

Youth Health Promotion Through Rising Daily Physical Activity Levels and Correction of the Behavior in Relation to Food, Tobacco and Alcohol Use

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SUMMARY

World Health Organization estimates that, because of the consequences of physical inactivity in the world two million people die annually. Research suggests that in contemporary, civilized society, civilization usual physical activity level decreases in adults, but also in school children and youth. Inadequate nutrition, tobacco smoking and alcohol consumption have become the lifestyle of young people, not only in developed countries, but in developing countries. The aim is to promote the importance of physical activity in maintaining and improving child health, promotion of physical growth and development of personality, and harmonious development of all its anthropological features. Also, assess how common behaviors and habits of young people in the area of MBC, and to recommend appropriate plans and programs whose implementation would improve the health of young people. 3000 of high school students participated in examining. They came from ten municipalities of Central Bosnia Canton. They were the subject of epidemiological research in which was used modern epidemiological questionnaire, which consisted of 4 groups of questions. Collecting of data was based on questions on physical activity, habits, diet and consumption of tobacco and alcohol. Test results indicate a low level of physical activity in young people, which is accompanied by inadequate lifestyle. Nutrition and physical activity, along with tobacco and alcohol, are key determinants of contemporary public health. It is therefore necessary to include significant community in the design and implementation of modern programs that are cheap, sustainable and acceptable to young people.

Keywords: physical activity, health promotion, lifestyle, public health.

1. INTRODUCTION

Health of young people largely depends on lifestyle and way of behavior. Research suggests that in contemporary society usual physical activity levels are decreased in both in adults as well as school children and youth.

Drastically reduce of the daily activity is observed in school age children. More time is spent sitting at school, studying, watching TV, playing video games, spent on the Internet. Simultaneously is observed increase in prevalence of obesity and stress. In the period of adolescence comes to the rejection of authority and their system of values, experimentation with many lifestyles and flirt-

ing with many forms of risky behavior. In this age of life, young people first meet with alcoholic drinks and cigarettes, began to experiment with different types of psychoactive substances, and have the first sexual experience.

2. GOAL

The aim is to promote the importance of physical activity in maintaining and improving child health, promotion of physical growth and development, personality and harmonious development of all its anthropological features.

Also to assess which are the common behaviors and habits of young people in the area of Middle-Bosnia Canton and to recommend appropriate plans and programs whose implementation should improve the health of young people.

3. MATERIAL AND METHODS

This study was conducted on a sample of 3000 respondents, the students of first and third grade of secondary schools in the area of Middle-Bosnia Canton. In relation to gender, there is greater participation of women compared to men. With analytical epidemiological research methods and adequate statistical data processing we investigated the habits of young people in terms of level of daily physical activity, drinking alcoholic beverages and tobacco smoking. For the purposes of this study a special questionnaire is created. The survey was anonymous, made during classes on a survey sheet adapted to their age and which consisted of 117 questions grouped in the above mentioned groups.

The analysis is carried out in relation to age, gender, success in school, socioeconomic status and place of residence.

4. RESULTS

based on the conducted research, active participation in some kind of everyday sports practices every sixth adolescent. In relation to gender, men were significantly more involved in sport (21%) versus women whose involvement is only 12%.

	HOBBY	%
a)	Plays computer games	29
b)	Have other hobbies (playing instrument, draw, write....)	21
c)	Going out at evening with friends to disco, cafe...	19
d)	Actively participating in sport	15
e)	Read books (excluding textbooks)	7
f)	Drive motorbike for fun	5
g)	Play games on automates	4
		100%

Table 1. List of hobbies practiced almost everyday

During the day majority time is spent by young sitting or laying in front of TV, Without discussing the content of the TV chows and their message it is estimated the time spent in that manner.

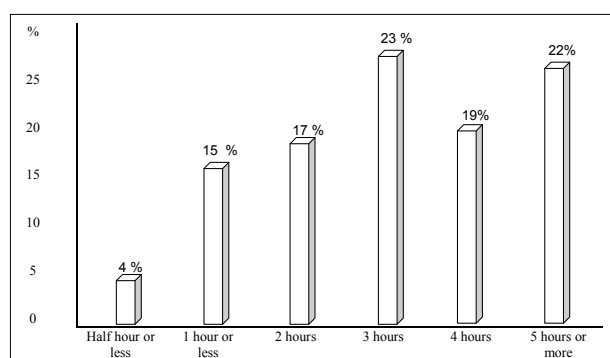


Figure 1. Time spent in front of TV from Sunday to Friday

At the same time there is just a few young who practice everyday physical activity which involves sweating or increased hearth rate of more than 50% compared to resting (120 BPM).

