

Original Article

Monitoring of training of future teachers of health care activities in school

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Abstract

Problem statement. Global community recognizes health as an essential human possession. Society perceives school as a center for preserving and promoting health in children and young adults. Therefore, healthcare activities are an important task for the teachers.

Objective: Highlight the comparative results of the study on the readiness of future primary school teachers and physical education teachers of healthcare activities at school; identify ways to improve the training of future teachers in healthcare activities.

This study is part of an experimental work aimed to develop and implement an effective approach for preparing future teachers of healthcare activities.

Research data: Randomly selected senior students from pedagogical (n = 168) and physical education and sports (n = 162) departments from higher educational institutions of Ukraine participated in the study. The students were required to fill out questionnaires. The survey was conducted in November–December of 2018. The statistical analysis of the survey data was performed.

Results: This article presents the results on the motivational, cognitive, and procedural components of the readiness of students specializing in “Primary Education” and “Physical Culture” for the healthcare activities at secondary schools. The article identifies the deficiencies in working with students and clarifies ways to improve the training of future teachers of healthcare activities.

Conclusion: The study showed that the training of future primary school and physical culture teachers in Ukraine is not sufficiently effective. To improve the training of students, it is necessary to: ensure purposeful and systematic implementation of healthcare education of future teachers; supplement the curriculum content to improve the knowledge of future teachers on the fundamentals of maintaining health in students; improve the health culture of future teachers and their motivation for a healthy lifestyle; fill the gaps in the methodological training of future teachers; perform comprehensive training of students to create a “health school” as a tolerant educational environment aimed to develop a physically, mentally, and spiritually healthy child; give preference to active forms and methods of training students; on the basis of the abovementioned information, develop a comprehensive approach aimed to train future teachers for activities to preserve and improve the health of students by taking into account the specifics of “Primary Education” and “Physical Culture” specialties.

Key words: monitoring, training of future teachers, primary school teacher, physical education teacher, healthcare activities of a teacher

Introduction

Today, the problem of public health, and in particular, the health of children and young people, has become global. In 2014, the United Nations Educational, Scientific and Cultural Organization (UNESCO) identified eight key areas for acquiring 21st century competencies, and two of them (physical well-being and psychological well-being) directly affect the health and safety of human vital activity (2014). Ukraine is a country, where educational policies put emphasis on the problem of maintaining and improving the health of children and youth. This is reflected in a number of government documents, namely, the “Education Law”, “General Secondary Education Law”, “Higher Education Law”, the National Doctrine of the Development of Physical Education and Sports, the National Program “Health 2020: Ukrainian Dimension”, the Concept of the Development of Mental Health Care in Ukraine (2017-2030), etc. However, some scientific research works (N. Bashavets, O. Bezpalko, V. Bobrytska, O. Bondarenko, L. Volkov, H. Voskoboinikova, M. Honcharenko, M. Hrynova, O. Dubohai V. Yefimova, V. Nesterenko, O. Omelchenko, L. Slyvka, etc.) reflect a distinct trend of school students’ health deterioration (Zagorodniy, 2015, p. 141). The number of children with disabilities, children with congenital malformations, acute and chronic diseases is growing in Ukraine. The lack of tolerance in the educational environment leads not only to deterioration of physical health but also to mental and behavioral disorders among school students (Oliar, 2013). An active introduction of innovative technologies

often leads to an even greater intensification of the learning process, increased hypodynamia, deterioration of physiological parameters, and reduced functional reserves of the child's body (Gryban, 2008). Despite this, only highly specialized or short-term healthmaintenance interventions are usually implemented in Ukrainian educational institutions.

An analysis of foreign research data shows that during the 20th century the United States, as well as European countries were actively developing the comprehensive programs and different models of health maintenance schools (Dryfoos, 1998).

