czech Republic (Charles University in Prague, Masaryk University in Brno and Palacky University in Olomouc). The students are members of the group of age which is at the transition from adolescence to young adults. At the same time they constitute one of the best educated groups of the population. We can therefore take them as representatives of our society, taking part in a particular degree in the formation of attitudes and habits of future generations. 4292 students of the age 18-29 attended the questionnaire.

Used methods

The research project was supported by the following measuring instruments:

• Questionnaire “Health, Sport and Body concepts in Middle- and East- Europe” (Mrazek, Fialova, Bychovskaja, 1998) and “Scale of schematic body silhouettes” (Modification of Fallon, Rozin, 1985). The questionnaire is investigating the health status, the health supporting behavior, the extent of physical activity, the relation to the own body and the body image with 96 items. Most of them are based on a 5-level Likert-scale (1- absolutely not right, 5- absolutely right).

• “NEO Personality-questionnaire” with five factors (Costa, Mc Cray/Hrebickova, Urbanek, 2001). The 60 items refer to the five basic factors: openness to experience, conscientiousness, extroversion, amicability, neuroticism. The answers are on a 5-level scale (1- not applicable, 5 completely applicable).

• “Questionnaire to Life-satisfaction” (Pavot, Diener, 1993) with five items. The persons asked are expressing the degree of acceptance and disagreement on a scale of 1- 5 (1- not agree, 5- complete agree). For the analysis the total value was used, which can be between 5 and 25 by five items. A high value means a high life-satisfaction.

Results

The 40 items for body- and health relating behavior from the questionnaire “Health, Sport and Body-concepts in Middle- and East- Europe” were examined by a main-component-analysis with oblique rotation Promax (value Kappa= 4). The results were 11 factors explaining 65% of the common variance. It concerns about the following factors:

• Factor 1 – Physical activity (increase of physical capacity, active shaping of the figure, apparatus gymnastics, sport exercises in hours, competitive- and regularly practiced leisure- sport)

• Factor 2 – Hygiene and care of appearance (regular hygiene, cleanliness of clothing, use of deodorants, mirror-control of appearance)

• Factor 3 – Weight- and figure-control (diet, passive treatment for figure-modeling, solarium-visits, weight-control)
1. Types of lifestyle

Through a cluster analysis (method K-Means) the types of lifestyles will be determined under use of the above mentioned 11 factors of the health and body related behavior. The division of the persons in 6 clusters was turned out as the best solution. We identified 6 different types of lifestyles and qualified them on the base of their usefulness for health. The following types were turned out (working fitting terms were made through typical characteristics of behavior):

- Sportsman/ Pleasure lover
- Good examples
- Conscious people
- Careless people
- Barrelhouse loafers
- Hypochondriac

The basic characteristics of the individual cluster are shown in table 1.

Table 1: *Types of lifestyle*

| Cluster 1 (n 536) Sportsmen/Pleasure lover | 1. 0.45 | 2. -0.55 | 3. -0.75 | 4. -0.40 | 5. 0.45 | 6. -0.1 | 7. -0.55 | 8. -1.6 | 9. 0.55 | 10. -0.45 | 11. 0.2 |
| Cluster 2 (n 719) Good examples | 0.8 | 0.5 | 1.0 | 0.6 | 0.3 | 0.6 | 0.65 | 0.25 | 0.55 | 0.7 | -0.5 |
| Cluster 3 (n 869) Conscious people | 0.4 | 0.1 | -0.1 | 0.5 | -0.2 | 0.5 | -0.4 | 0.4 | -0.3 | 0.05 | -0.7 |
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Cluster 1 Sportsmen/ Pleasure lover (12.5% of sample)

These students are spending many hours per week with physical activities, dedicating less attention on their way of life as well as on care of health and appearance, paying less attention on weight and figure, visiting regularly the doctor but having no good attitude to their own body. This group is most homogeny concerning the gender splitting – covering 59.7% males and 40.3% females. We can find them especially in faculties with sport orientation. But they are not all competitive sportsmen; a relative large number of these students are studying mathematic-technical subject areas. Especially rare this lifestyle is represented within the medical faculties.

Cluster 2 Good Examples (16.8% of sample)

This group is showing figures over the average in all items – the students are exercising regularly, watching their weight and their figure, concerning good nutrition and putting special emphasis on prevention. This group is built by women in major degree (82.2% women, 17.8% men). We find the representatives of this style above all within sport students and medicine-students. In contrast to that representatives of this lifestyle are studying very rare on mathematic-technical and natural faculties.

