



STUDENTS ABOUT A HEALTHY LIFESTYLE, RISK AND HEALTH - PROMOTING FACTORS

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ABSTRACT

A healthy lifestyle excludes behavioral risk factors in a person's daily life. Awareness of risk and health-promoting factors is an important prerequisite for maintaining optimal health.

Purpose: To study the opinions and attitudes of students towards some risk and health-promoting factors to motivate them towards a healthy lifestyle.

Methods: survey method, statistical and graphical methods. An anonymous group survey was conducted during the winter semester of the academic year 2024-25 among students from the professional field "Health Care" - in three specialties: "Midwife", "Physician Assistant" and "Nurse", studying at two Universities in the country - Trakia University and Burgas State University "Prof. Dr. Asen Zlatarov".

Results: For more comprehensive and systematized processing of the results, the answers to the various questions were grouped into four modules - social aspects of health; mental health; physical health; risk (behavioral) health factors. The results of all modules show good awareness of students regarding factors influencing health, as well as a desire for healthier behavior.

Conclusion. Health awareness and competence of medical students on issues related to health protection and promotion are important conditions for their future professional activity as ambassadors of health for people.

Keywords: health factors – risk and sanogenic, healthy lifestyle, motivation, health awareness.

INTRODUCTION

A healthy lifestyle means, first of all, the so-called anti-risk behavior – the exclusion of behavioral risk factors in everyday personal life. V. Borisov defines the healthy lifestyle as “a synthesized expression of the main, typical for a given person or group features of positive health behavior” (1). Health promotion combines personal choice with public responsibility for health, placing the individual and the public at the center of health improvement activities. In the context of the National Health Strategy 2030, which outlines the long-term vision for the development of healthcare in Bulgaria, health risk factors are indicated and an emphasis is placed on effective prevention by reducing the influence of modifiable risk factors; raising awareness about a healthy lifestyle through health education and upbringing and implementing intersectoral policies to encourage and facilitate the population towards a healthy

lifestyle, described in Strategic Goal 1: Sustainable improvement of health and a health-supportive environment (2).

The primary significance of prevention lies in the change in people's lifestyle, the pursuit of health-promoting factors, and above all, the limitation of the impact of negative risk factors. Strengthening factors that contribute to a better and healthier lifestyle include balanced nutrition, regular physical activity, maintaining a healthy body weight, and avoiding harmful habits such as smoking and excessive alcohol consumption.

The beneficial effects of a healthy lifestyle are related to increasing the duration of life in good health.

Research on the impact of a healthy lifestyle on healthcare costs mainly focuses on the effects of individual risk behaviors.

A study by Thai researchers defined and analyzed five factors for a healthy lifestyle: non-smoking, avoiding excessive alcohol

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consumption, sufficient physical activity, adequate intake of fruits and vegetables, and maintaining a normal weight (3).

Based on in-depth research, a team of authors (Jafar Tabrizi et al.) identified several key factors influencing health-promoting behavior among adolescents, including: educational, economic, social, spiritual, psychological, and personal factors (4). Health literacy among students is an important factor in overcoming health risk factors. According to a study by K. Zakhariyeva, it was found that students need additional health knowledge to maintain a healthy lifestyle (5). According to a team of Jordanian researchers, “interventions are needed that focus on demographic differences among students in order to improve health-promoting behavior” (6).

Similar studies in Turkey among nursing students found that their behavior towards a healthy lifestyle is at an average level and highlight the need for interventions to promote their healthy behavior (7). The authors of another study found that “nurses have a role in public health that requires them to promote the health of individuals, and it is necessary for them to possess practical skills to participate in health promotion, as there is a professional expectation for nurses to serve as examples of healthy behavior” (8).

Similar results were found in another study, which showed that a healthy lifestyle is essential for students in relation to their future medical roles and emphasized the importance of nursing students' education in promoting healthy behavior among them (9). According to a team of authors, “Nursing students will be future health promoters, but they may not always adopt the recommended healthy lifestyle”. The authors conducted a study on the healthy lifestyle behaviors of Chinese nursing students and examined the influence of socioeconomic status and healthy lifestyle on their health. They concluded that further research is needed to explore the barriers that prevent students from practicing healthy behaviors (10).