Scientists have proven that health indicators in modern developed society largely depend on the level of education of the population. The higher is the level of knowledge about the basics of health maintenance, the better are the health indicators. In modern society schools are perceived as a center of formation of the healthy nation, which provides a transition from the old biomedical to a holistic social-ecological model of health maintenance. Therefore, finding a solution to the complex issue of maintenance and improvement of health is one of the tasks of pedagogical workers (Garkusha, 2014, p. 94). The teacher's readiness for the implementation of health maintenance activity is defined as an integrative entity that includes his motives and interest in this problem, professionally significant qualities of the teacher's personality, orientation towards the values of health maintenance, the system of theoretical and applied knowledge, abilities and skills in designing and implementing educational activities aimed at maintenance and improvement of school students' health. The structural components of readiness are motivational and value-oriented, cognitive, as well as processual (Slyvka, 2014, pp. 81-82).

The purpose of current study is to identify the state of readiness of university students (teachers-to-be) for implementation of health maintenance activities at school.

Materials and methods

The study involved senior university students –primary school teachers-to-be (n = 168) and physical education teachers-to-be (n = 162) selected via random sampling. In November- December 2018 an anonymous survey was conducted among university students related to training of teachers-to-be for health maintenance activities. The choice of test questions variants was random. The statistical analysis of data was completed.

The following research methods were used: surveying, pedagogical observation, analysis, synthesis, statistical methods, and the method of evaluation and self-assessment of students' readiness for health maintenance activities.

Results

The monitoring study was carried out after senior university students of the Faculty of Physical Education and Sports have completed the courses aimed at training for maintenance and improvement of school students' health, such as Therapeutic Exercise and Functional Diagnostics, Methodology of Health Improvement and Sports Work, Methodology of Health-Improvement Physical Education. The students of the Pedagogical Faculty, namely primary school teachers-to-be, have completed the following courses: Fundamentals of Health Maintenance, Methodology of Teaching in the Educational Field "Health and Physical Education". Students of both faculties have also completed a Pedagogical Practice course in schools.

The monitoring included a survey study of the motivational and value-oriented, cognitive and processual components of the training of teachers-to-be for health maintenance activities at school.

Students were asked the following question: what is a key priority in your desire to carry out the health maintenance activity at school? They had to choose a single response option out of the three available ones.

Table I. University students' motivation for health maintenance activity

Response options	"Primary Education" Specialty		"Physical Education" Specialty	
	N = 168		N = 162	
Maintaining children's health is a professional duty of a teacher	121	72	135	83,3
I am interested in this problem, because health is an essential human value	47	27,9	27	16,7
I am not interested in this problem	0	0	0	0

The results reflected in Table I demonstrate that most respondents already have an understanding of own professional responsibility, as well as the need for health maintenance activities, but this indicator is significantly higher (83.3%) among physical education teachers-to-be, as compared to primary school teachers-to-be (72%). 28% of Primary Education specialty respondents and 16.7% of Physical Education specialty respondents expressed an interest in the problem and a desire for self-development attributed to personal reasons. It should be noted that there were no students identified, who would demonstrate no interest in the issue of health maintenance.

The next question that students were offered to answer was: how would you estimate your level of knowledge about health maintenance activity at school?

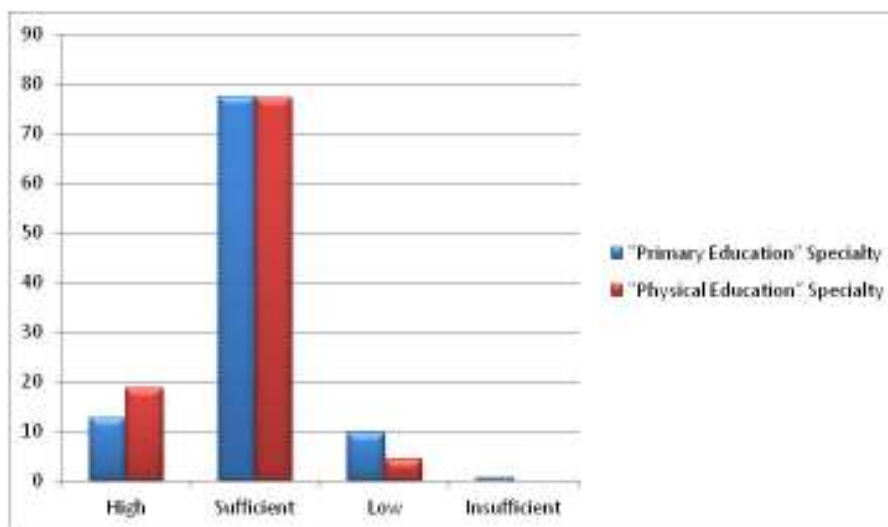


Fig. 1. The level of university students' knowledge about health maintenance activity at school.

