Gergana Markova[1]

1) Department of Nursing Surgical Care, Faculty of Health Care, Medical University of Pleven, Bulgaria

The Health Culture Of Adolescents From Pleven, Bulgaria

ABSTRACT

AIM

By studying the level of knowledge and attitude of teenagers towards some health risk factors to determine the need for conducting more in-depth health education among them.

METHODS

In February 2023, a survey was conducted through direct group survey among 71 children aged 11-13, in two primary schools in the municipality of Pleven, Bulgaria. The children were interviewed after the written informed consent of their parents. An originally developed questionnaire containing 29 questions, adapted to the children's age, was used.

Survey data were processed with IBM SPSS Statistics 25 and EXCEL for Windows statistical software packages. The results are described by graphs and numerical indicators of structure, frequency, averages, correlation coefficients and others. The $\chi 2$ and Fisher's exact test criteria were applied.

FINDINGS

It is of great concern that the results of this study once again confirm that the 11-13 age group is particularly vulnerable to behavioral health risk factors.

CONCLUSION

Given the information found about the risky behavior of Bulgarian adolescents and the level of their health culture from the literature review and the results of the conducted study, the introduction of mandatory health and educational measures among adolescents in our country is extremely urgent.

Keywords: behavioral health-risk factors; adolescents; health culture

INTRODUCTION

Today we live in a dynamic world where our health is not in the first place of our priorities. We think of it only when we are faced with serious health problems, some of which lead to permanent disabilities and shorten our life expectancy. A large percentage of them are preventable. It is sufficient for the population to form a subjective health culture based on certain knowledge, beliefs, motivation, acquired habits and behavioral patterns.

Behavioral, health-risk factors such as: use of alcohol and narcotic substances, smoking are observed among adolescents in the European Union; consumption of high-calorie food, combined with hypo- and adynamia [1-6]. In relation to some of them, worse results were found in Bulgaria [7]. A report of the Regional European Office of the World Health Organization states that Bulgarian children aged 11-13 are among the first places in terms of alcohol use and abuse, use of tobacco products and cannabis [8]. The situation with the consumption of food of the "Fast food" type in combination with hypo- and adynamia is no different [9, 10].

It should not be overlooked that health-risk behaviors are the most common source of morbidity among adolescents [11]. According to Muñoz-Pindado C, et al., the presence of one behavioral health risk factor provokes the appearance of others. They recommend creating preventive programs targeting this age group [12].

The author collectives of Dyachuk D, et al. and Khan A, et al. also strongly recommend introducing measures to correct behavioral risk factors [13, 14]. In some countries, systematic observations are carried out and health educations are conducted among students of junior high schools [15-20].

According to Garov N., the level of health knowledge directly reflects on the health status of the individual [21].

It has been found that there is a significant relationship between health knowledge and adolescent health behavior [22]. We should not forget that individuals with a lower health culture trust more easily and more often dubious sources of health information, which also poses a risk to their health [23]. In support of this, Timoshilov V. & Lastovetckii A. prove that independent search for drug information on the Internet has a negative effect. According to them, widespread implementation of targeted advanced training is needed [4].

According to Kolmaga A, et al. health education should be compulsory in school [24]. Perelman J, et al prove that the school as an institution and environment plays an important role in preventing smoking among adolescents [25]. I would also add in the prevention of the use of alcohol and narcotic substances, the prevention of unhealthy eating habits and the fight against hypo- and adynamia. For this purpose, complex health and educational activities with a preventive purpose must be undertaken among the students.
Within Bulgaria, Slavchev S. recommends harnessing the efforts of the entire society and all institutions, including schools [26]. A decade earlier, Terzieva G. established the same need to develop and create a health education and educational program in order to master the growing knowledge about health, its protection and preservation [27].

AIM

By studying the level of knowledge and attitude of teenagers towards some health risk factors (tobacco smoking, use of narcotic substances, use of alcohol, consumption of fatty and caloric food, lack of movement) to determine the need for conducting more in-depth health education among them.

