

THE ROLE OF THE SCHOOL IN PREPARING STUDENTS TO LEAD A HEALTHY LIFESTYLE

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Abstract Preparation of students for adult life also includes the area of health care. Health education is part of the core curriculum of Polish schools. The leading role of the health educator is assumed by the physical education teacher, but many other educational tasks are carried out by all school staff. The present study attempts to answer the question: How is health education implemented at school? The research project was carried out among students of various colleges in the city of Szczecin, Poland. At the same time, similar studies were conducted among students from other universities in other cities. The research method was a diagnostic survey, with the main assessment tool being the 'Questionnaire for Assessment of Implementation of Physical Education at Secondary School' by K. Górna-Lukasik. On the basis of the study results, an attempt was made to determine the forms and methods of work and the involvement of various types of teachers in health education. Relationships between students' opinions on the methods of implementing the curriculum content, fields of study and gender of physical education teachers were searched for. The study results demonstrate a low degree of implementation of these educational contents. The Polish school offers students few forms of preparation for taking care of their own health.

Key words health education, secondary school, physical education teacher

Introduction

Education and upbringing play an important role in preparing a person for adult life, in particular, to fulfill various social roles. They also affect the formation of desirable social attitudes, including care for one's own and other people's health, the quality of one's own life, society and the environment, which manifest themselves in the display of specific behaviors. Health is the supreme value conditioning human functioning. According to the World

Health Organization health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health should also be considered in four aspects:

- a) physical – the proper functioning of the human body;
- b) mental – maintaining internal balance and coping with stress;
- c) social – the ability to establish social contacts and functions in the family, school, and professional environment;
- d) spiritual – the ability to act in accordance with the accepted system of values (Nutbeam, Levin-Zamir, Rowlands, 2018; Popławska, Jacewicz, 2019; Sentell, Vamos, Okan, 2020; Sęk, Cieślak, 2012; Wolny, 2019; Woynarowska, 2010; Żuchelkowska, 2013).

According to B. Woynarowska, health education is a long-term process in which children and adolescents gain the knowledge related to health and the ways of maintaining and improving it. They also acquire habits and skills that are conducive to creating the right conditions for health and coping with conditions of illness or disability (Woynarowska, 2010). On the one hand, health education provides school students with the awareness about health and life-threatening factors, and on the other hand, with the knowledge about increasing health potential, including the principles of healthy lifestyle and coping with new situations (Bulska, 2017; Han, 2003; Kędzior, 2019; Obodyńska, 2016; Wolny, 2019). It is also important to emphasize the practical aspect of health education activities aimed at 'the development of practical skills to apply knowledge in everyday life situations' (Szpak, 2020, p. 40). According to the ministerial regulation on the core curriculum in Polish schools, 'health education, (...) carried out consistently and competently, will contribute to the improvement of the health condition of the society and the economic prosperity of the country' (Rozporządzenie..., 2018, p. 311).

Health perception is the subjective process of understanding how the human body functions in health and in disease (Condello et al., 2016; Curi, Vilaça, Haas, Fernandes, 2018; Hallal et al., 2012).

Health education has been included in the core curriculum of general education at all stages of schooling: from kindergarten, through elementary schools, to different types of secondary schools (Rozporządzenie..., 2017, 2018).

Conducting school health education classes contributes to the achievement of objectives of the core curriculum for general education through which students get to know themselves, diagnose health problems, in particular, in relation to counteracting the diseases of civilization, learn responsibility for their own and others' health, improve personal and social competencies, strengthen self-esteem, be able to function in everyday life and create an environment conducive to maintaining good health (Kostenecka, 2012; Rogacka, 2019; Schulte-Körne, 2016; Tuszyńska, 2012; Wolny, 2019; Woynarowska, 2011). These objectives are implemented in two ways:

- a) subject-oriented – with a clear emphasis on the leading role of physical education (teaching and learning about health within the framework of health education) and the inclusion of health education in the curricula of various subjects;
- b) educational and preventive – stressing the axiological dimension (values of health and healthy lifestyle included in the educational programs of disease prevention) (Wolny, 2019, p. 19).