The data from Fig. 1 confirms that students of both specialties have provided a positive feedback about their own level of knowledge about health maintenance activity. However, the overall results of self-estimation of cognitive indicator of physical education teachers-to-be were higher than those of primary school teachers-to-be. In particular, 18.5% of the students of Physical Education specialty estimated their level of knowledge as high (only 12.5% of students of Primary Education specialty did the same), 77.2% – as satisfactory (as compared to 77.4% of students of Pedagogical Faculty), only 4.3% indicated that they had a low level of knowledge (9.5%, or twice as many students of the Pedagogical Faculty did the same). Only one Pedagogical Faculty student reported the level of own knowledge as unsatisfactory (0.6%).

A more detailed information regarding the knowledge of university students about health maintenance activity is summarized below in Table 2.

Table II. University students' knowledge about health maintenance activity.

Content of knowledge	"Primary Education" Specialty N = 168		"Physical Education" Specialty N = 162	
	N	%	N	%
Knowledge of developmental physiology of school students	73	43,5	54	33,3
Knowledge about safe behavior of school students	86	51,2	61	37,7
Knowledge about maintenance of physical health of children	83	49,4	103	63,6
Knowledge about maintenance of children's mental health	93	55,4	66	40,7
Knowledge of sanitary and hygiene standards at school	92	54,8	65	40,1
Knowledge about physical education and health improvement activities at school	64	38,1	93	55,4
Knowledge of modern health maintenance technologies	67	39,9	54	33,3
Knowledge about how to provide first aid in emergency cases	85	50,6	96	59,3
Knowledge about healthy lifestyle	104	61,9	87	53,7
Knowledge about the harmful effects of risk factors on human health	115	68,5	121	74,7

As can be seen from Table 3, students of the Primary Education specialty most often referred to knowledge about harmful factors affecting the health of children (68.5%), healthy lifestyle (61.9%), mental health of children (55.4%), sanitary and hygienic standards at school (54.8%), safe behavior of children (51.2%), and methods of provision of first aid in emergency cases (50.6%). Students of the Physical Education specialty chose knowledge about harmful factors influencing the children's health (74.7%), maintenance of physical health of children (63.6%), methods of provision of first aid in emergency cases (59.3%), physical education and health-improvement activities at school (55.4%), as well as healthy lifestyle (53.7%).

A detailed analysis of students' responses has demonstrated that the knowledge of students of both specialties about the issue discussed above is scattered and non-systematic. Students have a general understanding of the essence of individual phenomena (such as knowledge of safe behavior), but their knowledge is incomplete. Another goal of the study was to determine whether students could use their acquired

knowledge to develop practical aspects of health maintenance activities. Teachers-to-be were asked to answer the question: how do you estimate your ability to plan health maintenance related educational activities?

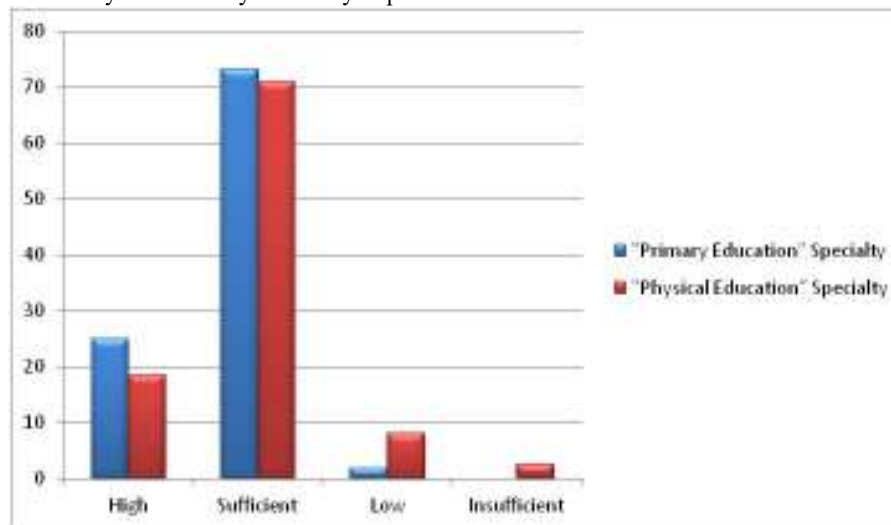


Fig. II. The level of university students' proficiency in the ability to design educational events on health maintenance topics.