Cluster 3 Conscious people (20.3% of sample)

The majority of the focused variables are on the average with these students – physical activities are natural for them, they take care of their lifestyle, through which they try to get influence on health troubles. They are interested in their health situation and are quite critical towards their body, however accepting him. In this group the women are dominating in the relation of 1:2 (32.9% men, 67.1% women). Characteristically for these students are after all the natural every-day-cares for themselves and essentially for their good health status. In relation to their health these students are very responsible and are trying to support it by an adequate lifestyle. Therefore it is logical that the majority of these health-conscious
students can be found on medical faculties. In comparison with other study areas a less number of such students can be found on faculties of social sciences.

**Cluster 4 Careless people (10.4% of sample)**

These students neglect themselves and their own health, they chose no physical activity and have no positive relation towards their own body; hygiene and care of their own image are not important for them. In this numerical smallest group men are in the majority, actually in relation 2:1 (63.4% men, 36.6 women). This fact is corresponding with the splitting on the study areas: most of the careless students are found on mathematic-technical faculties. Extremely rare this lifestyle is represented by sport students.

**Cluster 5 Barrelhouse loafers (17.6% of sample)**

Representatives of this group take care of hygiene and appearance, are less physical active, concern less about their health, consume excessively alcohol and also using other drugs. For this group (24.7% men, 75.3% women) their lifestyle and health are not of relevant importance. The major number of representatives of this group we found within students of areas of social sciences, a relative large number is also on juristic and economical faculties. As rarest this lifestyle is represented on sport science faculties.

**Cluster 6 Hypochondriac (22.5% of sample)**

These students are paying excessive attention for their body inclusive hygiene and care of appearance. They are trying prevention of possible health problems, often visiting the doctor, are non-smokers and non-drinkers. In this group the women are dominating clearly the men (9.3% men, 90.7% women). It is the numerous largest group; representatives of this lifestyle are relatively often found in all study areas – the most we find with medical students, relatively many also with students of social sciences. The rarest hypochondriacs are represented on sport faculties.

2. **Motivation for physical activities**

In the cognitive-motivational process-model of life it is accepted that the success depends on the quality and duration of carried out activities, but also from the status of functionality of the individual during the learning period (Engesser et al. 2005). Physical activity is without any doubt one of the key-factors for a healthy lifestyle. In the frame of our research we will be not content with the conclusion that the different types of lifestyle are attending in a different way to physical activity. The above listed results show that students from the groups “Good examples”, “Sportsmen/ Pleasure lover” and “Conscious people” are particularly emphasizing the value of physical activity. Conversely the “Careless people” and “Barrelhouse loafers” are fewest physically active. For the continuing analysis of these differences we therefore researched also the motives of those students attending physical activities especially in their leisure time. Out of the total list of nine possible motives we created two independent factors: F1 –Health- and Aesthetic-motives, F2 –Re-
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The six types of lifestyle were compared concerning these two motive-factors with variance-analyses (see Table 2).

Table 2: Lifestyle-types and Motivation for physical activity

<table>
<thead>
<tr>
<th>Motivation for Physical Activity</th>
<th>Lifestyle-type</th>
<th>N</th>
<th>M</th>
<th>s</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health- and Aesthetic-motives</td>
<td>Sportsmen/ Pleasure lover</td>
<td>528</td>
<td>-0.4</td>
<td>1.04</td>
<td>169.39</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Good examples</td>
<td>703</td>
<td>0.6</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conscious people</td>
<td>852</td>
<td>0.2</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Careless</td>
<td>415</td>
<td>-0.6</td>
<td>1.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barrelhouse loafer</td>
<td>737</td>
<td>-0.4</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hypochondriacs</td>
<td>943</td>
<td>0.2</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relaxation- and Social intercourse motives</td>
<td>Sportsmen/ Pleasure lover</td>
<td>4178</td>
<td>0.0</td>
<td>0.99</td>
<td>68.0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Good examples</td>
<td>528</td>
<td>0.4</td>
<td>0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conscious people</td>
<td>703</td>
<td>0.3</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Careless people</td>
<td>852</td>
<td>0.2</td>
<td>0.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barrelhouse loafer</td>
<td>415</td>
<td>-0.2</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hypochondriacs</td>
<td>737</td>
<td>-0.3</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of this table explore that the differences in motivation for physical activities are statistically significant between members of the different lifestyle-types. Above all the differences are more significant within the Health- and Aesthetic motives. Both kinds of motives are of great importance for the lifestyles “Good examples” and “Conscious people”. They are practicing sport on one side in knowledge of the healthy importance of physical activity; on the other side exercise also offers them a feeling of relaxation and satisfaction through social contacts.