Health education in the new secondary school core curriculum has been included in the educational contents of a number of school subjects, such as biology, foundations of entrepreneurship, modern foreign languages, and geography. However, only in physical education has the component of 'Health Education' been identified together with the specific requirements grouped in four sections: physical development, physical activity, safety in physical

activity, and social competence. Importantly, the themes proposed by the legislators in the above sections are also conducive to attaining health education goals. For example, in the area of physical development, the student will acquire the knowledge about the relationship between physical fitness, health and well-being, and will be able to evaluate his/her own body's reactions to physical exercise of different intensities; in the area of physical activity, the student will know selected relaxation techniques and organizes his/her own weekly physical activity (health training) with respect to health recommendations (e.g. WHO or EU); in terms of safety in physical activity the student will be able to assess the risk of injury associated with some sports and to behave in an emergency situation; finally, in terms of social competence the student will act as an organizer, competitor, judge and supporter in sports competitions and recreational events and will take individual and team initiatives.

Teachers of all subjects, school counsellors, support teachers and school psychologists as well as non-teaching staff, who are an integral part of the school environment, are also responsible for the implementation of the health education content at school. However, the most important role is attributed to the teachers of biology, family life education and physical education. The last – according to many researchers (Linca-Ćwikła, 2016; Ostrowska, 2014; Świtała, Gnitecka, Supiński, 2016; Wolny, 2019) – have a special role in attaining the goals of health education due to their substantive preparation and organizational conditions that allow them to make use of various activation methods and conduct classes in an unconventional way. The role of PE teachers – due to the focus of modern education on 'learning' rather than 'teaching' – has undergone an evolution. Nowadays a PE teacher acts primarily as a guide, leader, advisor, animator, and model of appropriate pro-health attitudes (Rasmus, Stetkiewicz-Lewandowicz, Talarowska, Sobów, 2013). In his/her actions a PE teacher should be open to the needs of students, show respect and understanding, undertake joint actions with both students and their parents and guardians, other teachers and specialists, contribute to the formation of the educational environment, and create situations conducive to the achievement of health education goals (Szpak, 2020). According to M. Ostrowska: 'Authenticity, empathy and acceptance in teacher-student relations create a bridge between upbringing and teaching. Through such targeted educational interactions, we help the students find meaning and values in life, and at the same time, we build the right foundation for the formation of their life skills' (Ostrowska, 2014, p. 73). A physical education teacher, who is also a leader or promoter of health at school, must have the appropriate professional background to optimally implement the contents of health education. For this purpose, it is necessary for PE teachers to have competencies that can be divided into:

- a) scientific – related to their level of knowledge, e.g. about health, functioning of the human body, lifestyle diseases, stress, threatening influences, etc.;
- b) pedagogical – which enable the selection of appropriate methods, forms and didactic means for the implementation of specific content and the fulfillment of students' expectations and abilities;
- c) social – that affect the development of relationships, creating an atmosphere conducive to the acquisition of skills and the formation of desirable habits;
- d) organisational – which determine the creation of a material environment and space for educational activities.

Some researchers identify only subject-related competences and pedagogical competences (Czechowski, Żukowska, 2010), while others specify them in more detail. K. Wojciechowska further divides the competences into creative, information and media, moral, diagnostic, cooperation, technical or emotional, among others (Wojciechowska, 2014).

Effective conduct of the educational process in the field of health education should be realized on the basis of a reliable diagnosis of the possibilities, needs and expectations of students; the use of various forms of teaching to motivate and make classes more attractive; the involvement of students in the creation and implementation of class themes; combining information from different sources; presenting models of health behavior with respect to authorities, and organizing conditions for practical activities (Olejniczak-Nowakowska, 2014; Wolny, 2019; Woynarowska, 2011; Wrona-Wolny, Makowska, 2011).

