

## Promoting a healthy lifestyle among schoolchildren (comparative study between Poland and Ukraine)

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### Abstract:

Purpose: to present the opinions on healthy lifestyle of the junior high school students from Poland (Myślenice district) and Ukraine (Ivano-Frankivsk region). Material: in the research teenagers from the Polish (n=138) and Ukrainian (n=107) schools participated. The questionnaires were prepared for the junior high school students. The survey was conducted in May and June 2017 in randomly selected schools from the Myślenice district (Poland) and Ivano-Frankivsk region (Ukraine). Selection of the research sample was random. The study attracted the same number of boys and girls between the age of 12 to 15. The statistical analyses were prepared based on data obtained from the surveys. Results: in the article the authors presented the results of their research on the evaluation of the lifestyle lead by young people from two countries, including physical activity, nutrition, personal care and life safety. The article stresses the main concepts in terms of protecting and strengthening physical, social, spiritual and psychical health of pupils. Conclusions: the research proves that nowadays the states introduce many programs of prophylactic medicine, aimed at prevention and early detection of diseases, conducting explanatory work about harm of alcohol and drugs to school children, offering interesting information about the problems of preserving and strengthening health; active development of students' motivation to respect for their own health; psychological training to overcome depression and resolution of the conflict situations; stimulating students to realise the importance of physical education, healthy diet, daily routine, hygienic body care, safe behaviour.

**Key words:** educational process, youth, healthy nutrition, personal hygiene, safety level, physical activity.

### Introduction

In the modern civilisation the problems of quality of life and maintaining health is a global issue (Budnyk, 2014). Today, many countries are focussed not only on a matter of physical health, but also on keeping the mental balance among young people. The most typical reasons of this are: migration in the world, changing family structure, constant stress and conflicts, lack of financial resources etc. Thus, 4% of young people aged 12 to 17 years and 9% of 18-year-olds suffer from depression, which is the most common disease. It leads to various negative consequences (Hearst, Shanafelt, Qi, Leduc & Nanney, 2018). Also the physical health, especially among young people, is getting worse and worse. For example, in Ukraine in recent years the state of children's health is getting close to critical: for every thousand children surveyed only 11 are almost healthy; it means that among 15-year-olds only 1.1% are healthy. Thus, according to official statistics, over 30% of people are almost healthy (Budnyk, 2014). About 90% of them suffer from chronic diseases. This trend is observed in many European and American countries.

According to the American scientists (Judith R. McCalla, Cheryl L. Juarez, Lúcia E. Williams, Judy Brown, Katie Chipungu, Patrice G. Saab), “almost one third of high school students engage in 3 or more hours per day of sedentary activity (ie, using computers for nonacademic purposes or watching television). The probability of students engaging in unhealthy lifestyle behaviors and failing to follow healthy behavior guidelines is increased when they are stressed, a common occurrence during high school” (Judith, McCalla, Cheryl, Juarez, Lúcia, Williams, Brown, Chipungu, Patrice & Saab, 2012).

However, human health depends largely on their lifestyle, hierarchy of values and the relationship with nature. There is big freedom in the selection of means and methods of a physical recreation, their flexibility and variability (Shivers, 1981). According to B. Woynarowska “healthy (health-promoting) lifestyle is a conscious behaviour oriented on improving, maintaining and protecting health. This involves mainly: caring for body and

mental hygiene, appropriate physical activity, healthy eating, maintaining security, periodic health examinations, not smoking tobacco and taking drugs, moderation in alcohol consumption” (Woynarowska, 2000).

According to this definition, we can distinguish two types of behaviour:

a) health-oriented, ie. favourable to health. They include: physical activity, rational nutrition, maintaining the body and environment hygiene, coping with stress, maintaining security, maintaining appropriate relationships, undergoing preventive health examinations;

b) anti-health, ie. hazardous to health – smoking, use of alcohol and other drugs, risky sexual behaviour (Woynarowska, 2000).