Fig. II shows that significantly more Primary Education specialty students rated their level as high (25%), as compared to Physical Education specialty students (18.5%). The majority of students from both groups rated their level as sufficient (73.2% and 71.0% respectively), and 1.8% of the primary education teachers-to-be were at a low level, which is much less, when compared to Physical Education specialty students (8.0%). Four of physical education teachers-to-be (2.5%) considered their level of skills as insufficient. These results apparently indicate a more thorough methodological training of primary school teachers-to-be for implementation of educational technologies.

The study of school students' health is an important part of teacher's professional health maintenance activity. Therefore, university students were offered to answer the question "Do you know and use the methods of evaluation of school students' health?" Only 8 students (4.8%) of the Primary Education specialty and 11 students (6.8%) of the Physical Education specialty answered this question affirmatively. When explaining the rationales behind their answers, most students emphasized a lack of lecturers' attention to the problems of school's health-improvement function (64.3% of the primary school teachers-to-be and 56.8% of physical education teachers-to-be respectively); the content and methodology imperfection in the teaching of disciplines aimed at formation of health maintenance competence of university students (57.7% of students of the Primary Education specialty and 46.3% of students of the Physical Education specialty respectively).

Another question that students were asked was: "What are the forms of health maintenance activity that can be used by a teacher at school?"

Table III. The forms of health maintenance activity of a teacher at school.

	Forms of health maintenance activity	"Primary Education" Specialty		"Physical Education" Specialty	
		N = 168		N = 162	
		N	%	N	%
1.	Teacher as a personal example.	44	26,2	39	24,1
2.	Organization of extracurricular activities in Physical Education.	30	17,9	36	22,2
3.	Organization of walks (including health-improvement ones), cross running, etc.	18	10,7	33	20,4
4.	Organization of a specific day of the week dedicated to health.	4	2,4	-	-
5.	Organization of a week dedicated to health improvement topics.	3	1,8	-	-
6.	Organization of conversations with parents on topics related to the health of children.	48	28,6	12	7,4
7.	Organization of sports competitions, festivals, contents, shows.	21	12,5	48	29,6
8.	Issuing newspapers and other visual materials on health-oriented topics.	7	4,2	3	1,9
9.	Promoting a healthy lifestyle during conversations with school students and during lectures.	26	15,5	14	8,6

10.	Warning school students about dangers of alcohol and drugs abuse, as well as smoking.	24	14,3	59	36,4
11.	Conducting lessons of physical education in an unconventional form.	9	5,4	2	1,2
12.	Organization of additional physical education classes.	3	1,8	12	7,4
13.	Cooperation with teachers of other classes.	4	2,4	16	9,9
14.	Cooperation with sports clubs.	2	1,2	22	13,6
15.	Introduction of the basics of healthy nutrition to school students	19	11,3	36	22,2
16.	Drawing attention of children to maintaining a proper posture in order to prevent spine issues.	57	33,9	29	17,9
17.	Explanation and recommendations for school students regarding maintaining proper personal hygiene.	41	24,4	27	16,7
18.	Maintaining positive interpersonal relationships in the school environment.	59	35,1	32	19,8