Issues of health education are introduced as part of physical education classes, extracurricular activities and projects included in the school educational and disease prevention program. In addition – according to the provisions of the core curriculum – the school should create conditions for independent inquiry, problem solving, cooperation, and development of key competencies. This provides teachers with an opportunity to utilize a variety of methods and forms of work with students. Specialists in pedagogy, didactics and education propose to implement – in addition to traditional methods such as lectures, talks, working with texts – various activation methods. B. Woynarowska highlights the significance of such methods as discussion, role plays, portfolios, projects, and visualization. Particular importance is also attached to those ways and forms of student participation in the implementation of health education content, which contain elements of fun, competition, and opportunities to test oneself in practical activities, e.g. sports and recreation festivals (events), quizzes, knowledge competitions, etc. (Woynarowska, 2011).

It is important to note that the quality of provided health education depends not only on the scope of knowledge, teaching, or organizational skills. The effects on interactions and, consequently, on the formation of prohealth attitudes of students also rely on the personality of the health leader, his/her empathy, authenticity and thoroughness in the implementation of tasks, and traits and skills which, unfortunately, the future teacher cannot be equipped in during professional teaching training (Ostrowska, 2014). The effects on the achievement of the assumed goals of health education are conditioned by the functioning and cooperation of all participants in the school environment, namely, the school management, teaching and non-teaching staff, students and their parents, as well as institutions supporting various school activities.

Materials and methods

The present study was conducted as part of a joint research project at the University of Szczecin and the Jerzy Kukuczka Academy of Physical Education in Katowice. A diagnostic survey was conducted among 303 students of the University of Szczecin (194 women and 109 men). The research was conducted in January 2020 in the fields of physical education (74 women, 70 men), tourism and recreation, and sports diagnostics (a total of 120 women and 39 men in both fields of study). The research tool used was the 'Questionnaire for Assessment of Implementation of Physical Education in Secondary Schools' designed by Krystyna Górna-Lukasik. The project was approved by the relevant Bioethics Committee (No. KBI43/17). The reliability assessed with the Spearman-Brown formula and Cronbach's alpha was in the range between 0.86 and 0.96 (Górna-Lukasik, 2017). Corresponding to the research questions, 12 statements were selected for statistical analysis. They were all rated on a five-point Likert scale (1 point – no occurrence of a given form, 5 points – frequent occurrence of a given form). The comparison of results was made for all students, separately for men and women, and for students of physical education and students of other majors. Statistical analysis was performed using IBM SPSS Statistics v. 25. Due to the ordinal nature

of the collected data and the non-equinumerosity of the compared groups, non-parametric tests were applied: the Mann-Whitney U test for two independent groups, and the Kruskal-Wallis H test for three independent groups. In tables, descriptive statistics were presented as means (M) and standard deviation (SD) to increase the visibility of differences between groups. The level of statistical significance was set at $p < 0.05$.

Results

The most common forms of promoting a healthy lifestyle were sports and recreational events (Statement 8). The least frequent form of promoting healthy lifestyles were lectures for parents (Statement 3). The male students more often declared that in their schools lectures on healthy lifestyle had been given by teachers, outside classes for students and parents, teachers of theoretical subjects provided active recreation during classes (e.g. respiratory exercises, in-class physical exercises), and that teachers corrected body posture and emphasized the principles of a healthy lifestyle (Table 1). Statistically significant opinions were recorded in statements 2, 3, 5, 7 and 9.