Another study indicates that “although the benefits of maintaining a healthy lifestyle are well known, few nursing students actually practice healthy behaviors”. The authors conducted a study involving nursing students from two different cultures — the United States (a high-income country) and Lebanon (a low-

income country) — and found that cultural factors may influence students' healthy lifestyle choices. The authors believe that “nursing education should consider exploring strategies that encourage student participation in health-promoting activities” (11).

A study by Bulgarian researchers states that “the development of the right attitude toward health is a key element of a healthy lifestyle”. The authors conducted research among Bulgarian and Japanese students on the prevalence of certain lifestyle-related health risk factors and provided recommendations for a healthy lifestyle for students in relation to their future work as medical professionals (12).

MATERIALS AND METHODS

This study aims to investigate the opinion and attitude of students towards some risk and health-promoting factors to motivate them towards a healthy lifestyle. An anonymous group survey was conducted among students from the professional field of “Health Care” - in three specialties: “Midwife”, “Physician Assistant” and “Nurse”, studying at two Universities in the country – Trakia University - Faculty of Medicine, Stara Zagora and Burgas State University “Prof. Dr. Asen Zlatarov” - Faculty of Public Health and Health Care Management.

The study was conducted during the winter semester of the academic year 2024/2025. A Google form questionnaire was used, developed (by Radoman G.A., Dolbeshkina N.A.), modified for students (Hr. Milcheva, 2024).

A total of 120 students from the three mentioned specialties participated in the survey, distributed as follows: (55%, $n = 66$) midwifery students; and equally (22.5%, $n = 27$) nursing students and (22.5%, $n = 27$) physician assistant students. The majority of respondents were first-year students (37.6%, $n = 45$), followed by second-year students (24.3%, $n = 29$), third-year students (21.6%, $n = 26$), and the smallest group were fourth-year students (16.5%, $n = 20$). In terms of age distribution, the largest group of surveyed students were in the very young age range of 18–25 years (65%, $n = 78$), followed by the other age groups: 26–30 years (4.2%, $n = 5$); 31–35 years (8.3%, $n = 10$); 36–40 years (9.2%, $n = 11$); 41–50 years (10%, $n = 12$); and over 50 years (3.3%, $n = 4$). Twice as many students completed the survey from Burgas State University “Prof. Dr. Assen Zlatarov” — 80 students; the remaining 40 students were from Trakia University – Faculty of Medicine, Stara Zagora (**Figure 1**).