According to the results of the study highlighted in Table III, it was determined that the majority of primary school teachers-to-be consider the following forms of health maintenance activity at school to be important: positive interpersonal relationships in the school environment (35.1%), drawing attention of children to maintaining a proper posture in order to prevent spine issues (33.9%), organization of conversations with parents on topics related to the health of children (28.6%), explanation and recommendations for school students regarding maintaining proper personal hygiene (24.4%), promotion of healthy lifestyle during conversations with school students and during lectures (15.5%), warning of school students about dangers of alcohol and drugs abuse, as well as smoking (14.3%). Apparently, such priorities are related to the age characteristics of primary school children, which include not entirely formed mental functions, bone system, as well as insufficient independence. At the same time, unhealthy habits, such as smoking, alcohol abuse and drug addiction are not typical for this age. Significantly more students of the Primary Education specialty, as compared to the Physical Education specialty students are ready to use a variety of forms of health maintenance work: conducting lessons of physical education in an unconventional form (5.4% and 1.2% respectively), issuing newspapers and other visual materials on health-oriented topics (4.2% vs 1.9%), organization of a specific day of the week dedicated to health (2.4% vs 0%), organization of a week dedicated to health improvement topics (1.8% - 0%), and so on.

The physical education teachers-to-be have favored the following forms of work with school students: warning of school students about dangers of alcohol and drugs abuse, as well as smoking (36.4%), organization of sports competitions, festivals, contents, shows (29.6%), extracurricular activities in physical education (22.2%), introduction of the basics of healthy nutrition to school students (22.2%), organization of walks (including health-improvement ones), cross running, etc. (20.4%). This indicates that students are mainly oriented at working with adolescents and older school students, which are more independent and organized, and are conscious of the need to take care of own health. The results of the study demonstrated that physical education teachers-to-be are ready to pay much more attention to motor types of health maintenance activities (as compared to students of the Primary Education specialty), to organization of additional physical education classes (7.4%), to cooperation with teachers of other classes (9.9%), and to cooperation with sports clubs (13.6%), but twice as less attention is paid to establishing of positive interpersonal relationships in school environment (19.8%). One of the important aspects of health maintenance activity of a teacher is the development of school students' motor activity abilities. Since a significant amount of respondents from both specialties (26.2% of Primary Education and 24.1% of Physical Education specialty students respectively) have named the teacher's personal example as a main condition for effective health maintenance, the questions aimed at exploring the lifestyle of students themselves were added to the questionnaire.

Table IV. "How much time do you spend moving on an average day?", "What types of rest do you like?"

Response options	"Primary Education" Specialty		"Physical Education" Specialty	
	N = 168		N = 162	
	N	%	N	%
How much time do you spend moving on an average day?				
4 hours and more	73	43,4	123	75,9
2 hours and more	91	54,2	39	24,1
Less than an hour	4	2,4	0	0
What types of rest do you like?				
Active (running, walking, cycling, sports, etc.)	67	39,9	137	84,6
Passive (watching TV shows, spending time in social networks, reading, etc.)	101	60,1	25	15,4

The results presented in Table IV confirm that students of the Physical Education specialty tend to pay much more attention to keeping up with motor activity schedule, than students of the Primary Education specialty. In particular, 75.9% of them move four hours or more per day (among the primary school teachers-to-be, there were only 43.4% of students, who were usually engaged in sports, dancing, tourism, etc.). On the other hand, twice as many students of the Primary Education specialty are physically active two or more hours a day

(twice as less among the physical education teachers-to-be - 24.1%). None of Physical Education specialty students were physically active less than 1 hour per day, and among the primary school teachers-to-be, there were four such students (2.4%). Thus, twice as many Physical Education specialty students (84.6%) prefer active types of rest, as compared to primary school teachers-to-be (39.9%), and the majority of students of pedagogical faculty (60.1%) prefer passive forms of rest. In particular, 82.1% of them indicated that they spend a lot of time communicating in social networks, 33.9% like watching television programs, 20.8% read books, and so on. Therefore, students engaging in sports pay considerably more attention to a healthy lifestyle than those who are not.

Discussion

Nowadays, there are a lot of studies devoted to the training of teachers for the implementation of health maintenance activities and effective management in the field of physical education and sports (studies conducted by N. Abaskalova, O. Alekseieva, H. Meshcheriakova, I. Nikolaieva, R. Tyahur, S. Churiukina confirm this fact), as well as health maintenance technologies (studies completed by S. Hrymblat, Y. Kobiakov, L. Koval, M. Korzhov, M. Nosko, Y. Palichuk confirm this). The analysis of research works of Ukrainian and foreign scientists, as well as the results of the conducted study confirm that the process of training of teachers-to-be for health maintenance activity should purposefully and systematically ensure the development of students' motivation for health maintenance activity, acquisition of theoretical knowledge and practical skills, integration of physical and professional culture of teachers-to-be, the development of innovative thinking, leadership skills, as well as ability to use modern methods and technologies (Tyagur, 2014, p.85). Health maintenance and health improvement must be included in the content of education, its forms, methods, techniques and means of its implementation, as well as in the conditions in which the education is provided (Kulmatycki, 2003).