Table 1. Opinions of all students (n = 303) on the implementation of health education content in their schools

Implementation of health education content	Women, n = 194		Men, n = 109		Mann-Whitney U Test	
	M	SD	M	SD	Z	p
Statement 1	2.21	1.30	2.16	1.29	-0.323	0.747
Statement 2	1.66	1.12	1.97	1.19	-2.768	0.006
Statement 3	1.24	0.67	1.46	0.95	-2.069	0.039
Statement 4	3.03	1.22	2.85	1.39	-1.156	0.248
Statement 5	1.64	1.10	2.01	1.36	-2.108	0.035
Statement 6	3.24	1.45	3.27	1.34	-0.027	0.978
Statement 7	1.79	1.07	2.20	1.30	-2.731	0.006
Statement 8	3.87	1.09	3.98	1.06	-0.907	0.364
Statement 9	2.36	1.25	2.62	1.19	-2.114	0.034
Statement 10	2.71	1.32	2.91	1.33	-1.326	0.185
Statement 11	2.70	1.37	2.98	1.35	-1.785	0.074
Statement 12	3.04	1.30	2.81	1.42	-1.522	0.128
Total	29.50	9.04	31.22	10.55	-1.174	0.240

Legend. Statement 1: Talks on health for students by outside experts; Statement 2: Talks on health for students by teachers outside PE lessons; Statement 3: Talks on health for parents; Statement 4: Teachers of other subjects than PE convinced students of the need for a healthy lifestyle; Statement 5: Teachers of other subjects than PE provided students with active recreation during lessons; Statement 6: Sports and recreational events were organized at school for students, teachers and parents; Statement 7: Teachers corrected students' body posture; Statement 8: There was a student-friendly atmosphere at school, Statement 9: The school paid attention to the principles of healthy lifestyles; Statement 10: The school provided opportunities for students to use extracurricular sources of information about health; Statement 11: Teachers organized extracurricular activities and events to promote healthy lifestyles; Statement 12: Competitions and exhibitions on health-related topics were organized at school. M – mean; SD – standard deviation; Z – Mann-Whitney U test, p – level of statistical significance.

Table 2 presents the opinions of physical education university students about the ways health education had been implemented in their secondary school. There were no significant statistical differences between male and female students' opinions.

Table 2. Physical education students' opinions (n = 144) on the provision of health education contents at school

Implementation of health education content	Women, n = 74		Men, n = 70		Mann-Whitney U Test	
	M	SD	M	SD	Z	p
Statement 1	2.26	1.33	2.13	1.30	-0.598	0.550
Statement 2	1.84	1.22	1.91	1.11	-0.751	0.453
Statement 3	1.23	0.65	1.46	0.99	-1.205	0.228
Statement 4	3.09	1.15	2.93	1.44	-0.726	0.468
Statement 5	1.64	1.14	1.90	1.31	-1.268	0.205
Statement 6	3.53	1.41	3.31	1.29	-1.090	0.276
Statement 7	1.92	1.12	2.07	1.31	-0.456	0.648
Statement 8	3.89	1.03	4.01	1.01	-0.798	0.425
Statement 9	2.51	1.23	2.66	1.09	-1.006	0.315
Statement 10	2.68	1.30	2.89	1.14	-1.018	0.309
Statement 11	2.66	1.40	2.84	1.28	-0.932	0.352
Statement 12	3.08	1.31	2.80	1.35	-1.258	0.208
Total	30.32	9.36	30.91	10.01	-0.414	0.679

The opinions of students of other majors presented in Table 3 show that men more than women reported that their schools had provided extracurricular lectures on healthy lifestyles (Statement 2), provided leisure activities during lessons (Statement 5), teachers corrected students' body posture (Statement 7), and organized extracurricular activities and events promoting healthy lifestyles (Statement 11). These correlations were statistically significant (Table 3).