The adolescence period (from 12 to 18-20 years of age) is the period of transformation that lead a man from childhood to adulthood. The mental and physical changes enable young people to undertake new tasks and social roles. This is the time that has a huge impact on man's lifestyle, beliefs, attitudes to life, etc. Taking risk is an essential part of nature of young people. The effects of risky behaviour for health become apparent only after many years. The youth do not see a direct connection between their behaviour and health. Unfortunately, this group is not interested in health education and preventive programs that would provide them a better, healthier life (Dubis, 2014). Some questions of solving of healthkeeping problems of children and youth are identified and characterized by A. Besedina, C. Bryant, T. Carson, V. Druz, M. Dubis, T. Ermakova, R. Hakh S. Iermakov, O. Ivashchenko, O. Kapkan, V. Liashenko, I. Mordvinova, N. Novitskaya, M. Nosko, I. Olszowy, V. Pasichnyk, M. Perfilieva, D. Ponczek, B. Popkin, L. Shesterova, A. Siega-Riz, V. Tumanova, E. Vilchkovsky, B. Woynarowska, L. Zapata and others (Druz, 2017; Ivashchenko, 2017; Kapkan, 2015; Liashenko, 2017; Ponczek & Olszowy, 2012; Siega-Riz, 1981; Zapata, 2008).

The aim of the article is to present the opinions on healthy lifestyle of the junior high school students from Poland (Myślenice district) and Ukraine (Ivano-Frankivsk region).

### Material and methods

Teenagers from the Polish (n=138) and Ukrainian (n=107) schools participated in the research. The study attracted the same number of boys and girls between the age of 12 to 15. A questionnaire of own authorship was used in the study as the research tool. Participation in the survey was anonymous. The questionnaire was conducted in May 2017 in randomly selected schools from Poland and Ukraine. The selection of the sample for testing was random. 138 questionnaires were collected from the students in Poland and 107 questionnaires – in Ukraine. Analysis of the structure of the tested children in Poland indicates that the number of boys (48.6%) was slightly lower than the number of girls (51.4%); the tested Ukrainian children indicates that the number of boys (44.9%) was slightly lower than the number of girls (55.1%). Based on the data from these surveys, the statistical analyses were carried out.

### Results and discussion

The research showed that students are relatively knowledgeable about healthy lifestyle. Respondents associate it primarily with a rational nutrition (88.6%) and active lifestyle, sports activities (87.1%). Subsequently, the students show a concern for personal hygiene and mental hygiene (17.4%) and the need to abandon alcohol, smoking and drugs (9.8%). In the students' answers one may find also such elements of a healthy lifestyle as the periodic health examinations (3%) and the security.

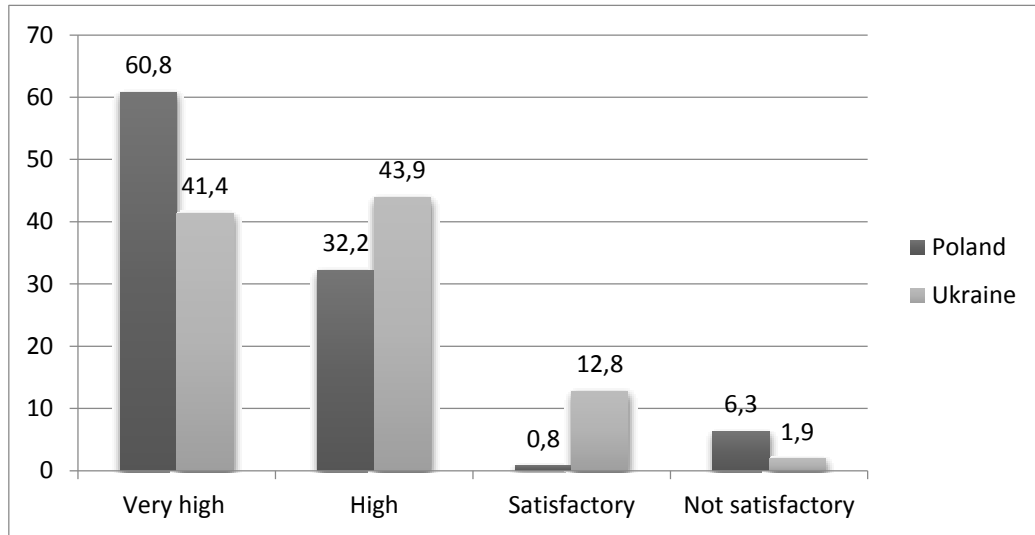
The respondents in Poland consensually indicated that the lifestyle (84.8%) is the most important factor that ensures optimal health and minimizes the risk of contemporary diseases of civilisation. Subsequently, the junior high school students indicated such elements as the state of the environment (5.8%), the development of medicine (5.1%) and genetics (4.4%).