The same is evidenced by the international works aimed at maintaining the health of schoolchildren. At the current stage, it is important to provide training of teachers-to-be for the organization of "Schools of Health", which includes: administration; the promotion of health and health related education; school health services; healthy environment; integration of school and social programs; specialized services for school students with special needs (Wallace, 1992). This model is unique, as it defines the administration as an important element in the coordination and integration of other components (Wallace, 1992; Tyagur, 2014). Dryfus (1998) considers a full-service school, where physical, mental health, social and family services are integrated into a single complex as an effective model.

Allensworth and Kolbe (1987) describe a model of the "School of Health", which includes: a school health program; a school curriculum for physical education of school students; a school medical service (disease prevention, emergency medical care); food services; school staff health services; psychological and social services, as well as school-based social support structures; a healthy physical and psychological environment at school; the involvement of parents and the public in improvement of school students' health. The Polish scholars are actively developing the content and technologies for training of Physical Education and Primary Education specialties teachers-to-be for health maintenance activities (Klimas, 2015; Kosińska, 2002; Kulmatycki, 2003). After the reformation of Polish school educational system in 2009, health maintenance work became one of the main goals of school education. This work is congruent with the content of physical education at all educational levels; physical education was declared as "leading" educational discipline in relation to the implementation of health related education; the topic of "health maintenance education" is singled out in the physical education curricula for gymnasiums and lyceums; the physical education teacher is entrusted with the role of the main promoter and organizer of health maintenance events at school (Slyvka, 2017).

Conclusions

The analysis of research works of Ukrainian and foreign scholars, as well as the experience of public health maintenance in different countries, has demonstrated that the role of the teacher in this process is essential. However, the current study demonstrated that the training of teachers-to-be for health maintenance activities in Ukrainian higher education institutions is not sufficiently effective at present.

The results of current study confirm that in the process of their professional training primary school and physical education teachers-to-be have developed a positive motivation and interest in the problem of health maintenance activities at school. The vast majority of students of both specialties (89.9% of Primary Education and 95.7% of Physical Education specialty respectively) estimated their level of knowledge about health maintenance activity at school as high or sufficient. However, a more detailed analysis of students' knowledge has proven it to be incomplete and non-systematic. The study revealed a poor level of health maintenance culture among primary school teachers-to-be, as well as lack of motivation for maintaining a healthy lifestyle. This is an alarming fact, since the primary school teachers are the main promoters of healthy lifestyle at school, and children are especially inclined to follow the example of a teacher at a younger age. Therefore, it will be recommended to increase the number of compulsory physical education hours for students of the Primary Education specialty or to introduce some specific elective courses, aimed at helping students develop their own health and exercise habits. The study has discovered gaps in the methodological training of physical education teachers-to-be, which is aimed more at strengthening of physical health of school students (mainly adolescents

and senior school students), rather than at the use of forms of educational work aimed at the development of a mentally and spiritually healthy child (Slyvka, 2014, p.46). Therefore, the content of programs on health maintenance education in higher education institutions in Ukraine requires a thorough revision. According to practicing teachers, the psychological and social health aspects are complex, and most difficult to teach (Wiśniewska-Śliwińska, 2010, p. 209), therefore, scholars emphasize the need to fill the content of the training of teachers-to-be with topics on how to develop interpersonal skills in schoolchildren, help them manage stress, make decisions and build a personal system of values (Klimas, 2015, p.52). The increase in the level of readiness for the implementation of health maintenance measures in own professional activity is also associated with an improvement of students' knowledge about interactive teaching methods (Klimas, 2015, p.50). The scientists recommend introducing active forms of educational sessions and ways of provision of information that would better motivate students to obtain the required knowledge (Wilk, 2006, p.46). The training of students for creation of tolerant educational environment at school is an important factor in health maintenance of schoolchildren. Tolerance is one of the essential professional traits of a teacher. The lack of it may lead to a variety of conflict situations, which may cause stress in both the teachers and school students (Oliar, 2013, p.309). Thus, the current study has confirmed the need for development of a comprehensive technology aimed at training of teachers-to-be for activities of maintenance and improvement of school students' health while taking into account the specifics of Primary Education and Physical Education specialties.