MATERIAL AND METHODS:

In February 2023, a survey was conducted through direct group survey among 71 children aged 11-13, in two primary schools in the municipality of Pleven, Bulgaria. The surveyed people are students in three different 5th grades from two primary schools in Pleven city, Bulgaria. The schools and grades are randomly chosen. Students who study in the designated grades are included in the survey. The children were interviewed after the written informed consent of their parents. An originally developed questionnaire containing 29 logically connected consecutive questions, adapted to the children's age, was used. The questionnaire is a survey card consisted of 4 introductive questions, 2 filtered, 21 major and 2 identified questions. The major questions completely and consecutively correspond to the topic of the survey. From all the questions: 24 are closed type-12 are with more than one possible answer; 3 are semi-closed – more than one possible answer or other opinion; the two identified questions are open. In six of the closed questions is used alternative scale with medium point- 'yes', 'no', 'I don't know', and in 5 – two phased alternative scale with possible answers 'yes' or 'no'. The following questionnaire gives opportunity to investigate the level of knowledge of the teenagers on the problem and their attitude
Survey data were processed with IBM SPSS Statistics 25 and EXCEL for Windows statistical software packages. The results are described by graphs and numerical indicators of structure, frequency, averages, correlation coefficients and others. The $\chi 2$ and Fisher's exact test criteria were applied.

FINDINGS:

71 children aged between 11-13 from two primary schools in the city of Pleven participated in the study. The relative share of 11-year-olds prevails - 78.9% (n=71), followed by the group of 12-year-olds - 16.9% (n=71). In terms of gender, the distribution is as follows: boys – 50.7% (36), girls – 49.3% (35). The relative share of respondents is high - 77.5% (55) sharing that there are older children in their circle of friends. According to 97.2% (69) of children, health is a value. Nearly 44% (31) of the children believe that a person is healthy when nothing hurts, and 32.4% (23) associate health with the absence of a diagnosed disease. At the same time, 52.10% (37) are of the opinion that health is a state of complete physical, mental and social well-being (Figure 1). The distribution of results shows that the choice of wording for "healthy person" is not based on knowledge and understanding, but is random (df = 1, χ^2 =1.891, p=0.1, r=0.16).

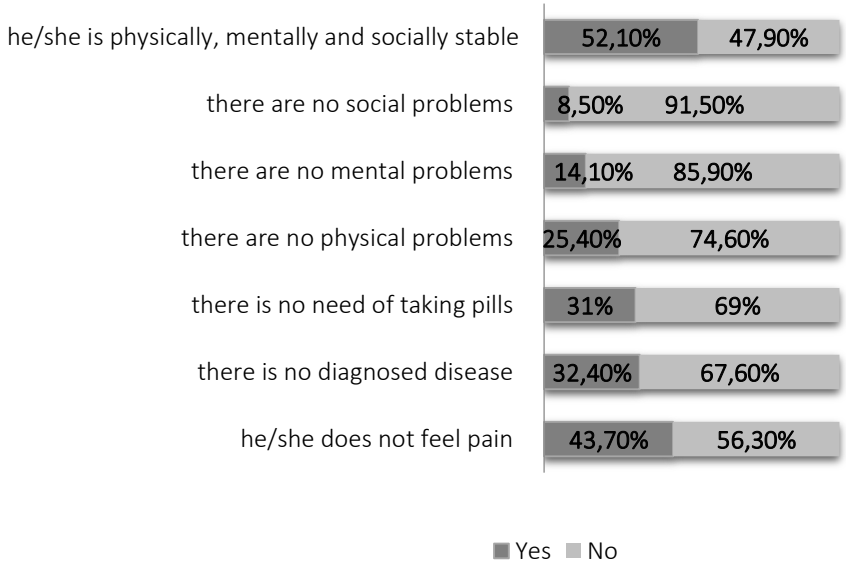

Fig. 1. A person is healthy when…

According to 95.8% (68) of the surveyed adolescents, a person's health depends only on his lifestyle. Only 4.2% (3) believe that health also depends on the age and gender of the individual.
The children were asked to indicate which actions are not dangerous for their health. It is impressive that children are well informed about 3 of the factors related to health: exercise, fruit and vegetable consumption and rational nutrition. Worryingly, more than half - 66.2% (47) consider dieting to reduce body mass to be safe. Although with a lower relative share, there is also a group of children, according to whom it is safe to consume: foods containing refined sugar; carbonated drinks; burgers and chips; the use of electronic devices; tobacco products; alcohol; cigarettes and drugs (Figure 2).