Table 3. Opinions of students in other majors (n = 159) about the health education implementation in their schools

Implementation of health education content	Women, n = 120		Men, n = 39		Mann-Whitney U Test	
	M	SD	M	SD	Z	p
Statement 1	2.18	1.29	2.21	1.30	-0.162	0.871
Statement 2	1.55	1.05	2.08	1.33	-2.732	0.006
Statement 3	1.25	0.69	1.46	0.88	-1.830	0.067
Statement 4	2.99	1.26	2.72	1.32	-1.181	0.238
Statement 5	1.65	1.07	2.21	1.45	-2.012	0.044
Statement 6	3.07	1.45	3.18	1.43	-0.419	0.675
Statement 7	1.72	1.04	2.44	1.27	-3.502	<0.001
Statement 8	3.86	1.13	3.92	1.16	-0.394	0.693
Statement 9	2.27	1.26	2.56	1.35	-1.221	0.222
Statement 10	2.73	1.34	2.95	1.34	-0.933	0.351
Statement 11	2.73	1.36	3.23	1.44	-1.952	0.050
Statement 12	3.02	1.30	2.82	1.55	-0.869	0.385
Total	28.99	8.84	31.77	11.50	-1.034	0.301

The analysis of the ways in which health education was implemented according to the physical education teacher's sex revealed no significant statistical differences. When dividing the respondents according to their major,

there were also no differences with re-gard to the PE teacher's sex. As far as the physical education students were concerned, there were no respondents who declared that they were taught by both women and men (Tables 4–6).

Table 4. Opinions of all surveyed students (n=303) on the implementation of health education content depending on the PE teacher's sex

Implementation of health education content	PE teacher's sex						Mann-Whitney U Test	
	Women and men n = 86		Women, n = 140		Men, n = 77		H	p
	M	SD	M	SD	M	SD		
Statement 1	2.21	1.29	2.21	1.30	2.12	1.32	0.437	0.804
Statement 2	1.57	1.07	1.84	1.19	1.87	1.17	5.019	0.081
Statement 3	1.20	0.53	1.36	0.88	1.38	0.86	1.167	0.558
Statement 4	3.08	1.24	2.91	1.34	2.94	1.23	1.051	0.591
Statement 5	1.63	1.06	1.94	1.36	1.65	1.05	2.606	0.272
Statement 6	2.97	1.47	3.34	1.39	3.42	1.34	4.743	0.093
Statement 7	1.86	1.12	2.01	1.25	1.90	1.11	0.491	0.782
Statement 8	3.87	1.13	3.93	1.07	3.92	1.05	0.081	0.960
Statement 9	2.31	1.30	2.44	1.24	2.65	1.12	4.799	0.091
Statement 10	2.69	1.42	2.84	1.29	2.78	1.30	1.071	0.585
Statement 11	2.90	1.36	2.78	1.42	2.74	1.28	0.658	0.720
Statement 12	2.97	1.35	3.00	1.34	2.87	1.36	0.502	0.778
Total	29.24	9.18	30.60	9.98	30.22	9.53	0.567	0.753

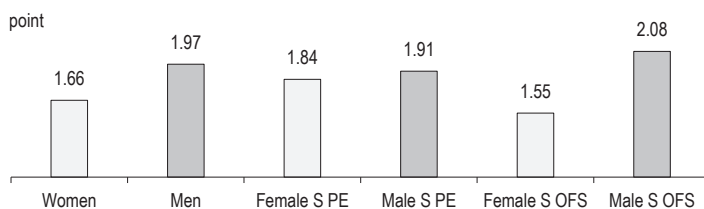
Table 5. Opinions of students of physical education (n = 144) on the implementation of health education content depending on the PE teacher's sex

Implementation of health education content	PE teacher's sex				Mann-Whitney U Test	
	Women, n = 69		Men, n = 75		Z	p
	M	SD	M	SD		
Statement 1	2.33	1.31	2.07	1.30	-1.285	0.199
Statement 2	1.90	1.18	1.85	1.16	-0.015	0.988
Statement 3	1.32	0.83	1.36	0.85	-0.257	0.797
Statement 4	3.13	1.36	2.91	1.23	-1.062	0.288
Statement 5	1.91	1.41	1.63	1.02	-0.704	0.482
Statement 6	3.46	1.37	3.39	1.35	-0.394	0.693
Statement 7	2.13	1.33	1.87	1.10	-1.024	0.306
Statement 8	4.01	0.99	3.89	1.05	-0.659	0.510
Statement 9	2.55	1.23	2.61	1.10	-0.550	0.582
Statement 10	2.83	1.36	2.73	1.29	-0.380	0.704
Statement 11	2.81	1.43	2.69	1.26	-0.424	0.672
Statement 12	3.06	1.31	2.84	1.36	-1.003	0.316
Total	31.45	10.01	29.84	9.36	-0.674	0.500