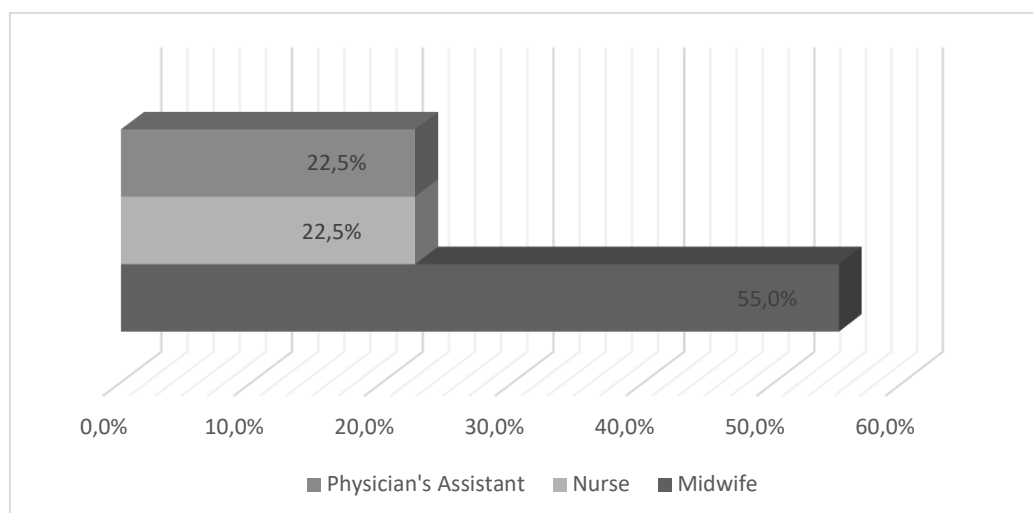


Figure 1. Surveyed Students by Specialty

RESULTS AND DISCUSSION

To ensure a more generalized and systematic analysis of the results, the responses to the various questions were grouped into four modules.

First Module – Social Aspects of Health: lifestyle and leisure, understanding of a healthy lifestyle.

Nearly half of the surveyed students described their lifestyle as dynamic and stressful (49.2%, n = 59); diverse and interesting (Figure 2).

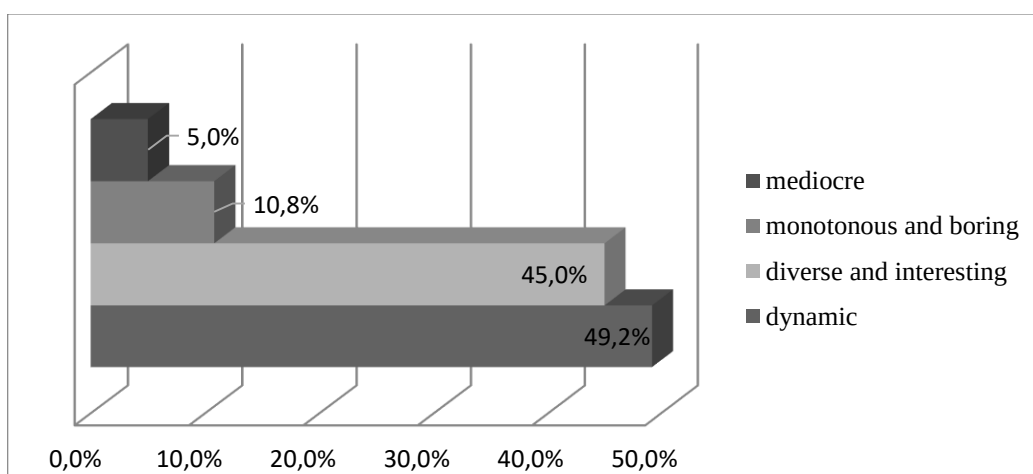


Figure 2. Self-assessment of the Lifestyle Led by Students

The responses of the surveyed students regarding their leisure activities outside the university are varied and interesting. The most common answers were from students (65%, n = 78) who indicated that they use their free time for sleep and rest; for physical activity and walking (54.2%, n = 65); for phone and social networks (50.8%, n = 61); for reading books and literature (31.7%, n = 38); for music (26.7%, n = 32); for sports (17.5%, n = 21); for cinema and theater (14.2%, n = 17); for computer use (10%, n = 12). The remaining minimal percentages were distributed among activities such as exhibitions, work, studying,

family, household chores, and childcare. (Figure 3)

Over the past two decades, there has been a significant increase in research on the effects of the arts on health and well-being, alongside the development of practices and policy activities in various countries within the WHO European Region and beyond. Results from over 3,000 studies identify a key role for the arts in the prevention of poor health, the promotion of health, and the management and treatment of diseases throughout life (13).