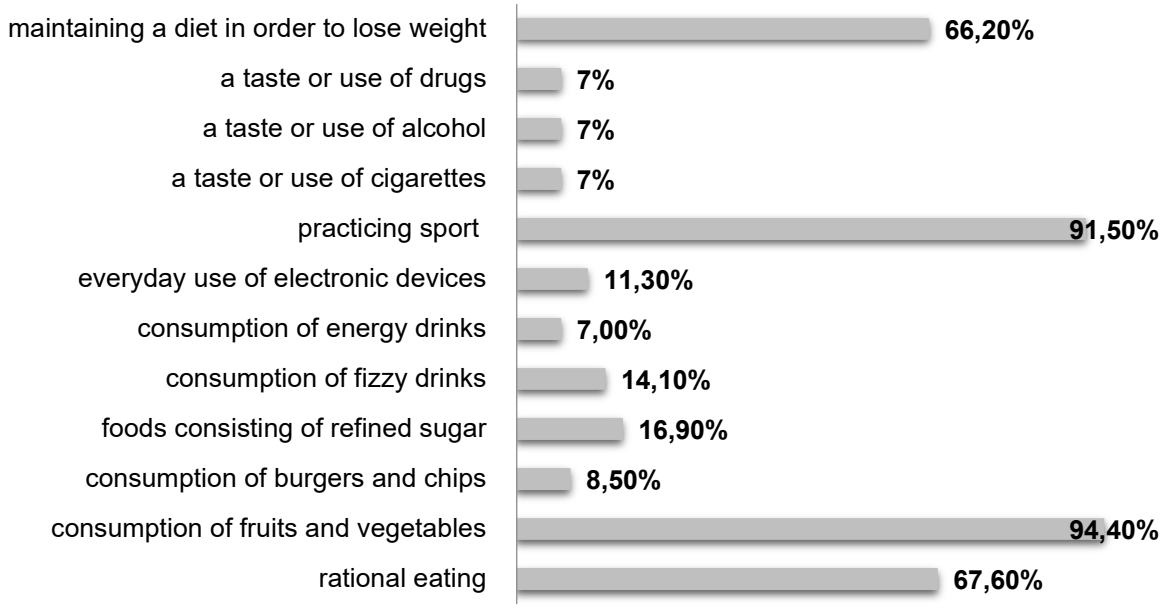

Fig. 2. It is safe for health…

Almost 41% of children (29) admit that they wanted to try at least one of the following: alcohol, cigarette, smokeless cigarette, electronic cigarette, marijuana. To the question "What would provoke them to try...?" - 28.2% (20) answered - curiosity, and 12.7% (9) would do it because it is fashionable. A stronger motive determining the desire of teenagers turned out to be the fashion trend (df = 1, χ^2 =14.867, p=0.001, r=0.456), curiosity has a slightly weaker influence (df = 1, $\chi 2$ =10.200, p<0.05, r=0.38). Age (df = 2, $\chi 2$ =0.91, p=0.1, r=0.1) and gender (df = 2, $\chi 2$ =0.91, p=0.1, r=0.1) of the children had no effect. More than half of the children – 69% (49) believe that trying a drug could endanger their health. It is disturbing that there are still those who think it is not dangerous - 12.7% (9) and those who are not aware of the consequences at all - 18.3% (13). According to not a small share of the respondents - 54.9% (39), the use of drugs makes the person addicted to them forget their problems. Unfortunately, the effects are very diverse and with severe consequences, which the results show that the children are not familiar with. It is worrying that 29.6% (21) say that there are children in their friendly circle. Only 14.1 % (10) acknowledge that they were offered to taste a narcotic substance. It is worrying that there is a straight correlation dependence between the two variables with moderate connection force (df = 2, $\chi 2$ =7.446, p=0.025, r=0.31). The presence of older children in the friendly circle is not a reason to have either among the surveyed persons who were offered narcotic substances (df = 3, $\chi 2$ =2.977, p=0.1, r=0,1) neither respondents have the desire to try them (df = 3, $\chi 2$ =0.263, p=0.1, r=0.134). But it is also a reason why some teenagers want to try a cigarette (df=3, $\chi 2$ =16.823, p=0.001, r=0.328). Almost half of them - 46.5% (33) claim that there are children who smoke in their circle of friends. Although they show knowledge of the harmful effects of using tobacco products (Figure 3), 44.8% (32) have tried one or more of the following: cigarette, electronic cigarette, hookah, smokeless cigarette. In the specific case, no cause-and-effect relationship was observed between the knowledge and the behavior of the teenagers (df = 1, $\chi 2$ =0.34, p=0.1, r=0.06). Boys and girls are equally exposed to this behavioral risk factor (df =1, $\chi 2$ =1.015, p=0.1, r=0.1).