Similar responses were received from the Ukrainian students. For example, among the most important factors for maintaining health 81.4% of girls (83.3% of boys) pointed lifestyle, 15.3% (16.7% boys) – the environment and only 3.4% (0 % of boys) – genetics. This indicates that students understand the importance of the healthy lifestyle, but they do not always pay attention to this issue. To the question: “Do you follow the principles of healthy lifestyle?” 28.8% of the girls and 37.5% of the boys answered “yes”; 87.5% of girls and 52% boys answered “partially”. However, 10.4% of boys from Ukraine indicated that “it's not important to them”.

The youth were asked to assess the health education implemented at school. According to the vast majority of Polish respondents (61.6%), the activities conducted to promote the healthy lifestyle are satisfactory. Only 5.8% of the students believe that school activities in this field are not satisfactory.

Students from the Ukrainian school answered that most often they get information on healthy lifestyles at school (13.1%), from the family (24.3%), during the general educational classes, lectures, training in sports sections (7,48%), from classmates, friends – 4.7% of respondents. However, more than a half of the young people (50.5%) told that the basic information on preserving and strengthening their health they get from the media and the Internet.

Subjective assessment of the level of hygiene students is positive, up to 92.8% of Polish respondents believe that their level of personal hygiene is very high or good whereas only 6.5% estimated it as not satisfactory. Similar results were obtained also in the Ukrainian school (Figure 1).



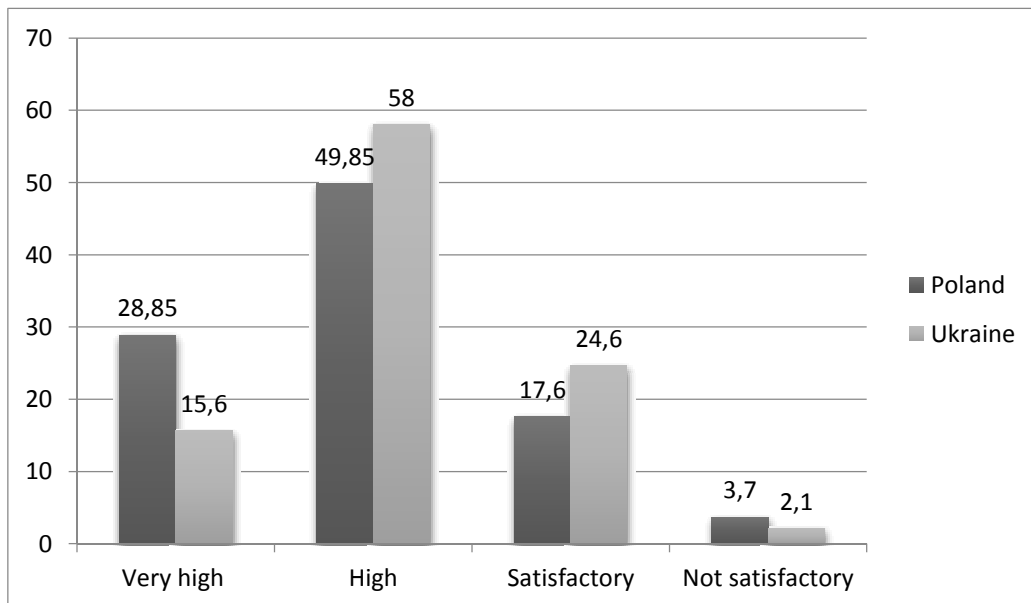
**Figure 1.** How do you assess the personal hygiene level?

