

ORIGINAL SCIENTIFIC PAPER

Motivation of Forming Students' Healthcare Culture on Principles of Interdisciplinary Integration

Volodymyr Klymovych¹, Artur Oderov¹, Serhiy Romanchuk¹, Orest Lesko¹ and Mukola Korchagin²

¹National Academy of the Army, Department of Physical Education, Special Physical Training and Sports, Lviv, Ukraine, ²Military Institute of Armored Forces of National Technical University "Kharkiv Polytechnic Institute, Department of Physical Education, Special Physical Training and Sports, Kharkiv, Ukraine

Abstract

This article demonstrates the effectiveness of the motivation of students to the formation of health preservation culture on the basis of interdisciplinary integration. As the object of the research, we have developed methods for motivating students to form a culture of healthcare on the basis of interdisciplinary integration. The study involved 208 students from two higher educational institutions of Ukraine (Ivan Franko Lviv National University, Yuriy Fedkovych Chernivtsi National University). Students were divided into control (n=86) and experimental groups (n=122). As the verification result, we have identified and compared the effectiveness of the motivation of students in the control and experimental groups to form healthcare culture on the basis of interdisciplinary integration. The digital indicators of the obtained results confirm the suitability of using the author technique in the process of studying the following disciplines: "Safety of life", "Philosophy", "History of Ukrainian culture", and "Physical education".

Key words: *interdisciplinary integration, healthcare, students, training, motivation*

Introduction

One of the strategic tasks of modernizing contemporary education is to direct it to the healthcare of the younger generation. This is stated in the National Programme "Health - 2020: Ukrainian Dimension" (Ishchenko, 2013). Contemporary researchers integrate the basic concepts of pedagogy and health in the curricula of environmental, valeological and inclusive education (Romanchuk, 2016). The issue of maintaining health for students acquires particular importance. It is associated with many health-destructive factors affecting their body. The stressful schedule of the high school educational process is accompanied by such negative influences as hypo-dynamics, stress, tension of the organs of vision, and lack of preparedness for health preservation. The problems of human health, physical culture, and healthy lifestyle are featured in the fundamental works of Ukrainian researchers. The culture of student healthcare is one of the components of the physical culture of future professionals. To form the culture of healthcare, it is essential to conduct compulsory physical education classes during stu-

dents' high school studies (Melnychuk, 2012; Palichuk, 2014).

Foreign scientists in healthcare programmes highlight the prospects for maintaining health in the economic field, determine the relationship between healthcare conservation and promotion of healthy lifestyles at workplaces, the impact of health-saving measures on the behavior of adolescents regarding their health (Pronk, 2013), determine the challenges and opportunities for healthcare in the context of the economic crisis in Europe (Korchagin, Kurbakova, & Olkhovyi, 2017); argue for the introduction of new methods for the study of health conservation and the promotion of a healthy lifestyle in small and medium-sized labor collectives (Putrov, 2014; McDaid et al., 2013).

The analysis of scientific works in the field of health care, pedagogy, medicine, sports and physical culture shows that scientists pay close attention to the study of the problems of the professional training of future specialists for health and conservation activities. Thus, the subject of modern research is the educational aspect of the issue of the development of a healthy



Correspondence:

V.B. Klymovych

National Academy of the Army, Department of Physical Education, Special Physical Training and Sports, Heroyiv Maydanu, 79012 Lviv, Ukraine

E-mail: klimovichvolodymyr@gmail.com

lifestyle (Ashytok, 2013). Scientists have conducted a series of studies to form a culture of students' health. They used interdisciplinary integration, mobile and traditional games (Kyverial, 1980), and other innovative approaches. Particular attention is paid to the formation of a value attitude toward a healthy lifestyle among students. Scientists focus research on improving the training of future specialists in various specialities for health-saving activities: economists, nurses, and doctors (Boiko, 2014). Researchers emphasize the need to improve the training of specialists in physical education for health-saving activities by developing models for future teachers of physical culture in order to use mobile and national games in professional activities and to organize a health-preserving educational environment through the use of innovative technologies for the organization of physical training (Makarenko, 1984; Jessor, Turbin, & Costa, 2017).