“Sportsmen/ Pleasure lover” correspond exactly with the term we gave to that lifestyle. They are declaring in the same way relaxation and social intercourse reasons for their basic motivation for physical activities. They enjoy their exercise; however the health aspect is less important for them. Not surprising is the result that those students explaining the importance of relaxation- and social intercourse motives also show high extraversion figures.
Discussion

Only two of the six explored lifestyles can be termed as “healthy” (“Good examples” and “Conscious people”). The students representing these lifestyles got a relative large amount of positive habits including those we are declaring as health supporting (physical activity, adequate way of life, limited consuming of addictive drugs, control of health problems on regulation of way of life, health trouble concerned attention, regular doctor-visits). In contrary to these healthy lifestyles are the “Barrelhouse loafers” and “Careless people”. At least some criterions of health supporting behaviour are fulfilled by the last types “Sportsmen/ Pleasure lover” and “Hypochondriacs”. The students belonging to those types are concentrating themselves always on only one of the researched aspects (Within the “Sportsmen/ Pleasure lover” it is physical activity; within the “Hypochondriacs” it is the endeavour for minimising the risks of health problems). Other health supporting habits are ignored by these students; that is why these ways of life are not very effective in concern of health support. In conclusion we can constitute that approximately 40% of our sample are following successfully a healthy lifestyle, whereas the remaining 60% still have reserves concerning attention and care on themselves and their own health.

In view of the remaining researched aspects we can ascertain that the obtained findings are in a large degree corresponding with the results of other studies with similar targets. The individuals from our sample, which lifestyle is comprising a higher number of health supporting habits, are more conscious, emotional more stabile, stronger realising their self effectiveness and are better capable for the detection of processes targeting their bodies. The students representing the lifestyle of a good example, consciousness and pleasure loving are belonging to the especially extraverted ones. In agreement with other authors (Blumenthal et al., 1982) these students got after all a positive relationship towards physical activity in relation to their health supporting behaviour.

Our findings confirm explicit a correlation between personality and health supporting behaviour. On the base of these research results we can assess conscientiousness, emotional stability and self effectiveness as a essential assumption for keeping a healthy lifestyle. Their significance is subsidised by the findings of other authors. For the facilitation of the optimal access to health their linking and combining is basically essential. Consciousness is the base for the long-termed keeping of health supporting habits and conscious attitude towards health often demand self discipline and persistence. Emotional stability takes satisfaction and safety and avoids thereby being afraid in case of changing in health status. Because of that it set the frame conditions for further personality characteristics and the awareness for self-effectiveness. These factors are absolutely necessary for the feeling of the individual, having itself under control and able to influence the own health status as well as the subjective well-being under assistance of a health supporting lifestyle.

We should educate people for a positive self-esteem, that means being aware of their own worth and in the same way living healthy and rational. Before others the youth should get important information
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about body-care in the frame of school education. This could also allow an easier orientation in the offers concerning the lot of different preparations for beauty, health and physical efficiency. Sport is an indisputable medium for the perfection of the own body and the psychological state of health and should have its place in every one’s life.

The author is aware that the presented study cannot become the status of a concluded evaluation. It put however some very important findings and values for proposal, being used for the development of the new school education subject and offers the way of getting continued.

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References


Summary:

Lifestyle and Health Promoting Habits as Topic for School Education

Health prevention and physical activities are actually matching a fulfilled, balanced and self – determined human daily life. This study was conceived and run in order to support this very important and necessary cognition and to involve the findings after all into a new subject in school education (“Individual and Health”). The aim of our empiric study was the research of correlations between health supporting behaviour and selected personality characteristics within university students as well as the analysis of mistakes in their lifestyle. This revision created and summarized findings taken from three questionnaires concerning differences in lifestyle and targeting themes of body image and health promoting behaviour, life satisfaction and personality. Only 40% of the sample (4 292 students) have the desirable health life style, most of students do mistakes (hypokinesis, smoking, alcohol, drugs, not regular doctor visits, negative attitude to the own body...).

Key Words: Health education, life style, health promoting behaviour, body care, physical activity

Resumen:

Estilos de vida y hábitos para la promoción de la salud como materia de estudio en la educación escolar

La prevención de la salud y las actividades físicas son en realidad una partida completa, equilibrada y propiamente determinada en la vida diaria.

Este estudio fue concebido y puesto en marcha para apoyar este importante y necesario conocimiento e implicar los descubrimientos a pesar de incluir a un nuevo sujeto en la educación escolar (“individuo y salud”). El propósito de nuestro estudio empírico fue la investigación de las correlaciones entre la promoción de conductas saludables y una selección de características de personalidad de estudiantes de la Universidad, así como de errores en su estilo de vida.

Esta revisión creó y sintetizó descubrimientos apoyados en tres cuestionarios relativos a las diferencias en los estilos de vida y una selección de temas de imagen corporal y promoción de de conductas saludables, satisfacción vital y personalidad. Solo el 40% de esta muestra (4292 estudiantes) tienen el deseadov el estilo de vida saludable, la mayoría de los estudiantes cometen errores (hipokinesis, fumar, alcohol, drogas, no visitar regularmente...).
al médico, actitud negativa a su propio cuerpo...

**Descriptores:** Educación para la salud, estilo de vida, promoción de conductas saludables, cuidado corporal, movimiento actividad.

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