The results show that the higher percentage of Polish boys (98.5%) than girls surveyed (87.3%) believe that their level of personal hygiene is very high or good. As much as 12.7% of girls considered their level of hygiene unsatisfactory. The results collected in the Ukrainian school show that 66.1% of girls evaluated their level of personal hygiene as very high, 25.4% – as high and 1.7% – as not satisfactory. Among boys the results turned out to be a little bit lower (Table 1).

**Table 1.** The level of personal hygiene

|                  | Poland     |      |           |      | Ukraine    |      |           |      |
|------------------|------------|------|-----------|------|------------|------|-----------|------|
|                  | Girls N=71 |      | Boys N=67 |      | Girls N=59 |      | Boys N=48 |      |
|                  | N          | %    | N         | %    | N          | %    | N         | %    |
| Very high        | 46         | 64.8 | 38        | 56.7 | 39         | 66.1 | 8         | 16.7 |
| High             | 16         | 22.5 | 28        | 41.8 | 15         | 25.4 | 30        | 62.5 |
| Satisfactory     | -          | -    | 1         | 1.5  | 4          | 6.8  | 9         | 18.8 |
| Not satisfactory | 9          | 12.7 | -         | -    | 1          | 1.7  | 1         | 2.1  |

The research results indicate that students have a high level of sense of security. 79% of the Polish students believe that their safety level is very high or high, and only 3.6% evaluated it as not satisfactory (Figure 2).



**Figure 2.** How do you assess the safety level?

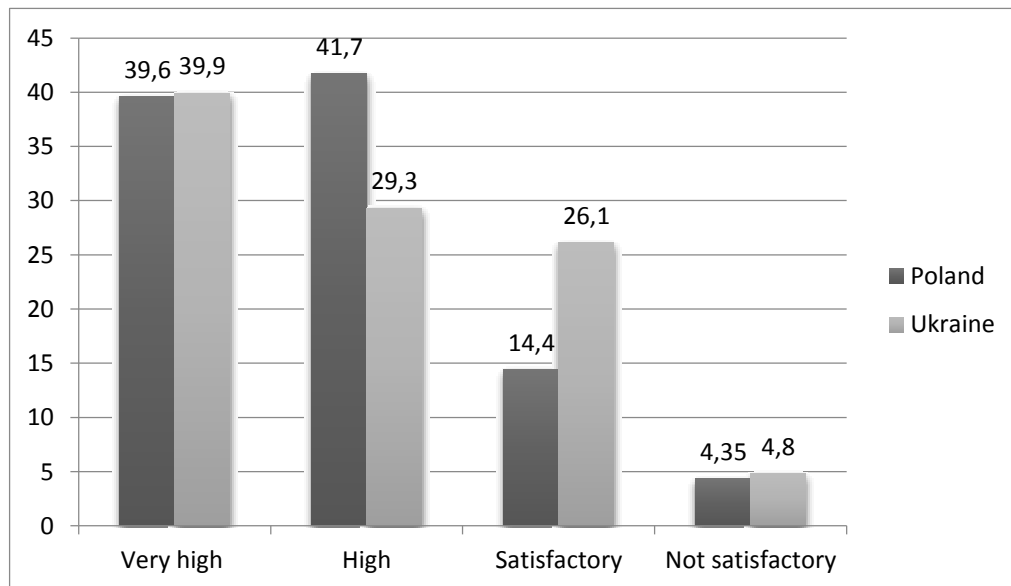
The analysis of the collected research material show that a higher percentage of girls surveyed (87.3%) than boys (70.1%) believe that their safety level is very high or high. On the other hand, the satisfactory level

was indicated by larger percentage of boys (23.9%) than girls (11.3%). 1.4% of girls and 6% of boys considered their level of security unsatisfactory (Table 2).