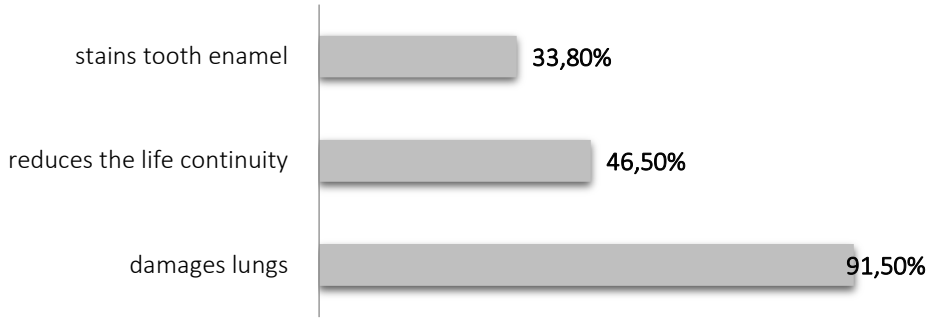

Fig. 3. Effects of cigarettes on health state according to students

Regarding alcohol - 90.1% (64) of teenagers categorically state that it is harmful to health. The relative share is high - 76.1% (54) of those who are convinced that their peers have tried alcohol, and 59.2% (42) claim that they even know such people. There are also quite a few who state that they themselves have tried it - 47.9% (34). Here again, neither a regular difference between boys and girls (df = 1, $\chi 2$ =2.471, p=0.1, r=0.19) nor a causal relationship "awareness-behavior" (df = 2, $\chi 2$ =4.138, p=0.1, r=0.1).

The surveyed students are firmly convinced that in order to be healthy a person must do sports - 85.9% (61). However, nearly 30% (20) of them prefer to play electronic games in their free time, and 18.3% (13) – to watch TV. Electronic games are preferred more by boys (df = 1, $\chi 2$ =10.08, p=0.001, r=0.38). Watching television is not affected by the gender of the children (df = 2, $\chi 2$ =4.52, p=0.1, r=0.1).

A very large percentage of teenagers – 91.5% (65) are aware that a varied diet is important for maintaining health. More than half - 57.75 % (34) prefer to consume cooked meals, fruits and vegetables. Their preference, although less influenced by the knowledge they have about varied nutrition (df =1, $\chi 2$ =5.085, p=0.025, r=0.27). But there is also a group of children - 37.8% (27) who

find it appropriate to eat burgers, chips, waffles, biscuits and chocolate. For them, their knowledge did not influence their choice (df = 1, $\chi 2$ =0.139, p=0.1, r=0.04).

DISCUSSION

For everyone, health is a value, although we are busy in our daily lives, we often neglect it. It is also defined as a value by the children. What is interesting is the interpretation they make regarding a "healthy person" presented in Figure 1. Unfortunately, the results showed that they were not aware of the content of the concept and their proposed formulations. However, this is a trend that is observed among our entire society, and not only among the children surveyed. For a large part of the population, the absence of pain or infirmity is interpreted as a state of good health.

It is of great concern that the results of this study once again confirm that the 11-13 age group is particularly vulnerable to behavioral health risk factors. A part of adolescents have in their circle of friends children who have tried drugs, tobacco products and alcohol; another part was offered a narcotic substance; third - although they demonstrate some knowledge, at this tender age they already had health-risky behavior (they used tobacco products and alcohol). The most likely reason for alcohol and tobacco products is that they are widely used by the population and are more easily available. The family environment as a condition should not be neglected either.

In Bulgaria, smoking and alcohol consumption among adults and adolescents are a major public health problem. Our country holds one of the first places in the European Union in terms of these two behavioral risk factors for health [28]. Although at first glance the use of tobacco products and alcohol are not accepted by society as a direct danger to health, this risky behavior should not be neglected, especially when it comes to children. It has been shown that teenage children who express even one of the behavioral risk factors are highly likely to develop other behavioral risk factors [29]. A fact that should not be neglected because it can have a domino effect on both personal and public health.

