The Method of Forming the Health-Saving Competence of Pedagogical Universities' Students

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Abstract: The purpose of the article is to develop and to implement the method in the educational process of the pedagogical university. It would promote the formation of health-saving competence of students. 202 students of H. S. Skovoroda Kharkiv National Pedagogical University (EG n =152) and Berdyansk State Pedagogical University (CG n=54) participated into the pedagogical experiment. It was developed the criteria (motivational, cognitive-activity, informational-communication, reflective-productive) and their levels (high, average, low) for estimation the formation level of certain components of health-saving competence. The motivational criterion was evaluated applying Pashnev methodology, cognitive-active method, Phillips test, information and communication Shmishek test, reflexive-productive method. The experimental implementation of the developed method indicates positive results of the formation of health-saving competence of pedagogical universities' students. The developed method promote the correction of somatic health violations applying a complex of health and medical activities without interruption from the educational process; rationing of the workload and prevention of students fatigue; permanent medical-psychological and pedagogical monitoring of the health condition, physical and mental development of students; to develop and implement educational programs for students to develop healthy lifestyle habits and prevent harmful habits; the effective operation of the psychological assistance service to teachers and students in overcoming stress, anxiety; the formation of a friendly relationship among teachers' staff, etc.

Keywords: *health-saving competence; educational process; students; methodology; means; health-saving technologies; pedagogical experiment.*

How to cite: Khatuntseva, S., Kabus, N., Portyan, M., Zhernovnykova, O., Kara, S., & Knysh, S. (2020). The Method of Forming the Health-Saving Competence of Pedagogical Universities' Students. *Revista Romaneasca pentru Educatie Multidimensionala*, 12(1), 185-197. doi:10.18662/rrem/208

1. Introduction.

The social demand of each country is the formation of a competent person able to keep a healthy lifestyle and be useful for society. Therefore, there is a necessity to educate the citizens' conscious attitude to their health as the highest social value, to form of hygienic skills and principles of a healthy lifestyle, to keep and to strengthen the physical and mental health. Particular status in the health-saving sphere is acquired by children who are the future generation of the state. Therefore, the provision of their physical, social and spiritual health should become a priority for society. According to medical statistics, nowadays there is a low level of children's health and a tendency to deteriorate pupils' health during school education. On average, no more than 6-10% of school graduates in Ukraine can be considered as healthy persons, while 52% have different morphological and functional deviations, and 40% already have chronic illnesses.

Zhara (Zhara, 2016) found out the forms and methods for the competence formation of individual health saving in future teachers on the stages of vocational training (bachelor's and master's degrees). Other authors (Serikov *et al.*, 2016) proved that the study of the educational program contents expressed in academic load, which affects the health of each student and leads to fatigue. Panachev *et al.* (Panachev *et al.*, 2018) defined the functions and principles of health-saving competence formation, which will allow organizing the physical education process on the highest level. Monteiro-Peluso (Monteiro-Peluso, 2005) determined the correlation between physical activity and mental health. Morimoto *et al.* (Morimoto *et al.*, 2006) revealed the influence of physical activity on the emotional condition of the individual. Shibata (Shibata, 2007) drawn up guidelines for Japanese adults devoted to health and quality of life. Bowling (Bowling, 1995) offered and discussed the concept related to the health and quality of life.

Among the vast spectrum of competencies, we distinguish the teacher's health-saving competence as an integrative professional and personal quality that promotes the formation of a healthy lifestyle for participants of the educational process at school and at pedagogical university (Khatuntseva, 2013a).