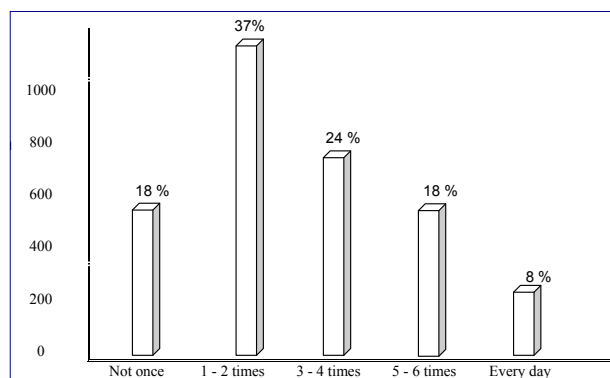


Figure 2. Number (percent) of respondents which was during past seven days were exposed to physical strain or sport training

Comparing activity in relation to gender, we found much greater involvement of men compared to women (63%: 37%). In relation to the age we recorded a slightly higher activity among the first grade students.

In this study measurements were not carried out, but we asked about the subjective experience of their own bodies. 34% of men considered to be malnourished and to increase body weight by increasing muscle mass and 28% of girls stated that he had been, or should start with diet for weight reduction.

18% stated that they never eat breakfast, and those who eat in the morning mainly do that at school by eating a

sandwich (salami), nuts with some carbonated juice.

From the total number of respondents in the last 30 days 76% smoked less than one cigarette per day (non-smokers), while 24% belong to a group of smokers.

In relation to age, number of respondents who smoke more than six cigarettes a day increased almost three times within two years. Also in relation to gender, in first grade, more girls declare themselves smoke, while in the third grade this relationship is more shifted to boys.

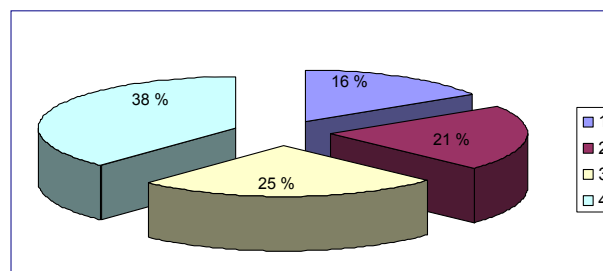


Figure 4. Percent of smokers in relation to age and gender

Interesting is also the first time of cigarettes use. The largest percentage (42%), smoked the first cigarette at the age of 15years.

Individuals differ according to fact whether they justify or not certain ways of behavior. Most adolescents (58%) justify when people smoke occasionally, and 31% when they smoke 10 or more cigarettes per day. Only a small percentage (11%) strongly disapproves smoking.

Experiences of alcohol consumption among adolescents are also very important. More than half of adolescents have tried beer or wine and about 17% of these are consumed "sometimes" or "often".

There is only very small number of young people who were not experimenting with alcoholic drinks. On average this happens with the age of 14 and half years. About 15% of those drink two or more than two liters of beer or wine a week.

Close to 50% of first grade students stated that the last time they drink in their or friend apartment, while nearly 63% of respondents of the third grade consumed alcohol in the café or discotheque.

Unfortunately, the majority of adolescents continue with the consumption of alcohol. 28% of all respondents or 35% of third grade states that during last month they drink five or more drinks in a row.

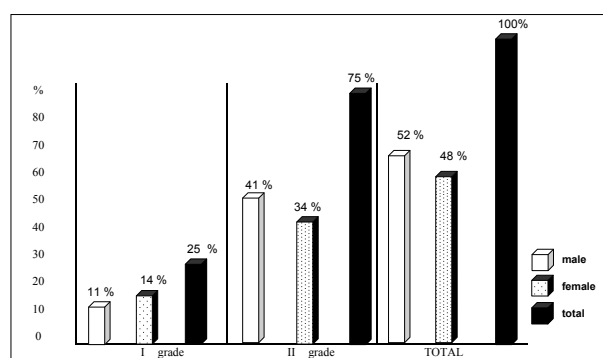


Figure 5. Frequency of alcohol use related to gender and age

5. DISCUSSION

This research has found that youth in the area of Middle-Bosnia Canton has low level of physical activity. Even in ancient times people have noticed that there is a close connection between physical activity and good health, as well as that specific ways of exercise can affect the course and outcome of certain diseases.