But more troubling are the results that children show regarding their knowledge of health risk factors. To some extent, they are not surprising, considering that the hours of health education at school are very limited and mainly deal with the topic of healthy eating. The training that takes place is implemented into the process of general education preparation. There is no separate general education subject connected with health-relevant knowledge and the formation of skills for health-protective behavior. Although there have long been recommendations (based on evidence) for the implementation of health education in schools and effectively, it is clearly not being implemented and the negative effect is evident. The little knowledge demonstrated by the students, and some of them even declared health-risky behavior, testify that the traditional way of providing health-promotional information is ineffective. The formal presentation of the health and education topics presented in the curricula of various subjects does not end in a positive result. Theoretical training is not enough. Protective health behavior cannot be formed in children. An attitude and stimulation are not achieved in order to preserve one's own health and the health of others. Responsibility for health is not formed. Facts which are reported- it is not able to interest young people to a degree that will encourage them to understand the problem and awaken in them a desire to be part of solving it. Although health education is regulated in Bulgaria among adolescents, there are scientific studies that prove that it is not sufficiently developed, does not cover all students, and is reported in a few settlements [30-31]. According to Georgieva & Kamburova: "over 80% of health education activities are conducted using traditional and unattractive methods or do not meet the informational needs of students, who are defined as a passive audience in this process". They report (ibid.) that students find school health education as insufficient to develop health-related skills or to motivate them to maintain a healthy lifestyle.The authors recommend that school health education should be formed to the needs and interests of students [32]. Boncheva & Dokova surveyed students who rated their knowledge of health problems received in secondary school as incomplete or missing [33]. This is also one of the major reasons for the negative trends regarding the health status and health behavior of Bulgarian children. According to data from Borisova & Mihaylov, students have a positive attitude towards the presence of a health education subject at school and are motivated to study on health topics and participate in activities that improve their health culture, preferring non-formal education and interactive methods for this [31] . Hizhov & Prokopov have developed a model of a health education program for junior high school students, but the effects of its implementation have not been described [34].

The childhood and adolescence are the periods in which children shape their character and behavior. This is the time when they can most easily adopt a given pattern of behavior. The period should be used to impart health knowledge to them in order to build a health culture.

CONCLUSION

Children have a cursory knowledge of health and its dimensions.

• They are partly familiar with some of the factors influencing the state of health.

• Regarding behavioral risk factors, knowledge is not sufficient as a basis for making sound health decisions.

• The level of health culture of adolescents is unsatisfactory.

Given the information found about the risky behavior of Bulgarian adolescents and the level of their health culture from the literature review and the results of the conducted study, the introduction of mandatory health and educational measures among adolescents in our country is extremely urgent.

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CONFLICT OF INTEREST STATEMENT

There is no conflict of interest in the implementation of this scientific work. The questionnaires used were originally developed for the aims of the study and approved by the Ethics and Research Committee of Medical University-Pleven, Bulgaria

REFERENCES

1. Coban F R, Kunst A E, Van Stralen M M , Richter M, Rathmann K, Perelman J et al. Nicotine dependence among adolescents in the European Union: How many and who are affected? *J Public Health (Oxf)* 2019;41(3):447-455. DOI: 10.1093/pubmed/fdy136
2. Wartberg L, Kriston L, Thomasius R. Prevalence of problem drinking and associated factors in a representative German sample of adolescents and young adults. *J Public Health (Oxf)* 2019;30;41(3):543-549. DOI: 10.1093/pubmed/fdy163.
3. Collese T S, Ferreira De Moraes A C, Fernández-Alvira J M, Michels N, De Henauw S, Manios Y et al. How do energy balance-related behaviors cluster in adolescents? *Int J Public Health* 2019;64(2):195-208. DOI: 10.1007/s00038-018-1178-3.
4. Timoshilov V I, Lastovetckii A G. The prevention of drug substances abuse among schoolchildren. *Probl Sotsialnoi Gig Zdravookhranenniiai Istor Med* 2019;27(3):273-276 DOI: 10.32687/0869-866X-2019-27-3-273-276.
5. Resiak M, Walentukiewicz A, Łysak-Radomska A, Woźniak K, Skonieczny P. Determinants of overweight in the population of parents of school-age children. *Int J Occup Med Environ Health* 2019;16;32(5):677–693. DOI: 10.13075/ijomeh.1896.01455.
6. Nowak M, Papiernik M, Mikulska A, Czarkowska-Paczek B. Smoking, alcohol consumption, and illicit substances use among adolescents in Poland. *Subst Abuse Treat Prev Policy* 2018;29;13(1):42. DOI: 10.1186/s13011-018-0179-9.
7. Merdzhanova E, Petrova G, Vakrilova-Becheva M. Spread of Health Risk Factors among Adolescents from Plovdiv, Bulgaria. *Iran J Public Health* 2020;49(8):1569-1570. DOI: 10.18502/ijph.v49i8.3904.
8. WHO/ Regional office for Europe. FINDINGS FROM THE 2017/2018 HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) SURVEY IN EUROPE AND CANADA INTERNATIONAL REPORT VOLUME.1 KEY FINDINGS. [Internet]. 2017/2018 [cited 2023 Sep 2]. Available from: https://www.researchgate.net/publication/342674634_FINDINGS_FROM_THE_20172018_HEALTH_BEHAVIOUR_IN_SCHOOL-AGED_CHILDREN_HBSC_SURVEY_IN_EUROPE_AND_CANADA_INTERNATIONAL_REPORT_VOLUME_1_KEY_FINDINGS Spotlight on adolescent health and well-being Spotlight
9. National Center for Public Health and Analysis. Report on Bulgaria EUROPEAN INITIATIVE WHO MONITORING CHILDHOOD OBESITY. Ministry of Health. [Internet]. 2017 [cited 2023 Sep 2]