However, the problem of motivating students to form a culture of health preservation on the basis of interdisciplinary integration has not yet been sufficiently reflected in the psychological and pedagogical literature (Olkhovyi, 2015).

The purpose of this study is to test the effectiveness of students' motivation to form a culture of healthcare on the basis of interdisciplinary integration by using the author methodology for training future specialists in the following disciplines: "Safety of Life", "Philosophy", "History of Ukrainian Culture", and "Physical Education".

Methods

Participants: Students of two higher educational institutions and teachers who conduct classes on disciplines: "Safety of life", "Philosophy", "History of Ukrainian culture", and "Physical education".

Organization of the study: The study was conducted in two stages. The constitutive stage of the experimental study was that the control (CG - 86 students) and the experimental (EG - 122 students) groups were determined and diagnosed (by questionnaire) regarding students' motivation. The results are determined as the formation of the motivational-ideological component of health preservation culture. In the questionnaire, students are asked to choose the answer to a question that reflects their attitude to the problem of healthcare:

1. I am aware of the importance of the problem of healthcare as one of the most important in my life: a) yes; b) yes, but I do not have enough willpower to take care of my health every day; c) only when there is a health problem; d) no, these problems will concern me when I am old.

2. I believe that I have formed a value attitude to health: a) yes; b) yes, but health, as a value, is not my ideological benchmark; c) not exactly; d) no, but I have a sufficient "safety margin" of health.

3. I am interested in information related to healthcare issues (on healthy lifestyles, ecological situation in a city, country, the world; negative technogenic influences on health and contaminated water, air, chemicals, features of healthy nutrition, safety of life; active rest, physical perfection of my body, etc.): a) systematically; b) I am interested in that information in the field of healthcare that interests me; c) episodically; d) everything is known for a long time.

4. Do you realize your own responsibility for choosing your lifestyle and organizing your leisure time?: a) yes; b) yes, so I try to stick to the diet, exercise, but I do not always manage to do so; c) sometimes it depends on the situation; d) nothing

depends on me, because I often tend to agree with what others think.

5. Do you think that knowing the real ways of saving your health has a certain effect on your lifestyle choices?: a) yes, it allows me to improve my healthcare programme; b) sometimes, it can be interesting and makes some changes in my life; c) I do not think that it will somehow affect my lifestyle; g) no, I'm used to stability.

6. Your attitude to the analysis of various programmes of physical perfection: a) systematically get acquainted with new programmes, as this allows me to improve my healthcare programme; b) periodically take interest in this information, if there is an urgent need (to get rid of excess weight, etc.); c) sometimes it can be interesting; d) I do not care about it.

7. Do you plan, systematically analyse, and self-assess your own healthcare activity?: a) yes; b) episodically; c) sometimes it is interesting; d) I do not care about it.

Calculation of the results of the survey, which indicates a certain level of formation of the motivational-ideological component of the culture of health preservation of future specialists:

- a) 4 points (high level);
- b) 3 points (sufficient level);
- c) 2 points (satisfactory level);
- d) 1 point (low level).

The motivational-ideological component characterizes the hierarchy of personality values in a healthy way of life, the attitude of students to this phenomenon, its influence on life plans and professional orientation; satisfaction with activities aimed at preserving and strengthening health; awareness of students about the needs and aspirations for development in healthcare, motives for healthy lifestyle, etc. As the criterion for this component, we determine the motivation of students to maintain their own health and the expression of a health-saving outlook as the central value orientations of the future specialist and a guarantee of his professional development. The formation of the motivational-ideological component is determined by the following indicators:

a) stability of value orientation on healthy life, preservation of health, success in future professional activity as priority factors of personal growth;

b) the formation of the need to enhance knowledge of healthcare;

c) student interest and aspiration for activities in the field of healthcare.

Based on the defined criteria and indicators of the formation of the motivational-ideological component of the health culture of specialists-to-be, the following levels were identified: the conscious activity-oriented (high), executive-productive (sufficient), copying-reproductive (satisfactory), initial-shaping (low). The levels will now be examined in more detail.