**Table 2.** Safety level

|                  | Poland     |      |           |      | Ukraine    |      |           |      |
|------------------|------------|------|-----------|------|------------|------|-----------|------|
|                  | Girls N=71 |      | Boys N=67 |      | Girls N=59 |      | Boys N=48 |      |
|                  | N          | %    | N         | %    | N          | %    | N         | %    |
| Very high        | 24         | 33.8 | 16        | 23.9 | 10         | 16.9 | 6         | 12.5 |
| High             | 38         | 53.5 | 31        | 46.2 | 31         | 52.5 | 30        | 62.5 |
| Satisfactory     | 8          | 11.3 | 16        | 23.9 | 18         | 30.5 | 7         | 14.6 |
| Not satisfactory | 1          | 1.4  | 4         | 6.0  | -          | -    | 2         | 4.2  |

The subjective evaluation of Polish students' physical activity is positive – 81.1% believe that their level of physical activity is very high or high, and only 4.4% evaluated it as not satisfactory. Among the Ukrainian schoolchildren 33.9% of girls and 45.8% of boys rated their physical activity as very high. Only 5.5% of respondents believe that their physical activity is insufficient (Figure 3).



**Figure 3.** How do you assess your physical activity level?

The analysis of the collected research material shows that a greater percentage of surveyed boys (85.1%) than girls (77.5%) believe that their level of physical activity is very high or high. On the other hand, the satisfactory level was pointed by a higher percentage of girls (18.3%) than boys (10.4%). Not satisfactory level of physical activity was recognised by similar degree of the junior high school students – 4.2% of girls and 4.5% of boys. This trend is typical both for Polish and Ukrainian students (Table 3).

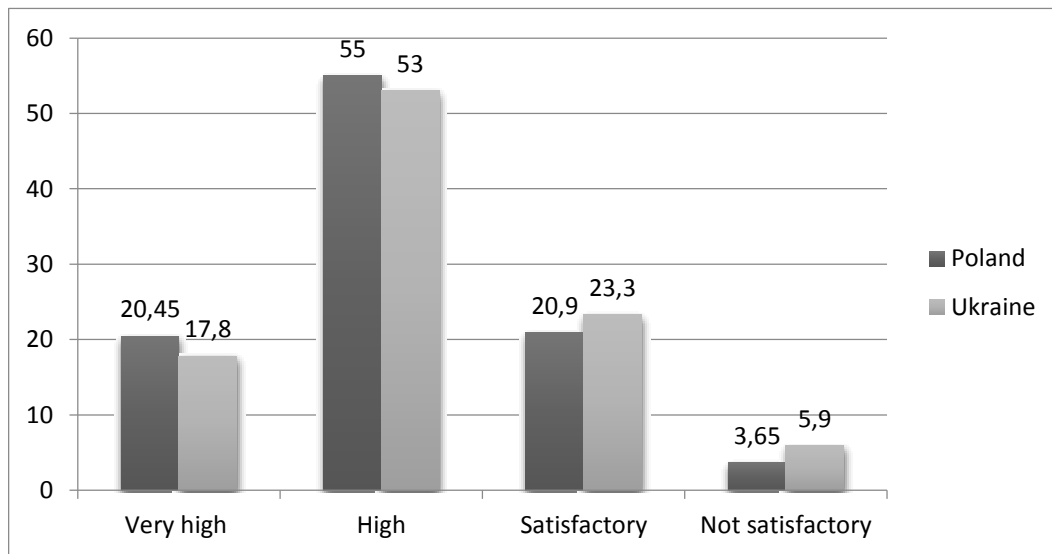
**Table 3.** Level of physical activity

|                  | Poland     |      |           |      | Ukraine    |      |           |      |
|------------------|------------|------|-----------|------|------------|------|-----------|------|
|                  | Girls N=71 |      | Boys N=67 |      | Girls N=59 |      | Boys N=48 |      |
|                  | N          | %    | N         | %    | N          | %    | N         | %    |
| Very high        | 17         | 24.0 | 37        | 55.2 | 20         | 33.9 | 22        | 45.8 |
| High             | 38         | 53.5 | 20        | 29.9 | 21         | 35.6 | 7         | 14.6 |
| Satisfactory     | 13         | 18.3 | 7         | 10.4 | 16         | 27.1 | 5         | 10.4 |
| Not satisfactory | 3          | 4.2  | 3         | 4.5  | 2          | 3.4  | 1         | 2.1  |

The students asked about how often they participate in various forms of physical activity, they confirmed their high assessment of the physical activity level. The large majority of Polish students are willing to perform physical exercises at home (54.3%), participate in physical education classes (88.3%), sports activities after school (58.7%) and take part in some active forms of recreation in the open air (91.3%). More than 3/4 of students surveyed declared that they perform physical exercises at least three times a week. The Ukrainian students indicated that 62.6% of them are engaged in physical activities at home, 33.6% do it rarely and 3.7% – are not involved in physical activities at home at all. The survey shows that the main form of physical activity are the lessons of physical education (67.3% of students). More than a half of students (69.1%) are engaged in

various sports after school, while 17.9% are not involved in extra physical classes at school; 13% of respondents never play any sports.