Conflict of interests - The author declares that there is no conflict of interests.

References:

- Allensworth, D. D., & Kolbe, L. J. (1987). The comprehensive School Health Program: Exploring an Expanded Concept. *Journal of School Health*, 57(10), 409–411.
- Dryfoos, J. (1998). *Full-Service Schools: A Revolution in Health and Social Services for Children, Youth, and Families*. San Francisco, USA: Wiley.
- Garkusha, S. V. (2014). *Pedagogical principles of formation of preparedness of future physical education professionals to the use of health maintaining technologies*. Chernihiv, Ukraine: Lozovyi V. M..
- Gryban, V. G. (2008). *Valeology: Textbook*. Kyiv, Ukraine: Center for Educational Literature.
- Klimas, N., & Laudańska-Krzemińska, I. (2015). The preparation of physical education students for health education lessons – theory and reality. *Quality in sport*, 2(1), 43–52.
- Kosińska, E., & Rębiałkowska, M. (2002). Przygotowanie do realizacji edukacji zdrowotnej w autoocenie nauczycieli naucznia początkowego. *Nauczyciel w edukacji zdrowotnej*, , 229–233.
- Kulmatycki, L. (2003). *Promocja zdrowia w kulturze fizycznej: kryteria dobrej praktyki*. Wrocław, Poland: Wydawnictwo Akademii Wychowania Fizycznego.
- Oliar, M. (2013). Development of tolerance of future elementary school teachers in the process of their learning of communicative strategies. *Collection of scientific works of Uman State Pedagogical University*, 2, 306–313.
- Slyvka, L. V. (2014). Some Aspects of Theory and Methodology of Training of Future Primary School Teachers for Health Maintenance Activities. *Problems of modern teacher's training: Collection of scientific works of Uman State Pedagogical University named after Pavlo Tychyna*, 10(2), 80–86.
- Slyvka, L. V. (2014). Organization of health preserving environment of junior pupils: theoretical and practical aspects. *Ukrainian Carpathians Mountain School*, 11, 44–47.
- Slyvka, L. V. (2017). The implementation of health maintenance education in primary schools in Poland. *Youth and the market*, 9(152), 119–123.
- Tyagur, R. S. (2013). Peculiarities of management work in the field of physical education and sports. *Bulletin of the Precarpathian University. Physical Culture Series*, (18), 129–137.
- Tyagur, R. S. (2014). Requirements for a modern manager in the field of physical education and sports. *Bulletin of the Precarpathian University. Physical Culture Series*, (20), 46–52.
- UNESCO. (2014). *Charting The Course Of Education And Hiv: Education On The Move*. Paris, France: United Nations Education, Scientific & Cultural Organization.
- Wallace, H. M. (1992). *Principles and practices of student health* (2nd ed.). Oakland, USA: Third Party Publishing Company.
- Wilk, B. (2006). Opinie studentów Akademii Wychowania Fizycznego i Sportu w Gdańsku o swoim przygotowaniu do realizacji programu edukacji prozdrowotnej w szkole. *Roczniki Państwowego Zakładu Higieny*, (57), 43–46.
- Wiśniewska-Śliwińska, H., Marcinkowski, J. T., & Wiśniewski, S. A. (2010). Opinie nauczycieli wychowania fizycznego względem propozycji ustanowienia ich głównymi edukatorami zdrowotnymi w szkołach. *Hygeia Public Health*, 45(2), 206–212.
- Zagorodniy, V. V. (2015). Modern problems of health of school age children and possible solutions. *Bulletin of Taras Shevchenko Chernigiv National Pedagogical University*, 3(129), 141–144.