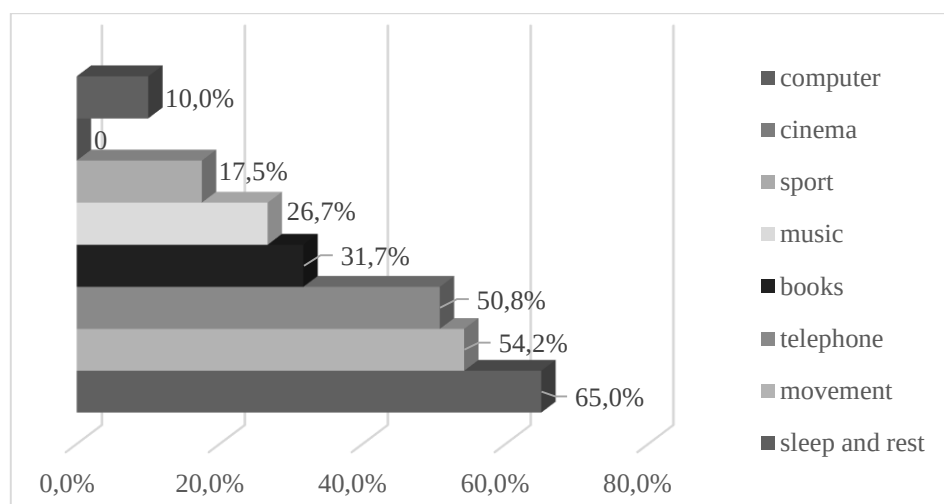


Figure 3. Activities in free time outside the University

The highest proportion of the surveyed students associate the concept of a “healthy lifestyle” with personal hygiene; balanced nutrition; avoidance of harmful habits; positive emotions; optimal physical activity; and engagement in physical education and sports as health-strengthening factors.

Second Module: Mental Health – emotions, psychosocial climate, vocation, relationships as health-strengthening factors.

About three-quarters of the surveyed students (66.7%, $n = 80$) believe that positive emotions have a health-strengthening effect and are satisfied with the psychological climate at the university and the relationships between faculty and students. A positive trend is evident from the respondents' answers regarding their chosen profession, as shown by the high relative share of respondents (87.5%, $n = 105$) who consider their chosen profession to be a vocation. We can assume that vocation, motivation, and satisfaction have a positive influence on the emotional health of students. Similar studies show “that there is a correlation between a high level of professional identity among students, intrinsic motivation for choosing their studies, and higher satisfaction with the university, faculty, chosen curriculum, as well as the perception of fewer barriers in continuing their education” (14).

Third Module: Physical Health – physical education and sports activities, hardening procedures, personal hygiene, and healthy nutrition as health-promoting factors.

A high relative share of the surveyed students believe that engaging in physical education and

sports has a positive impact on health as a strengthening factor. Hardening procedures are also considered important for health, although only about one-third of the respondents (39.7%, $n = 48$) actually engage in body hardening (**Figure 4**). According to Terzieva A. et al. “Sport is a powerful factor that influences stress, and active sports are a means to a high quality of life. It is essential to find a balance between workload (especially during exam periods) and a healthy lifestyle in order to master stress control.” (15). A report by the U.S. National Academy of Sciences also emphasizes that “monitoring public engagement in physical activity is necessary, as well as implementing strategies to improve public health surveillance of physical activity in the United States” (16).

A high proportion of the respondents (88.4%, $n = 106$) believe that personal hygiene and balanced nutrition are very important conditions for maintaining good health and a healthy lifestyle.

They agree with the statement that balanced nutrition means “meeting the body’s needs with a specific amount and ratio of nutrients” and “following a specific dietary regimen.” The dietary regimens preferred by the students are ranked as follows: just over a quarter of the respondents (42.1%, $n = 51$) avoid bread and bakery products; 17.4% ($n = 21$) follow food combining (separating incompatible foods); 10.7% ($n = 13$) do not consume meat products; 8.3% ($n = 10$) practice therapeutic fasting; and about one-quarter (38.8%, $n = 47$) of the respondents indicated “other.”