Table 6. Opinions of students of other majors (n = 159) on the implementation of health education content depending on the PE teacher's sex

Implementation of health education content	PE teacher's sex						Mann-Whitney U Test	
	Women and men n = 86		Women, n = 71		Men, n = 2			
	M	SD	M	SD	M	SD	H	p
Statement 1	2.21	1.29	2.21	1.30	2.12	1.32	0.437	0.804
Statement 2	1.57	1.07	1.84	1.19	1.87	1.17	5.019	0.081
Statement 3	1.20	0.53	1.36	0.88	1.38	0.86	1.167	0.558
Statement 4	3.08	1.24	2.91	1.34	2.94	1.23	1.051	0.591
Statement 5	1.63	1.06	1.94	1.36	1.65	1.05	2.606	0.272
Statement 6	2.97	1.47	3.34	1.39	3.42	1.34	4.743	0.093
Statement 7	1.86	1.12	2.01	1.25	1.90	1.11	0.491	0.782
Statement 8	3.87	1.13	3.93	1.07	3.92	1.05	0.081	0.960
Statement 9	2.31	1.30	2.44	1.24	2.65	1.12	4.799	0.091
Statement 10	2.69	1.42	2.84	1.29	2.78	1.30	1.071	0.585
Statement 11	2.90	1.36	2.78	1.42	2.74	1.28	0.658	0.720
Statement 12	2.97	1.35	3.00	1.34	2.87	1.36	0.502	0.778
Total	29.24	9.18	30.60	9.98	30.22	9.53	0.567	0.753

Figures 1–7 present opinions of students of various majors on the forms of implementation of health education at school. The mean scores of individual statements, ranging from 1–2 points, indicate that lectures for students outside their physical education classes, lectures for parents, active recreation during classes, and correcting students' body posture had been very rarely conducted (Figures 1–4). Slightly more frequent were lectures given by invited speakers from outside the school, e.g. doctors, nutritionists, nurses (Figure 5), and organization of extracurricular activities and health-promoting events (Figure 6). The total of all opinions on the questionnaire questions is between 29.50 and 31.77 out of a possible 60 points. Women's declarations were at a lower level than men's, but they did not differ significantly.



S PE – students of physical education, S OFS – students other fields of study.

Figure 1. Comparison of opinions of students of different majors on teachers' lectures out-side physical education classes

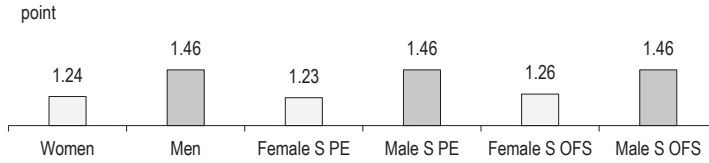


Figure 2. Comparison of opinions of students of different majors on lectures for parents

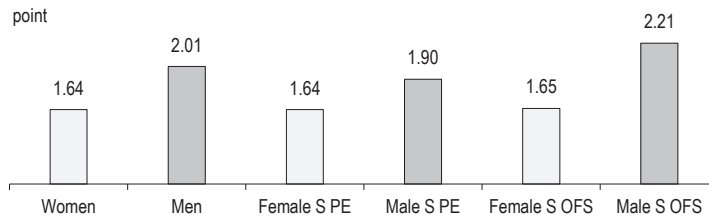


Figure 3. Comparison of opinions of students of different majors on the provision of active recreation during classes conducted by other teachers