According to opinions expressed by the surveyed Polish students, the vast majority of them (75.4%) claimed that the level of their nutrition is very high or high. Only 3.6% of respondents considered this level to be not satisfactory (Figure 4).



**Figure 4.** How do you assess the healthy nutrition level?

The research shows that the surveyed young people assess their level of healthy nutrition in a similar way. Most of them (in Poland: boys – 77.6%, girls – 73.3%; in Ukraine: boys – 68.8%, girls – 72.8%) believe that it is very high or high. The satisfactory level was indicated by 23.9% of girls and 17.9% of boys in Poland. Not satisfactory level of rational nutrition was pointed out by 2.8% of girls and 4.5% of boys. At the same time, 11.7% of Ukrainian schoolchildren believe that their nutrition is insufficient (Table 4).

**Table 4.** The level of healthy nutrition

|                  | Poland     |      |           |      | Ukraine    |      |           |      |
|------------------|------------|------|-----------|------|------------|------|-----------|------|
|                  | Girls N=71 |      | Boys N=67 |      | Girls N=59 |      | Boys N=48 |      |
|                  | N          | %    | N         | %    | N          | %    | N         | %    |
| Very high        | 11         | 15.5 | 17        | 25.4 | 10         | 16.9 | 9         | 18.8 |
| High             | 41         | 57.8 | 35        | 52.2 | 33         | 55.9 | 24        | 50   |
| Satisfactory     | 17         | 23.9 | 12        | 17.9 | 14         | 23.7 | 11        | 22.9 |
| Not satisfactory | 2          | 2.8  | 3         | 4.5  | 2          | 3.4  | 4         | 8.3  |

Polish students asked about the frequency of consumption of certain foods pointed out that every day they consume fruits (35.5%), vegetables (31.9%) and dairy products (36.2%). In the case of products considered unhealthy, the surveyed students declared that every day they reach for sweets (16.7%), chips (5.8%), fast food (2.9%) and soft drinks (18.8%). The results confirm that the level of healthy nutrition among junior high school students is satisfactory. The survey among Ukrainian students showed that their everyday diet included: 32.7% – fruits, 45.8% – vegetables, 52.3% – dairy products, 1.9% – fish. However, many students drink fizzy drinks (28%), eat chips (20.6%); often eat fast foods (10.3%) and sweets (22.4%).

Breakfast consumption contributes to healthful life habits, but in the United States nearly 25% of high school students do not eat breakfast. Given the association of obesity with less frequent breakfast consumption and the rise in obesity among persons of this age group, a renewed emphasis on the importance of breakfast is warranted (Siega-Riz, Popkin & Carson, 1998). As children transition into adolescents, regular breakfast consumption decreases (Hearst, Shanafelt, Qi, Leduc & Nanney, 2018) with more girls than boys reporting skipping breakfast (Zapata, Bryant, McDermott, Hefelfinger, 2008). “Student knowledge of the benefits of eating breakfast and the belief that eating breakfast would help in class, energy level, and weight control did not change significantly between the 2 conditions. It is possible that policy and environmental-level changes had a more immediate and stronger impact on reducing barriers whereas the benefits and beliefs require additional time and/or more intensive interventions focused on promoting breakfast nutrition and academic benefits” (Hearst, Shanafelt, Qi, Leduc & Nanney, 2018).