The conducted analysis of scientific literature affords ground to confirm that the health-saving competence of pedagogical universities' students contains the following structural components:

- motivational-value (health is a vital and occupationally significant value, inducement to acquire knowledge, development of useful habits, studying own health and control of its condition) (Zhernovnikova *et al.*, 2017);
- content (pedagogical universities students gain knowledge of foreign and domestic experience on healthcare, professional health, and health in general) (Khatuntseva, 2013b);
- activity (the manifestation of autonomy in the health-saving process, the development of individual ways and styles of healthcare) (Kabus, 2012);
- communication (the organization and maintenance of a health-saving mood, the ability to manage their emotions in the process of communication, the ability to receive and transmit educational information about health, transfer experience of a healthy lifestyle) (Khatuntseva, 2016a);
- emotional and volitional (receiving satisfaction from the health-saving process, development of the emotional sphere, formation of health-saving activities of pedagogical universities' students and the formation of a positive attitude towards it) (Kabus, 2017);
- personality-reflection (correction of the appropriate readiness of pedagogical universities' students for the formation of their health-saving competence based on teachers' assessment and students' self-assessment of their effectiveness) (Romanovsky *et al.*, 2018).

Scientists consider the following health-saving technologies:

1. Medical and hygienic technologies are aimed at the mandatory use of preventive programs at school (Kabus, 2011).
2. Physical health-improving technologies are aimed at the physical development of students (Khatuntseva, 2016b).
3. Ecological and conservation technologies are aimed at bringing up the love of nature among schoolchildren, the need to take care of it, and attracting them to research in the field of ecology (Grineva *et al.*, 2018).
4. The technology of ensuring the safety of life should be realized in the process of studying the subject "Fundamentals of Health", which develops in students the environmental literacy (Khatuntseva, 2016c).
5. Health-saving educational technologies have the greatest impact on the students' health among the above-mentioned technologies (Khatuntseva, 2014; Karapuzova, 2015). The health-saving educational technologies are classified as follows: protective and preventive technologies to protect the student from unfavorable health actions; compensatory-neutralizing technologies necessary for full life activity of the child's body; stimulating technologies allow to activate own forces of an organism;

information and educational technologies are aimed at forming high literacy in students (Zhernovnykova *et al.*, 2019);

6. Technologies for increasing the students' ability to work in the educational process are realized by optimizing and humanizing the educational process (Khatuntseva, 2016d).

Therefore, the purpose of the article is to develop and to implement the method in the educational process of the pedagogical university, which would promote the formation of the health-saving competence of students.

2. Materials and methods

Participants. 202 students of H. S. Skovoroda Kharkiv National Pedagogical University (EG n =152) and Berdyansk State Pedagogical University (CG n=54) participated in the pedagogical experiment. All participants gave the written consent for participation in the experiment.

Design of research

It was developed the criteria and their levels (high, medium, low) for estimation the formation level of certain components of health saving competence, which will ensure the possibility of targeted pedagogical influences in the process of this integrative quality formation in the system of vocational education:

1. The motivational-value component was evaluated based on a motivational criterion, which is characterized by the following indicators: considering health as vital and professional-significant value; the desire for personal health-saving.

2. The content component was evaluated according to the cognitive-activity criterion, which is characterized by the following indicators: to get knowledge and skills of foreign and domestic experience of health-saving technologies, professional health and health in general by pedagogical universities' students.

3. The communication component was evaluated according to the information and communication criterion, which is characterized by the following indicators: the ability to organize and to keep the health-saving mood, the ability to manage their emotions in the process of communication, the ability to receive and to give educational information about health, to get experience of healthy lifestyle.

4. The person-reflection component was evaluated according to the reflection-result criterion, which is characterized by the following indicators: satisfaction with the health-saving process, intention to achieve the goal of

health keeping and strengthening; the ability to assess their activities adequately.

The obtained data of the qualifying and control stages of the study, their comparative analysis, verification of the obtained results was processed by the mathematical statistics methods.

The motivational criterion was evaluated applying Pashnev methodology, cognitive-activity – "Diagnosis of knowledge, skills of using health-saving technologies in future professional activities", Phillips test, information, and communication – Shmishek test, reflexive-productive – "Diagnostics of the level of personality-creative readiness of pedagogical universities students to the professional activity".