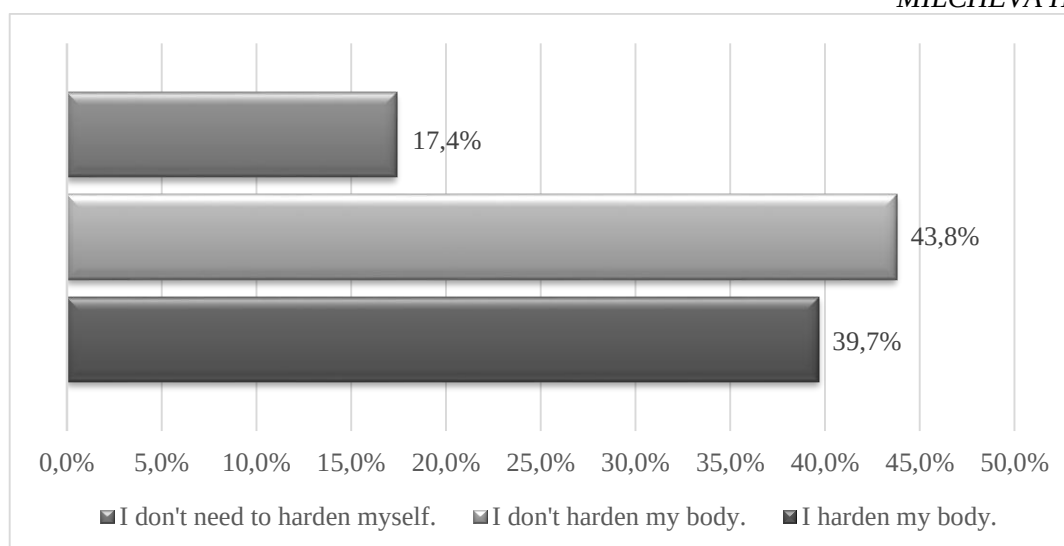


Figure 4. Attitudes of students towards hardening procedures

The total exceeds 100% because more than one option was selected. **(Figure 5)**

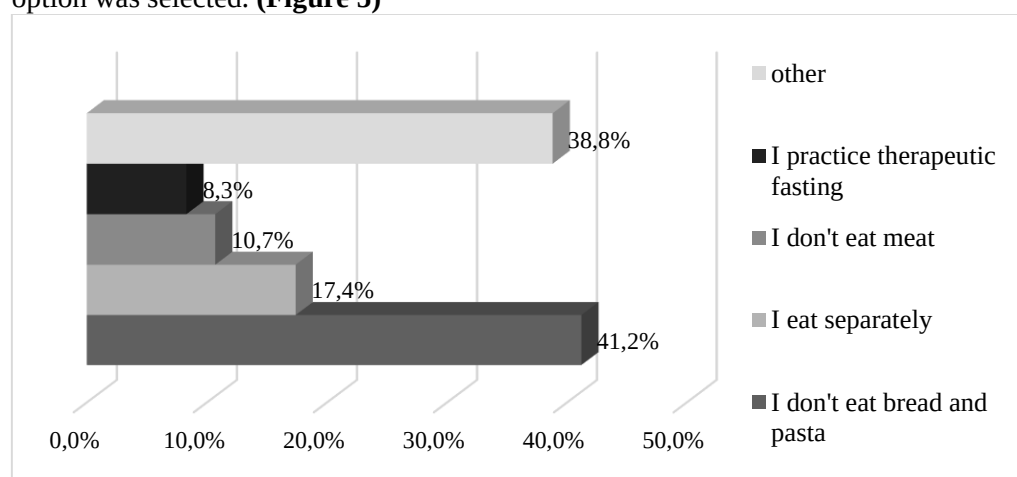


Figure 5. Preferred way of eating by students

Module Four: Behavioral Risk Factors for Health – Smoking, Alcohol Use, Drug Addiction, Risky Sexual Behavior.

Studies in recent years indicate that “longer life expectancy and ‘modernization’ are associated with the impact of risk factors such as smoking, alcohol abuse, physical inactivity, stress, and unhealthy diets, which contribute to a ‘global epidemic’ of chronic non-communicable diseases” (17).