Available from: https://ncpha.government.bg/uploads/pages/103/ChildOverweightObservation_2015-16.pdf
10. Petrova G, Merdzhanova E, Lalova V, Angelova P, Raycheva R, Boyadjiev N. Study of the nutritional behavior as a risky health factor of adolescents from different ethnic groups in the municipality of Plovdiv, Bulgaria. *Juornal of IMAB* 2020;28(3):4456-4460. DOI: 10.5272/jimab.2022283.4456
11. Richardson L, Parker EO, Zhou Ch, Kientz J, Ozer E, McCarty C. Electronic Health Risk Behavior Screening With Integrated Feedback Among Adolescents in Primary Care: Randomized Controlled Trial. *J Med Internet Res* 2021;12;23(3):e24135. DOI: 10.2196/24135.
12. Muñoz-Pindado C, Roura-Poch P, Riesco-Miranda J A, Muñoz-Méndez J. Smoking Prevalence in High School Students in the Barcelona Region (De Osona District). *Semergen* 2019;45(4):215-224 DOI: 10.1016/j.semerg.2018.11.004.
13. Dyachuk D D, Zabolotna I E, Yaschenko Y B . Analysis of the extension of childhood expectations and evaluation of the risks of the development of diseases associated with overweight. *Wiad Lek*. 2018;71(3 pt 1):546-550. [Internet]. 2018 [cited 2023 Sep 10] Available from: https://pubmed.ncbi.nlm.nih.gov/29783222/
14. Khan A, Lee E-Y, Rosenbaum S, Khan S R, Tremblay M S. Dose-dependent and joint associations between screen time, physical activity, and mental wellbeing in adolescents: an international observational study. *Lancet Child Adolesc Health* 2021;5(10):729-738. DOI: 10.1016/S2352-4642(21)00200-5.
15. Lazzeri G, Vieno A, Charrier L, Spinelli A, Ciardullo S, Pierannunzio D et al. The methodology of the Italian Health Behaviour in School-aged Children (HBSC) 2018 study and its development for the next round. *J Prev Med Hyg* 2022;Jan 31;62(4):E926-E933. DOI: 10.15167/2421-4248/jpmh2021.62.4.2343.
16. Herbenick S K, James K, Milton J, Cannon D. Effects of family nutrition and physical activity screening for obesity risk in school-age children. *J Spec Pediatr Nurs* 2018;23(4):e12229. DOI: 10.1111/jspn.12229
17. Zagà V, Giordano F , Gremigni P, Amram D L, De Blasi A, Amendola M et al. Are the school prevention programmes – aimed at de-normalizing smoking among youths – beneficial in the long term? An example from the Smoke Free Class Competition in Italy. *Ann Ig* 2017;29(6):572-583. DOI: 10.7416/ai.2017.2186.
18. Vieira S, Cheruel F, Sancho-Garnier H. Profile of first year secondary school children involved in the anti-smoking prevention trial „PEPITES". *Rev Epidemiol Sante Publique* 2019; 67(2):114-119. DOI: 10.1016/j.respe.2018.11.018.
19. Maceinaitė R, Šurkienė G, Žandaras Z, Stukas R. The association between studying in health promoting schools and adolescent smoking and alcohol consumption in Lithuania. *Health Promot Int* 2021;23;36(6):1644-1655. DOI: 10.1093/heapro/daab014.
20. Brinker T J, Buslaff F, Haney C, Gaim B, Haney A C, Schmidt S M et al. The global medical network Education Against Tobacco-voluntary tobacco prevention made in Germany. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz* 2018;61(11):1453-1461. DOI: 10.1007/s00103-018-2826-8.
21. Garov N. Development of health issues. *Varna Medical forum* 2018;7(1):187-191. [Internet]. 2018 [cited 2023 Sep 10] Available from: https://journals.mu-varna.bg/index.php/vmf/article/view/4927
22. Fleary S A, Joseph P, Pappagianopoulos J E. Adolescent health literacy and health behaviors: A systematic review. *J Adolesc* 2018;62:116-127. DOI: 10.1016/j.adolescence.2017.11.010
23. Chen X, Hay JL, Waters EA, Kiviniemi MT, Biddle C, Schofield E et al. Health Literacy and Use and Trust in Health Information. *J Health Commun* 2018;23(8):724-734. DOI: 10.1080/10810730.2018.1511658.
24. Kolmaga A, Trafalska E, Szatko F. Risk factors of excessive body mass in children and adolescents in Łódź. *Rocz Panstw Zakl Hig* 2019;70(4):369-375. DOI: 10.32394/rpzh.2019.0085.
25. Perelman J, Leão T, Kunst A E. Smoking and school absenteeism among 15- to 16-year-old adolescents: a cross-section analysis on 36 European countries. *Eur J Public Health* 2019;1;29(4):778-784. DOI: 10.1093/eurpub/ckz110.
26. Slavchev S. Health literacy as a priority of preventive medicine. *General Medicine* 2021;23(1):69-74. [Internet]. 2021 [cited 2023 Sep 10] Available from: https://cml.mu-sofia.bg/CML/Obsta_Medicina/page355.html