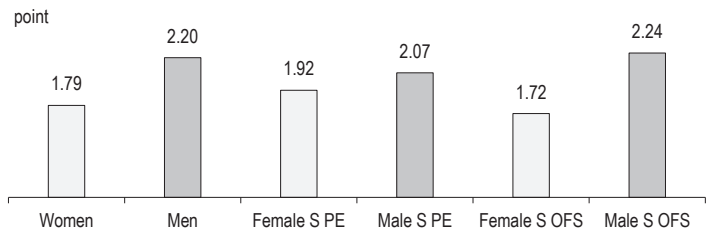


Figure 4. Comparison of opinions of students of different majors on correcting students' body posture

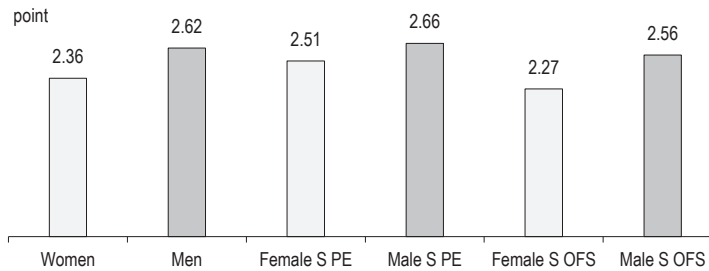


Figure 5. Comparison of opinions of graduate students on lectures given by experts outside school and application of healthy lifestyle principles at school

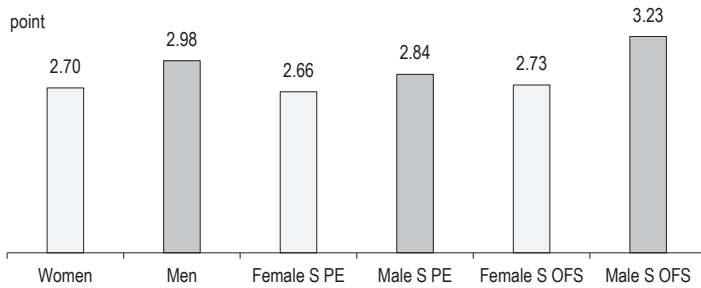


Figure 6. Comparison of opinions of students from different majors on the organization of extracurricular activities and health-promoting events

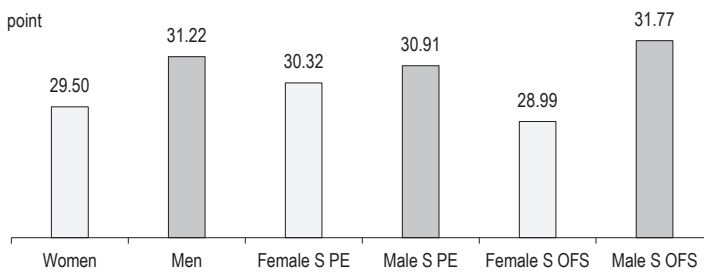


Figure 7. Comparison of opinions of students of different majors on the implementation of health-related educational content (aggregate)

Discussion

K. Borzucka-Sitkiewicz in her survey among health promotion coordinators in institutions participating in the network of Health Promoting Schools, concerning ways of health education implementation, found that more than 86% of respondents reported the implementation of health education within various school courses. Every tenth respondent (12%) admitted that a distinct course had been created to achieve the goals of the program. Among the forms used to convey the health content, teachers made use of school projects, ad hoc events, outdoor trips as well as lectures by outside experts (Borzucka-Sitkiewicz, 2016). K. Łomińska in her survey of teachers of Warsaw schools, found that health education was implemented by physical education specialists, conducting classes in the gym (70.8%), and less frequently in regular classrooms (55.6%) (Łomińska, 2014). P.F. Nowak, in a study on the population of teachers in Opole regarding the level of implementation of health education at school, found out that in most institutions various types of pro-health activities had been carried out (Nowak, 2012). M. Zadarko-Domaradzka in her evaluation of health education implementation, based on the opinions of teachers in Opole reported that physical education teachers were the most qualified to teach this subject (Zadarko-Domaradzka, 2015).