WHO Report for 2002 estimated that physical inactivity causes every year worldwide 1.9 million deaths.

Position of physical inactivity among the risk factors in developed countries is at the 7th place. It is estimated that in Australia, 8.7% of death for men and 11.7% female deaths are attributable to physical inactivity.

Physical activity and all-round and regular exercise stimulate non-specific adaptation of the organism to external and internal stresses, the development of the locomotors system function, to increase the capacity of the cardiovascular system, to develop capacity of the heart muscle and coronary arteries.

The effect of physical activity on bone is the largest at the time of rapid growth. Much attention is paid to the concept of peak bone density due to the rapid growth of bone mass in childhood and adolescence, which reached its climax in the twenties or earlier. If the peak bone density is high, the higher is the initial mass of bone that is lost later in life. The bone has strongest response to physical activity before and after puberty. Physical inactivity in those years resulting in low peak density and it is impossible to compensate for this lack in the later years.

Analysis of multiple controlled studies show that physical activity can maintain or even slightly increase bone mass in women before or after menopause.

Physical activity can influence also some of the internal risk factors to falls including muscle strength (6-174% improvement), amplitude of movement (0.5-18%), balance (7-53%), walking (12-48%)...

Strong JP and Mc Gill on the basis of studies conducted argued that atherosclerosis is a pediatric problem because the fatty deposits in the aorta occur in childhood, while in the coronary arteries in adolescence, and fibrous plaque development begins in the teenage age and progress at the age of 20.

Changes in coronary arteries in the form of fat residues until age of 20 are mostly reversible.

Also, most risk factors identified in childhood tends to keep their level in the adult age.

Multicentre study from USA in 1991 stresses the need for intervention and prevention of atherosclerosis before age of 15 in order to achieve maximum effects.

Incidence of obesity in the child's age is highly variable because of different criteria for evaluation, and various factors that cause it (diet, physical inactivity, genetic factors, etc.)

It is believed that about 20-40% overweight school children remain obese in adolescence, and about 80% of them in adult age.

Results of BOGALUS studies in the last 20 years indicate an increase in average body weight of children for more than 10%, and consecutive increase in the number

of obese, so more than 1/3 of children are at risk. The explanation of reasons for this phenomenon say that more than 50% have less than three hours per week of physical activity at school, while older children are less active.

Epidemiological studies have provided evidence that the increased risk of morbidity and mortality associated with increased body weight does not cause obesity by itself, but there is usually in the background physical inactivity, which develops and maintains excess weight and obesity.

The amount of physical activity necessary for the prevention of overweight and obesity that apparently works for a large population of western countries corresponds to 40-60 minutes of daily activities such as walking briskly.

Fat people because of their higher risk, incidence and prevalence of illness have a significantly greater need for health effects of physical exercise than those with normal weight.

Contemporary recommendations for at least 30 minutes of aerobic physical activity of at least moderate intensity on most days of the week are widely developed on the basis of findings on the effects of physical activity on prevention of coronary heart disease.

But the overall volume and intensity physical activity enhances its protective effect. Physical activity is also part of an effective cardiac rehabilitation program, which reduces the total cardiac mortality by 31% and coronary mortality by 35% and improves functional capacity and quality of life of the patients.

Epidemiological studies have demonstrated that 15-20% of the overall risk of coronary heart disease, diabetes type II, colon cancer, breast cancer and hip fractures in the elderly can be attributed to physical inactivity.

About the bad influence of computer and video games on physical health there are numerous studies in which the majority agrees that certain adverse effect on the two parts of the human body exist, to the eyes and the musculoskeletal system.

Due to the inactivity the muscle is weakened, sometimes hypotrophy resulting in a general reduction in fitness, clumsiness, unpreparedness for efforts and general poor condition. Further bending of the spine occurs in all forms, the unfavorable development of the feet and other joints.

On the psychological level occurs isolation of persons, loss of contact with family and peers. Living in virtual world, not developing the emotional intelligence or self-esteem, lack of creativity, with the possibility of developing depression and insecurity.

While tobacco can be taken in different ways the smoking is by far the most common way of use. It is believed that every second smoker dies because of their habit. If there is no tobacco, the rates of mortality from cancer would be 30% lower, and lung cancer up to 90%. But among the victims of smoking more are killed from a heart infarction and blood vessel diseases, including blood vessels of the brain.