In the research group of Polish students the vast majority had never smoked cigarettes (66%). Some attempts were taken by 15.3% of junior high school students. More often, these attempts were taken by the boys (20.8%) than girls (9.9%). Currently, 18.8% of the young people smoke with different frequency: 9.4% do it every day, 5.1% at least once a week, 4.4% less than once a week. The percentage of smoking boys (20.8%) is greater than the girls (17%). In the surveyed group, most of the Polish young people had never consumed alcoholic beverages (52.3%). 17.4% of them have tried alcoholic drinks, but does not drink alcohol at the moment. The attempts to drink are more often taken by the boys (20.8%) than girls (14.2%). Currently, 31.2% of the young people drink alcohol with different frequency: 16% do it every week (of which 2.2% every day), 2.2% every month, 13% less than once a month. The percentage of boys who drink (20.8%) is greater than the percentage of girls (17%) (Mazur & Łętocha, 2016).

Similar results we obtained in the Ukrainian schools: in the surveyed group of pupils 76.3% of girls and 58.3% of boys claimed that they do not smoke and had never smoked. 3.4% of girls and 2% of boys said that they smoke every day. It was revealed that 14% of the respondents do not smoke, but had already tried smoking, 11.2% – do it 1-3 times a month. It was found that 55.1% of students had tried alcohol, 19.7% – do not drink, but had once tried alcohol. Others consume alcoholic drinks with such frequency: 1.9% – once a week, 2.8% – 1-3 times a month, 20.5% – sometimes.

### Conclusions

To sum up, we may state that the students have quite good knowledge about the healthy lifestyle. It's most often associated with active lifestyle and rational nutrition. The conducted research shows also that the importance of the health-promoting lifestyle, which was declared by almost all of the students, is generally reflected in their everyday life. Most of the surveyed students use the active forms of recreation, as well as live in accordance with the rational nutrition principles. Risky behaviours occurring in the research group of young people are typical for their age.

According to the American scientists, “two important aspects of encouraging behavior change are: creating awareness of the connection between lifestyle habits and health outcomes and increasing self-efficacy for behavior change by setting achievable goals. Health education can improve students’ well-being and reduce their cardiovascular risk. This may be accomplished by engaging them in activities that promote healthy habits and helping them attain personal goals that are consistent with recommended healthy lifestyle guidelines” (Judith, McCalla, Cheryl, Juarez, Lúcia, Williams, Brown, Chipungu, Patrice & Saab, 2012). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3502021/-R10>

Obviously, nowadays the state introduces many programs of prophylactic medicine, aimed at prevention and early detection of diseases, conducting explanatory work about harm of alcohol and drugs to school children, the formation of interest to the problems of preserving and strengthening health; active development of students’ motivation to respect for their own health (Steinmayr, Dinger, Spinath, 2012); psychological training (Liashenko, Tumanova, Gnutova & Gnutov, 2017) to overcome depression and resolution of the conflict situations; stimulating students to realise the importance of physical education, (Druz, Iermakov, Nosko, Shesterova, Novitskaya, 2017; Ivashchenko, Kapkan, 2016), healthy diet (Murphy, Pagano, Nachmani, Sperling, Kane, Kleinman, 1998; Hearst, Shanafelt, Qi, Leduc & Nanney, 2018), daily routine, hygienic body care, safe behaviour. However, it is necessary to popularise the values of the healthy lifestyle among young people in Poland and Ukraine (Budnyk, Mazur, (2017), including strengthening their physical, mental, spiritual and social health. First of all, it is the formation of their health-maintaining competence, organising active recreation in the environment, involvement in physical education and sports, cooperation with parents about strengthening students’ health, learning capabilities of one’s own organism, visiting sports groups, clubs etc.

### Conflict of interests

The authors declares that there is no conflict of interests.

### References:

- Budnyk O. (2014). Health protective education in primary school. *Mountain School of Ukrainian Carpaty*, 30–33.
- Budnyk O. (2014). Professional training of primary school teachers to social and educational activities: Theory and Practice. Dnipropetrovsk: “Seredniak T.K.”
- Budnyk O., Mazur P. (2017). The Hierarchy of Values Among Young People from Schools in the Mountainous Regions (Comparative study on the example of Poland and Ukraine). *The New Educational Review*, 47(1), 53-65. <http://dx.doi.org/10.15804/tner.2017.47.1.04>
- Druz V., Iermakov S., Nosko M., Shesterova L., Novitskaya N. (2017). The problems of students’ physical training individualization. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 21(2), 51-59. <http://dx.doi.org/10.15561/18189172.2017.0201>
- Dubis M. (2014). Wartości i style życia młodzieży (Values and lifestyles of youth). In P. Długosz, M. Niezgodą, S. Solecki (Eds.), *Młodzi w społeczeństwie ryzyka (Youth in risk society)*, Kraków, 35-47.