Research on students' perception of health education was conducted by Charzyńska-Gula Jaworska, Bogusz, Kocka, Domżał-Drzewicka, Wasil (2013), Kap, Skowronek, Sarnecka (2017), and Świłała, Bukowska (2016). In their study health education themes were found to have been provided in the form of lessons prepared by students, using activating methods, including genre scenes as workshop activities (Truszkiewicz, Olejniczak, Religioni, Skonieczna, 2015) such as first aid, or problem solving in small groups (Charzyńska-Gula et al., 2013). Sources of health knowledge are most often physical education (35.5%) and biology classes (29.4%), with health information also provided in chemistry classes, civil defense courses, and homerooms (Kap, Skowronek, Sarnecka, 2017). According to Warsaw students, classes should be taught by educated specialists in this area (26%) or specialists from outside the school (45%) (Truszczyńska et al., 2015). The vast majority of female students from Łódź (70%) confirmed the need for health education classes, and 2/3 of male students (62%) said they were unnecessary (Szkudlarek, Kaźmierczak, Kowalska, 2016). A similar opinion was collected among female students in Wrocław, who acknowledged that the content implemented in the form of classroom activities was interesting and relevant to their development. Introducing theoretical classes into physical education classes does not – in their opinion – lower the quality of physical activity (Świłała, Bukowska, 2016).

K. Górna-Łukasik and K. Skalik in their research on university students from Katowice, found that sports and recreational events for students, teachers and parents, had been the most common form of implementation of health education, followed by extracurricular activities and other events organized jointly by teachers of physical education and other subjects, and then by competitions and exhibitions on health issues. The situation was similar in the study of Szczecin students. In the opinions of students from Katowice, lectures for parents and lectures delivered by outside experts had been the least frequently implemented forms of health education (Górna, Skalik, 2021). The results were similar among the Szczecin students. Posture correction and organization of active recreation during lessons were rare in both studied school environments.

The majority of respondents negatively assessed the application of healthy lifestyle principles at school (Górna, Skalik, 2021), both in the Katowice and Szczecin studies. Thus, the findings of the Polish Supreme Audit Office critically assessing this component of school functioning can be corroborated (Zaleski-Ejgierd, 2014).

The effects of implemented health education depend not only on the actions taken by PE teachers, who, as previously mentioned, have been assigned the role of health leaders in the education system. Their organizational skills, knowledge, teaching preparation, and 'pedagogical talent' are certainly half of the success. Nevertheless, many teachers claim that they are not fully prepared to implement health education, especially in terms of using activating methods and conducting theoretical classes, and that their hindered access to resources and teaching aids intensify their reluctance to implement health education content in the educational process (Woynarowska, 2010; Gaweł, 2016). Different barriers often arise in the cooperation of so many factors, which makes it difficult to achieve the desired results of 'health science'. In addition to the barriers on the part of the teacher, the financial limitations of educational institutions, lack of training offers for teachers, undervaluation by school principals and representatives of leading bodies of the importance of health education in preparing students for adult life, reluctance of teachers of other subjects to cooperate in the implementation of pro-health tasks, lack of involvement of parents in the life of the school, and thus in the process of health education of their children, as well as time and space limitations should also be indicated. One more important determinant of the effectiveness of health education is the interest and involvement of students themselves.

Conclusions

Perhaps it is thanks to health education – properly implemented, aimed mainly at raising awareness and involvement, allowing students to co-organize the educational space and select content – that attendance at physical education classes will increase, and thus the goals of health education will be achieved. The study results demonstrate a low degree of implementation of these educational contents. The Polish school offers students few forms of preparation for taking care of their own health. Opinions of students from Szczecin's universities confirm some serious neglect in this area of education. Therefore, it can be assumed that school teachers are insufficiently prepared to fulfil the role of health educators. Their theoretical knowledge does not translate into the development of appropriate attitudes of their students towards the care for their own and others' health.

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