Alcohol is always harmful for the youth. For older people, in small doses (up to two wines a day) can express a protective effect on the heart, while in larger quantities it

significantly increases the risk for many health disorders. This, in addition to the direct toxic effects on the brain and peripheral nervous system, refers to diseases of the heart and blood vessels, including stroke and hypertension, diabetes, cirrhosis and more malignant tumors. When observed mortality of young Europeans, alcohol is the leading risk factor.

6. CONCLUSION

Research on the habits, attitudes and behaviors of adolescents in the Middle-Bosnia Canton was conducted in 14 secondary schools on a total of 3000 students of which 53.8% were students of first, and 46.2% of third grade.

From the presented results can be seen that the dominant is inactive lifestyle with other harmful habits in terms of nutrition, tobacco and alcohol use.

Knowledge of broad preventive and therapeutic health effects of achieving and maintaining the average level of physical fitness is not today considered as the enormous achievements in sports medicine, but medicine in general, that many classify among the most important in the last century. With their application in practice we can expect far more favorable shifts in the global promotion of health of the population than in the application of any so far discovered medications or preventive agents.

It is needed to work on the modification of school education by introducing the mandatory 4 hours of physical activity in schools with testing of physical abilities, organizing competitions and education of children and parents about the health significance of these activities to the proper growth and development.

It is necessary to engage all those responsible and professional people in the development and implementation of a specific program of physical activity for health purposes, especially those aimed at youth and adolescents, which would be acceptable and accessible to all as an alternative to unhealthy life styles.

REFERENCES

1. Borms J. Organizacijski i metodološki aspekti zdravstvene tjelesne aktivnosti. *Sport za sve*. 2000; 17; 22: 16-20.
2. Dojčinovska M. *Nutritivna terapija*, Bata, Beograd, 1991.
3. Đuković B. *Alkoholizam*. I izdanje. Naučna knjiga Beograd. Beograd, 1988.
4. *Global Strategy on Diet, Physical Activity and Health*. Geneva, World Health Organization, 2003.
5. Haimer S, Ružić L, Relac M. Health as a precondition or a goal? The situation in Croatia. *CESS Magazine*, 2002; 10; 12.
6. Haimer S. Promicanje zdravstveno-preventivne tjelesne aktivnosti u Republici Hrvatskoj. *Sport za sve*, Glasnik Hrvatskog saveza sportske rekreacije. 2003; 35: 3-4.
7. Jackson R, Scragg R, Beaglehole R. Alcohol consumption and risk of coronary heart disease, *British Medical Journal*. 1991; 303: 211-6.
8. Jorga J. *Gojaznost-činjenice i zablude*, TV klinika, Beograd 1997.
9. Karakaš S, Tandir S. *Epidemiologija*, Print-GS, Travnik, 2009.
10. Kocijančić IR. *Higijena*, Beograd: Zavod za udžbenike i nastavna sredstva, 2002.
11. Koković D. *Sociologija sporta*. Beograd, 2000.
12. Medved R. *Sportska medicina*. Jumea, Zagreb, 1980.
13. Mišigoj-Duraković M. Uloga tjelesne aktivnosti u prevenciji kroničnih nezaraznih bolesti. *Medicus*, 2000; 9; 1: 99-104.
14. Mustajbegović J. Način života i zdravlje. *Medicus*, 2000; 9; 1: 7-15.
15. Obradović D, Milutinović B, Ulić D, Božić-Krstić V. *Kineziologija*, Zavod za udžbenike i nastavna sredstva, 2001.
16. Omanić A. O javnozdravstvenim posljedicama pušenja. *Medicinski arhiv*, 1989; 43, vol. 4-5-6: 265-268.
17. Papović Š, Kulenović F, Papović I. *Moderno zdravstveno vaspitanje-brana bolestima ovisnosti*. Svjetlost Sarajevo, Sarajevo, 1988.
18. Pate RR et al. Physical Activity and Public Health. *Journal of the American Medical Association*, 1995; 273: 402-7.
19. Peters Emil-Gatson. *Sve o ishrani*, BIGZ, 1975.
20. Simić BS. *Medicinska dijetetika*, Beograd, Nauka, 1998.
21. Vuori I, Lankenau B, Pratt M. Physical activity policy and program development: The experience in Finland. *Public Health Reports*, 2004; 119(3): 331-45.
22. WHO: *Health 21-health for all in the 21st century*, Copenhagen, WHO regional office for Europe, 2000.
23. WHO document, *Nutrition Research, A Growth Curve for the 21st century: The WHO Multicentre Growth Reference Study*, 2001.
24. WHO Expert Committee. *Physical status: The use and interpretation of anthropometry*. WHO technical Report series 854. Geneva, 1995.

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