Conscious activity-oriented (high) level of formation of healthcare culture is characterized by highly resistant attitudes to healthy life, health maintaining, success in future career as priority factors of personal growth; the formation of need to enhance knowledge in the field of one's own health preservation; the stability of students' interest, and the desire for healthcare activity. Practical healthy motivation of students with a high level of healthcare culture transforms into motivation for success to which future professionals attempt to move deliberately, outlining their health creating goals. Students recognize health as the highest value and strategic life goal.

The executive-productive (sufficient) level of the formation of healthcare culture is inherent in students who exhibit a certain indirect interest in the philosophical and historical aspects of healthcare, understanding the importance of leading a healthy lifestyle and maintaining their own health as a safe way of life, but do not think that success in future professional activity correlates with the state of health. Future specialists feel the need to maintain their own health, but it is not always supported by action, in particular, during physical education classes.

Copying-reproductive (satisfactory) level of formation of health preservation culture is characterized by the fact that students exhibit a weak level of cognitive interest (manifested episodically or absent at all) to deepen knowledge about the preservation of health; health care motives are not sustainable,

Table 1. The results of the constitutive stage of the research

Diagnostic direction	Group	High		Sufficient		Satisfactory		Low		AI
		QoS	%	QoS	%	QoS	%	QoS	%	
Motivation	CG	24	27.91	30	34.88	27	31.40	5	5.81	3.85
	EN	33	27.05	44	36.07	37	30.33	8	6.56	3.84

Legend: QoS - number of students, AI - average indicator

At the second stage, a shaping experiment was conducted. Students of the CG studied the disciplines "Philosophy", "History of Ukrainian culture", "Safety of life", and "Physical education" via traditional methods according to common syllabi. Students training of the EG was carried out according to the author's experimental method.

Thus, students had opportunity to expand knowledge and understanding of the philosophy of health and the idea of healthcare, healthy lifestyle in different periods of human development, while forming an understanding of the history of the formation of a health conservation culture in Ukraine. Future specialists were able to draw a parallel between world philosophical ideas and the ways these thoughts influenced the development of ideas about health preserving in the historical territory of our country. This contributed to the awareness of philosophical views and the development of their own philosophy of health preservation. Extension of health-preserving knowledge took place in classes on the history of Ukrainian culture, philosophy, life safety and physical education, the content of which was enriched with practical aspects of health care. Pedagogical ways of motivation to form a health preservation culture of students in these disciplines formed an integral system of solving the problem based on the integration of the courses content, developmental and educational learning, which focused students on active self-development, self-improvement.

During "Physical Education" lessons. EG students received information on the importance of physical exercise for human health. The attention of students was focused on the fact that their professional activities will often be associated with a sedentary lifestyle that leads to the rapid deterioration of health. At the same time, the gradual destruction of the body and the exhaustion of physical and intellectual strength increases

Table 2. Results of the formation stage of the research

Components	Groups and control stage	Levels								CI
		High		Sufficient		Satisfactory		Low		
		QoS	%	QoS	%	QoS	%	QoS	%	
Motivational-ideological	CG-IC	24	27.91	30	34.88	27	31.40	5	5.81	3.85
	CG-FC	26	30.23	32	37.21	26	30.23	2	2.33	3.95
	EG-IC	33	27.05	44	36.07	37	30.33	8	6.56	3.84
	EG-FC	71	58.20	12	9.83	39	31.97	0	0	4.26

because students do not distinguish health as the highest value. Healthcare activity does not cause interest; therefore, there is no desire to master the methods of healthcare. Future specialists are unaware of the meaning and importance of a healthy lifestyle, thinking that maintaining their health is the work of doctors.

Initial-shaping (low) level is characterized by a lack of students' interest in the problems of healthcare; motivation is at the level of spontaneous interest in health issues. Future specialists are not aware of the meaning and importance of a healthy lifestyle, are not aware of health preservation problems and the avoidance of professional risks, believing that they will always be healthy.