Students have also fulfilled the questionnaire, which consisted of the following questions:

1. Do you know a healthy lifestyle?
2. Do you keep a healthy lifestyle?
3. Evaluate your health condition.
4. Do you think that the teacher is responsible for maintaining the students' health, i.e. for the organization of health-saving study?
5. Have you ever been informed about the consequences of a sedentary lifestyle?
6. Do you conduct measures for preventing the consequences of a sedentary lifestyle for children during the pedagogical practice?
7. How often do you conduct educational measures to prevent the effects of sedentary lifestyles for children?
8. What health-saving measures for children during the educational process do you apply? List them all.
9. Do you consider that the health-saving measures that you conduct with pupils are sufficient?
10. Do you involve parents in the organization of health-saving study of pupils?

3. Results

Considering the content of the health-saving competence formation components of the pedagogical universities' students and the logic of the professional training process, the method and stages of its implementation were substantiated theoretically: professional-motivational, content-activity, reflexive-corrective.

The motivational criterion was tested at the professional-motivation stage (Table 1).

Table 1. Results of the confirmatory and control stages of the experimental verification of the motivational criterion of the health-saving competence formation of pedagogical universities' students

Criterion	Indicators	EG (152 persons)				CG (54 persons)		
		Levels	At the beginning of the experiment	At the end of the experiment	Growth rate	I check	II check	Growth rate
Motivational	Health as a vital and professionally significant value	H	–	17,6	+ 17,6	–	5,5	+ 5,5
		A	34,2	55,3	+ 21,1	33,5	50,5	+ 17,0
		L	65,8	27,1	– 38,7	66,5	44,0	– 22,5
	Intention for personal health-saving	H	-	32,1	+32,1	-	7,1	+7,1
		A	26,8	64,1	+37,3	23,6	47,8	+24,2
		L	73,2	3,8	-69,4	76,4	45,1	-31,3

Note: H – high, A – average, L – low.

It should be noted that the growth rate in the high level of indicator “Health as a vital and professionally significant value” has increased three times in EG (+17,6) in comparison with CG (+5,5), because at the formative stage of pedagogical experiment, the activity of EG students has always been focused on the formation of a stable position, which involves the health value understanding. According to the indicator “Intention for personal health-saving” the growth rate in EG at a high (+32.1) and average (+37.3) levels exceeds the increase in CG, which is respectively +7.1 and +24.2, because students of EG focused on forming a sense of responsibility for maintaining and strengthening their own health, deepening knowledge and skills associated with all components of health (physical, social, mental, spiritual).

The cognitive-activity and informational-communication criteria were checked at the content and activity stage (Table 2 and 3).

Table 2. Results of the confirmatory and control stages of the experimental verification of the cognitive-activity criterion of the formation of health-saving competence of pedagogical universities' students

Criterion	Indicators	Levels	EG (152 persons)			CG (54 persons)		
			At the beginning of the experiment	At the end of the experiment	Growth rate	I check	II check	Growth rate
Cognitive-activity	The mastery of system of knowledge and skills of foreign and domestic experience about healthcare, professional health and health in general by the pedagogical universities' students,	H	-	41,1	+41,1	-	25,3	+25,3
		A	5,1	56,1	+51,0	3,3	48,2	+44,9
		L						
			94,9	2,8	-92,1	96,7	26,5	-70,2

Note: H – high, A – average, L – low.

It should be noted that according to the cognitive-activity criterion there were significant changes in EG at high (growth rate +41.1) and average (growth rate +51.0) levels, in comparison with CG, where the growth rate at high level is +25.3, and at the average level +44.9, because during the educational experiment EG students were informed that in the future professional activities they should prevent the students' overload and determine the optimal volume of educational information and ways to provide it, considering the intellectual and physiological features and individual speech skills of each student. The positive issue was that EG students learned how to plan such types of work that contribute to the reduction of fatigue.