27. Terzieva G. Students health culture at the early school age. *Management and education* 2010;6(4):327-335. [Internet]. 2010 [cited 2023 Sep 10] Available from: https://www.conference-burgas.com/maevolumes/vol6_2010/book4/b4_r53.pdf
28. State of Health in the EU – Bulgaria - Country Health Profile 2021. [Internet]. 2021 [cited 2023 Dec 30] Available from: https://health.ec.europa.eu/system/files/2022-01/2021_chp_bulgaria_bulgarian.pdf
29. Chamova G. The role of significant other factors for grouping of risk behaviours in regulary drinking juveniles. *Social Medicine* 2014; 2: 22-24. [Internet]. 2014 [cited 2023 Dec 30] Available from: https://journals.mu-varna.bg/index.php/sm/article/view/941/811
30. Ordinance No. 13/21 September 2016 on civic, health, environmental and intercultural education. Effective from 11.10.2016. Issued by the Minister of Education and Science. Pron. DV. No. 80 of October 11, 2016, amended and add. DV. no. 80 of September 28, 2018 [Internet]. 2016 [cited 2023 Dec 30] Available from: https://dv.parliament.bg/DVWeb/showMaterialDV.jsp;jsessionid=CCDB584E0A82213E3FC255175F6056FA?idMat=199132
31. Borisova I, Mihaylov, N. Attitudes toward the introduction of health education as a new discipline in the high school curriculum among bulgarian students. *Health Economics and Management* 2020;2(76):23-28. [Internet]. 2020 [cited 2023 Dec 30] Available from: https://journals.mu-varna.bg/index.php/hem/article/view/7676/6776
32. Georgieva S, Kambourova M. School health education in Bulgaria – characteristics and directions for improvement. *The 4th Electronic International Interdisciplinary conference* 2015;1(4):220-222. DOI:10.18638/eiic.2015.4.1.454
33. Boncheva P, Dokova K. Health promotion in the secondary Bulgarian schools. *Varna Medical Forum* 2018;7(3):61-65. [Internet]. 2018 [cited 2023 Dec 30] Available from: https://journals.mu-varna.bg/index.php/vmf/article/view/6047/5328
34. Hidjov A, Prokopov I. Model of a health education program for students from the junior high school stage. *i Continuing education* 2020;15:2. [Internet]. 2020 [cited 2023 Dec 30] Available from: https://diuu.bg/emag/13031/