The results of the constitutive stage are reflected in Table 1.

with each passing day. On the basis of combining this information gained from "Physical Education" with materials from "Philosophy", "History of Ukrainian Culture", and "Life Safety", students generalized that the problem of healthcare is a problem-in-common for everyone, and its solution should be based not only on the knowledge in the field of healthcare or the ability to perform appropriate physical exercises but on the awareness about the value of their own health as a core value orientation in the system of human life values.

The use of interdisciplinary integration as the basis for the formation of the healthcare culture of students on the basis of the study of the disciplines "Philosophy", "History of Ukrainian Culture", "Safety of Life", and "Physical Education" enabled the formation of students' need to deepen their knowledge of healthcare; the raising of students' awareness of health preservation issues at various historical stages of societal development, motivating them to avoid professional risks and increase their level of knowledge of disease prevention, health-saving technologies, and health improvement measures; the formation of students' ability to critically evaluate their physical health and imperfections in their life activity; abilities associated with the support of physical activity, the ability to organize their own health protection activities (rational nutrition, compliance with the regime of the day, etc.).

Results

The effectiveness of the formation of the motivational-ideological component of the health preservation culture of future professionals is reflected in Table 2 (where IC is the initial control, reflecting the results of the stated experiment, and FC is the final control, which was carried out after studying the specified disciplines).

The reliability of the results of the experimental study was verified by the methods of mathematical statistics that are used in professional pedagogy: comparison of dispersions for initial

and final control in CG and EG and determination of Fisher's criterion (Table 3).

Table 3. Calculations to determine the F-criterion

Group and QoS	Control stage and average indicator	Indicators for F-criterion determination										F _{crit}
		f				(x _i - x̄)				Σ f(x _i - x̄) ²	σ ²	
		High	Suf	Sat	Low	High	Suf	Sat	Low			
CG-86	IC - 3.85	24	30	27	5	1.15	0.15	-0.85	-1.85	69.04	0.80	1.14
	FC - 3.95	26	32	26	2	1.05	0.05	-0.95	-1.95	59.81	0.70	
EG-122	IC - 3.84	33	44	37	8	1.16	0.16	-0.84	-1.84	98.72	0.81	1.03
	FC - 4.26	71	12	39	0	0.74	-0.26	-1.26	-2.26	101.61	0.83	

The F-value table was taken as the basis to compare the numerical values of the empirical F-criterion (which was calculated using the digital data obtained during the experiment) and the theoretical F-criterion, shown in the standard Table 3. The Fcrit index was determined by the number of degrees of freedom. In the control groups, the number of degrees of freedom was 86-1=85, and in the experimental ones it has a value of 122-1=121. According to the standard F-criterion table (Fcrit) for the results of our study, when the number of degrees of freedom is within 60-120 and from 24 to infinity (which corresponds the digital indicators in CG), has a value from 1.7 to 1.3. In the EG, the number of degrees of freedom varies from 120 to infinity and from 24 to infinity and has a value from 1.6 to 1.0. In the course of the study, the Femp-CG index with a value of 1.14, which goes beyond the limits of probability, was obtained. It is concluded that a slight increase in the level of motivation of students of CG for the formation of healthcare culture is associated with the conditions of the traditional learning process. The F-criterion for the experimental groups (Femp-EG) had an index of 1.03, which is within the validity of the results. This means that the results of the study are plausible and confirm the validity of the experiment.

Discussion

The analysis of modern scientific research shows that the majority of foreign scientists pay more attention to the issues of promoting a healthy lifestyle in the workplace, in small and medium-sized labour collectives. In our opinion, the formation of the motivation of students to form a culture of healthcare should begin in the first year of study in high school. In this context, we agree with the opinion of the scientists that the educational aspect of the problem of forming healthy lifestyles is relevant at the present stage of education development. We support the view of the researchers that the promotion of healthy living can be done through interdisciplinary integration and the use of innovative technologies (Alieksieiev, 2014). To form the value attitude of young people towards a healthy lifestyle, it is necessary to establish the motives and value orientations of future professionals to health-preserving activity (Ishchenko, 2013). It is essential to use the possibilities of different disciplines that are not tangential to health problems ("Philosophy", "History of Ukrainian culture," etc.), by health-saving content. However, modern researchers do not pay due attention to filling the lessons on these disciplines with factual and methodological material on motivation to preserve human health, using interdisciplinary integration. This issue can be debatable. However, the results of our study indicate the lack and feasibility of scientific research in this direction.