Our study reveals a positive trend regarding smoking. More than half of the respondents stated that they do not smoke (54.5%, $n = 66$), and 20.8% ($n = 25$) smoke fewer than 10 cigarettes per day. Regular smokers make up 32.2% ($n = 39$) of the respondents. Those who smoke cite various reasons, with the most common being boredom and restlessness (25.6%, $n = 31$). All respondents are aware of the harmful effects of smoking (98.3%, $n = 118$), including the dangers of passive smoking,

and just as many believe that quitting is worthwhile in order to stay healthy (90.9%, $n = 110$).

Regarding alcohol consumption as a health risk factor, respondents’ answers were almost evenly split. Just over half reported consuming alcohol (51.2%, $n = 62$), with 31.4% ($n = 38$) stating they drink alcohol two to three times a month. A high percentage of respondents (81.8%, $n = 99$) believe that the consumption of alcoholic beverages is dangerous to health.

Concerning the use of intoxicating chemical substances, a large proportion of the participants (96.7%, $n = 117$) stated they have never used such substances and recognize that their use poses health risks. However, a worrying fact is that more than half of the respondents (71%, $n = 86$) are only partially familiar with, or completely unaware of, the problems related to drug addiction among young people. Only around 30% (29.8%, $n =$

36) of respondents are fully informed on the issue. A positive trend is noted in the responses: a high proportion of participants (83.5%, $n = 101$) have never encountered the issue of “drug use” personally.

Regarding risky sexual behavior, a high proportion of the respondents (71.1%, $n = 86$) believe that drug use is a cause of the spread of AIDS. As for the respondents' knowledge about the ways HIV/AIDS can be transmitted, the answers vary, though most are correct. The majority of respondents (91.7%, $n = 111$) believe that HIV can be transmitted through sexual contact; followed by those who

mentioned bloodborne transmission (71.1%, $n = 86$); from an HIV-infected mother (44.4%, $n = 54$); and the fewest responses were from those who believe that AIDS can be transmitted through everyday contact (8.3%, $n = 10$). The total exceeds 100% because respondents were allowed to select more than one answer. This aligns with responses to subsequent questions. More than half of the respondents (65.3%, $n = 79$) stated that they are well-informed about safe sex practices and methods, and believe that sexual activity should begin after the age of 18, as well as that early pregnancy is a personal decision. **(Figure 6)**

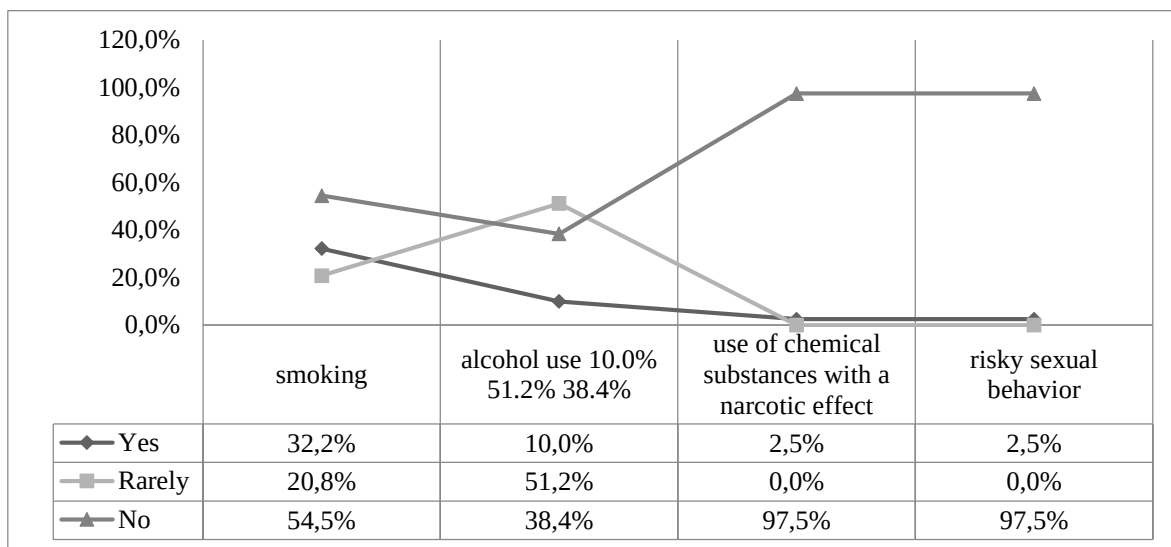


Figure 6. Attitude of students to risk (behavioral) factors for health

Based on the presented results, the following key conclusions can be drawn:

- The majority of students lead a dynamic and stressful, yet diverse and interesting lifestyle and most often use their free time for sleep and rest; physical activity and walking; using the phone and social networks; reading books and literature; listening to music; practicing sports; going to the cinema and theater; and using the computer.
- The highest proportion of the surveyed students associate the concept of a "healthy lifestyle" with personal hygiene; rational nutrition; abstaining from harmful habits; positive emotions; optimal physical activity; and engagement in physical education and sports as health-promoting factors.
- Three quarters of the respondents believe that emotions positively influence health; they are satisfied with the psychological climate at the University and appreciate the relationships between faculty and students.
- A high relative proportion of the respondents consider their chosen profession a calling and believe that motivation and satisfaction positively affect their emotional health.
- A high relative proportion of the respondents consider health risk factors (smoking, alcohol abuse, irrational nutrition, physical inactivity; use of narcotic substances and drugs; risky sexual behavior) to be dangerous to health and strive to avoid them in their daily lives.

In recent years, a healthy lifestyle has been a widely discussed topic both in academic circles through scientific publications and among the general public via media—television and radio programs, social networks, and platforms. Promoting a healthy lifestyle is a key priority for healthcare professionals as well as for specialists whose work is directly or indirectly related to people's health. Awareness of personal responsibility for one's own health is an important condition for the success of preventive activities. The competence in health

promotion that students acquire during their education is a crucial factor in planning, conducting, and evaluating health promotion and prevention activities in their daily professional work. Research shows that gaining competence in health promotion can be achieved “through reasonable pedagogical approaches, both online and in-person, and in challenging environments” (18). This and similar studies among students in medical fields show that as future healthcare professionals, they are familiar with health-strengthening and health-risk factors, although some topics (such as substance abuse and risky sexual behavior) require more health awareness to confidently promote healthy models among patients and the public. Improving communication skills, increasing motivation, and enhancing student responsibility are important factors for their future professional roles as health promoters among the population. Our study outlines positive trends regarding students’ knowledge of health-strengthening and health-risk factors for encouraging a healthy lifestyle. A similar study among students aimed to determine the relationship between a health-promoting lifestyle and its aspects. The authors focused on six aspects: “physical activity,” “nutrition,” “health responsibility,” “spiritual growth,” “interpersonal relationships,” and “stress management” for promoting a healthy lifestyle, and found a significant connection between the perception of a healthy lifestyle and the aspects of spiritual growth and stress management, as well as overall quality of life. Studying the aspects of a healthy lifestyle and seeking connections between them could serve as a starting point for more comprehensive clarification of the overall concept of health promotion and the outlining of professional fields of activity in the future (19).

CONCLUSION

Students in medical professions, as well as working healthcare professionals, are a valuable resource whose potential is still not fully utilized in the field of health promotion and encouraging a healthy lifestyle. Preventive activities they perform are autonomous and legally regulated (20). This circumstance offers opportunities for broader development of preventive activities, for their planning, organization, and implementation aimed at protecting people’s health.