- Hearst M.O., Shanafelt A., Wang Qi, Leduc R., Nanney M.S. (2018). Altering the School Breakfast Environment Reduces Barriers to School Breakfast Participation Among Diverse Rural Youth. *Journal of School Health*, 88(1), 3-8. <http://dx.doi.org/10.1111/josh.12575>
- Ivashchenko O.V. (2017). Special aspects of motor fitness influence on level of 11-13 years' age girls' physical exercises' mastering. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 1, 11–17. <http://dx.doi.org/10.15561/18189172.2017.0102>
- Ivashchenko O.V., Kapkan O.O. (2016). Informative pedagogic control indicators of 14-15 years age girls' motor fitness. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 6, 18–25. <http://dx.doi.org/10.15561/18189172.2016.0603>
- Judith R. McCalla, Cheryl L. Juarez, Lúcia E. Williams, Judy Brown, Katie Chipungu, Patrice G. Saab. (2012). Promoting Healthy Lifestyle Behaviors: The Heart Smart Discussion Activity. *Journal of School Health*, 82(12), 572-576. <http://dx.doi.org/10.1111/j.1746-1561.2012.00738>
- Kapkan O.O. (2015). Features of 14-15 years' age boys' training to physical exercises. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 19(9), 26–32. <http://dx.doi.org/10.15561/18189172.2015.0904>
- Liashenko V.M., Tumanova V.M., Gnutova N.P., Gnutov E.I. (2017). Special aspects of 12-14 yrs children's psychological protection. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 21(4), 180–184. <http://dx.doi.org/10.15561/18189172.2017.0406>
- Mazur P., Łętocha M. (2016). Healthy lifestyle in the opinion of junior High School students from Myślenice district (Poland). *Journal of Vasyl Stefanyk Precarpathian National University. Scientific Edition: Series of Social and Human Sciences*, 3(2-3), 62-67. <http://dx.doi.org/doi:10.15330/jpnu.3.2-3.62-67>
- Murphy J.M., Pagano M.E., Nachmani J., Sperling P., Kane S., Kleinman R.E. (1998). The relationship of school breakfast to psychosocial and academic functioning: cross-sectional and longitudinal observations in an inner-city school sample. *Arch Pediatr Adolesc Med.*, 152(9), 899-907.
- Ponczek D., Olszowy I. (2012). Styl życia młodzieży i jego wpływ na zdrowie (Youth lifestyle and its impact on health). *Problemy Higieny i Epidemiologii (Problems of Hygiene and Epidemiology)*, 2, 260-268
- Shivers J.S., (1981). Leisure and recreation concept: A critical analysis. *Boston: Allyn & Bacon*
- Siega-Riz A.M., Popkin B.M., Carson T. (1998). Trends in breakfast consumption for children in the United States from 1965-1991. *Am J Clin Nutr*, 67(4), 748S-756S.
- Steinmayr R., Dinger FC., Spinath B. (2012). Motivation as a Mediator of Social Disparities in Academic Achievement. *European Journal of Personality*, 26(3), 335–349. <http://dx.doi.org/10.1002/per.842>
- Weissman MM et al. (1999). Depressed adolescents grown up. *Journal of the American Medical Association*, 281(18), 1707-1713.
- Woynarowska B. (2000). Podstawowe pojęcia. Szkoła promująca zdrowie. Doświadczenia dziesięciu lat (School promoting health. The experience of ten years). In B. Woynarowska, M. Sokołowska (eds), Warsaw.
- Zapata L.B, Bryant C.A, McDermott R.J, Hefelfinger J.A. (2008). Dietary and physical activity behaviors of middle school youth: the youth physical activity and nutrition survey. *Journal of School Health*, 78(1), 9-18, 65-17.