We plan to reveal the results of the approbation of such techniques in our following publications.

The results of our study indicate the need to organize and use new approaches to the formation of a healthcare culture of students. It is advisable to combine the material content of several disciplines on the basis of interdisciplinary integration in relation to the preservation of health. For example, the connection between philosophy, history of Ukrainian culture, life safety and physical education will make it possible to use the philosophical understanding of the essence of health with the historical trends of the culture of its preservation in Ukrainian society, with the safety of life at the present stage and testing of new forms and methods of health promotion at the physical education classes that will motivate students to maintain their health.

Acknowledgements

There are no acknowledgements.

Conflict of Interest

The authors declare that there are no conflicts of interest.

Received: 26 May 2019 | **Accepted:** 30 July 2019 | **Published:** 01 October 2019

References

Alieksieiev, O.O. (2014). *A healthy lifestyle on the traditions of the Ukrainian Cossacks*. Kamianets-Podilskyi: LLC "Drukarnia Ruta".

Ashytok, N. (2013). The cultural aspect of problem of forming a healthy lifestyle. *Physical education, sports, and health care in the contemporary society*, 3(23), 3-7.

Boiko, Y.S. (2014). The essential characteristics of the formation of axiological attitudes to a healthy lifestyle among students. *Problems of preparing a modern teacher*, 10, 16-24.

Ishchenko, M.V. (2013). Health of a man. *Physical culture and a healthy lifestyle*, 3, 132-134.

Kyverialg, A.A. (1980). Methods of research in professional pedagogy. *Tal-linn, "Valgus"*, 334-335.

Makarenko, N.V. (1984). Latent period of sensory-motor reactions in persons with different functional mobility of the nervous system. *Journal higher nervous*, 34(6), 1041-1047.

Olkhovyi, O.M. (2015). Theory and methodology of scientific research in physical education and sport. *KSAPC*, 1(2), 143.

Melnychuk, I.M. (2012). Topicality of formation problem of a healthcare culture during professional training of future specialists. *Scientific bulletin of Uzhhorod National University*, 24, 101-104.

Palichuk, Y.I. (2014). A healthcare-keeping model in the educational process of the higher economic school. *Pedagogical sciences: theory, history, innovative technologies: a collection of scientific papers*, 6(40), 230-236.

Putrov, S.Y. (2014). The value of health of an individual as an object of philosophical knowledge. *New paradigm*, 112, 116-122.

Romanchuk, S.V. (2016). Innovative technologies of physical training organisation in educational institutions of the Armed Forces of Ukraine. *Scientific journal, Scientific-pedagogical problems of physical training/ physical culture and sport, National Pedagogical Dragomanov University*, 1(70), 157-162.

- Korchagin, M., Kurbakova, S., & Olkhovyi, O. (2017). Dependence of the success of professional activity of servicemen-operators on the level of psychophysiological qualities. *Sports Gazette of Prydniprovia*, 5(3), 65-68.
- Jessor, R., Turbin, M.S., & Costa, F.M. (2017). The Role of Protection in Adolescent Health Behavior. In *Problem Behavior Theory and Adolescent Health*. Springer International Publishing, 549-574.
- McDaid, D., Quaglio, G., De Campos, A.C., Dario, C., Van Woensel, L., Karapiperis, T., & Reeves, A. (2013). Health protection in times of economic crisis: challenges and opportunities for Europe. *Journal of public health policy*, 34(4), 489-501.
- Pronk, N.P. (2013). Integrated worker health protection and promotion programs: overview and perspectives on health and economic outcomes. *Journal of occupational and environmental medicine*. *American College of Occupational and Environmental Medicine*, 3(2), 30-31.