REFERENCES

1. Borisov, V., S. Popova, L. Georgieva, K. Shopova, Health Promotion, Sofia, Arso Publishing House, 1998.
2. National Health Strategy 2030, https://old.mh.government.bg/media/filer_public/2024/05/10/rns_-_nzs_2030.pdf
3. Lo WC, Hu TH, Shih CY, Lin HH, Hwang JS. Impact of Healthy Lifestyle Factors on Life Expectancy and Lifetime Health Care Expenditure: Nationwide Cohort Study. *JMIR Public Health Surveill*, 10: e57045, 2024.
4. Tabrizi, J.S., Doshmangir, L., Khoshmaram, N. et al. Key factors affecting health promoting behaviors among adolescents: a scoping review. *BMC Health Serv Res* 24, 58 (2024). <https://doi.org/10.1186/s12913-023-10510-x>, 2024.
5. Zaharieva K., The health culture of students as a factor in overcoming health risk factors. *Scientific works of the university of ruse*, 52 /8.3/: 85-90, 2013.
6. Shaheen, A.M., Nassar, O.S., Amre, H.M. and Hamdan-Mansour, A.M. Factors Affecting Health-Promoting Behaviors of University Students in Jordan. *Health*, 7:1-8, <http://dx.doi.org/10.4236/health.2015.71001>, 2015.
7. Polat Ü, Özen Ş, Kahraman BB, Bostanoğlu H, Factors Affecting Health-Promoting Behaviors in Nursing Students at a University in Turkey. *Journal of Transcultural Nursing*. 27(4):413-419, 2015.
8. Mills A., Helping students to self-care and enhance their health-promotion skills. *British Journal of Nursing*, 28(13), <https://doi.org/10.12968/bjon.2019.28.13.864>, 2019.
9. Damayanti, M. R., Antari, G. A.; Diño, M. J. S.; Ong, I. L., Prapti, Ni K., Predictors of Higher-Order Affective Skills in Health Promotion Among Indonesian Nursing Students: Assessment and Evaluation. *Nursing Education Perspectives*, 43(6):p E41-E46, | DOI: 10.1097/01.NEP.0000000000001012, 2022.
10. Mak YW, Kao AHF, Tam LWY, Tse VWC, Tse DTH, Leung DYP. Health-promoting lifestyle and quality of life among Chinese nursing students. *Prim Health Care Res*, 19(6):629-636, 2018.
11. Davis B., Badr LK, Doumit R., Health-promoting behaviors among American and Lebanese nursing students. *Worldviews Evid Based Nurs*. 19(1):73-80, 2022.

12. Gatseva P., M. Vasileva, V. Atanasova,, St. Harizanova1, A. Bivolarska, Health risk factors associated with the future medical specialists life style – comparative study among Bulgarian and foreign students. *General Medicine*, 24(4): 31-38, 2022.
13. Fancourt D., Finn S., What is the evidence on the role of the arts in improving health and well-being? A scoping review. WHO Regional Office for Europe; Copenhagen: (Health Evidence Network (HEN) synthesis report 67), 2019.
14. Smitina A., The link between vocational identity, study choice motivation and satisfaction with studies. *Procedia Social and Behavioral Sciences*, 5: 1140–1145, 2010.
15. Terzieva, A., Vasileva, A., Vitanova Y., Influences of sports on stress control in students from different specialties in higher education institutions. *Temto*, 273-278, 2024.
16. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Food and Nutrition Board; Committee on Strategies for Implementing Physical Activity Surveillance Implementing Strategies to Enhance Public Health Surveillance of Physical Activity in the United States, Washington (DC): *National Academies Press (US)*, 2019.
17. Sabev N., Smoking as a behavioral risk factor -significance and distribution. *Knowledge - International Journal* , 43(4): 853 – 857, 2020.
18. Anderson K., Gupta S., Nava Buenfil F., Verrinder G. , Using experiential learning and authentic assessments to support students to become competent health promotion practitioners. *Health Promot J*, 33(1): 27-34, 2022.
19. Tol A., Tavassoli E., Shariferad GR, Shojaezadeh D., Health-promoting lifestyle and quality of life among undergraduate students at school of health, Isfahan university of medical sciences. *J Educ Health Promot*, 2:11, 2013.
20. Order 1 of february 8, 2011 on the professional activities that nurses, midwiferens, associated medical specialists, dental technicians and health assistants may perform by appointment or independently (title supplemented - sg, no. 61 of 2022), issued by the minister of health, promulgated sg. no. 15 of february 18, 2011, amended sg. no. 50 of july 1, 2011, amended and supplemented sg.