Table 3. Results of the confirmatory and control stages of the experimental verification of the information and communication criterion of the health-saving competence formation of pedagogical universities' students

Criterion	Indicators	EG (152 persons)				CG (54 persons)		
		Levels	At the beginning of the experiment	At the end of the experiment	Growth rate	I check	II check	Growth rate
Information and communication	Ability to organize and maintain a healthy mood, the ability to manage emotions in the process of communication, the ability to receive and transmit educational information about health, transfer experience of healthy lifestyles	H	-	32,1	+32,1	-	7,1	+7,1
		A	26,7	64,0	+37,3	23,6	47,8	+24,2
		L						
			73,3	3,9	-69,4	76,4	45,1	-31,3

Note: H – high, A – average, L – low.

According to the information and communication criterion, we have significant achievements in the YE (+32.1 (high level, +37.3 (average level) in comparison with the COG ((+7.1 (high level, +24.2 (average level), as in the process of passing the pedagogical practice students had an intuitive ability to feel the emotional state of the student, and therefore from the first minutes of the lesson students tried to create a climate of goodwill, positive emotional adjustment, and they always remembered that the psychological state and the psychological health of the students affected and on physical health.

At the reflexion-correction stage, a reflection-and-performance criterion was checked (see Table 4).

Table 4. Results of the confirmatory and control stages of the experimental verification of the reflexion-result criterion of the of health-saving competence formation of pedagogical universities' students

Criterion	Indicators	Levels	EG (152 persons)			CG (54 persons)		
			At the beginning of the experiment	At the end of the experiment	Growth rate	I check	II check	Growth rate
Reflexion-result	Satisfaction with the health-saving process, perseverance and perseverance in achieving the goal of preserving and strengthening health	H	-	31,1	+31,1	-	4,4	+4,4
		A	14,0	66,8	+52,8	21,9	47,8	+25,9
		L	86,0	2,1	-83,9	78,1	47,8	-30,3
	Ability to adequately assess their own activities	H	-	32,1	+32,1	-	7,1	+7,1
		A	26,8	64,1	+37,2	23,6	47,8	+24,2
		L	73,2	3,8	-69,3	76,4	45,1	-31,3

Note: H – high, A – average, L – low.

The work on stress management was carried out with EG students at the reflection-correction stage. During the experiment, the group of authors and school administration developed methodological advice for the students of EG concerning the formation of pupils' conscious attitude towards their own health, which provide assistance to the teacher in planning the pupils' activities, in application of all levels of the decision-making process, considering age characteristics and level of development in each form by the algorithm "Stand! Decided! Act!" And as a result of the abovementioned, we have a significant growth rate in EG according to the both indicators.

4. Discussion

The experimental implementation of the developed method indicates positive results of the health-saving competence formation of pedagogical universities' students. The conducted pedagogical experiment was implemented at certain stages of the developed method: the professional motivation (the evaluation was based on the motivational criterion), the content-activity (evaluation was carried out according to the cognitive-activity and information and communication criteria) and the reflection-

corrective (the evaluation was carried out according to the reflexive-result criterion)

The study found out the following facts: during the study period, the attitude to the daily regimen did not change – the majority of students (EG – 40% and CG – 43.5%) do not follow it, but the number of participants trying to keep it slightly increased (in 4%). The main reason for non-compliance with today's regime is the inappropriate time management (one in three students), the number of lazy students increased by 6.1%, and at the same time, the number of students suffered from overloads decreased in 15%. The former tendencies of the nutrition regimen also preserve: 72% didn't keep the nutrition regimen, it is also increased the number of students who often eat dry food. It was also determined the growth in the number of students (from 53.3% to 74.2%), who consider their non-organization as a reason for non-compliance with their nutrition regimen.

In our study, we received data on the reduction of smokers from 33.6% to 19.4% among participants. The changes in the age of start smoking was also unexpected: seven years ago every third student began smoking at the age of 15-17 years, now the majority of pupils (60%) begin to smoke at the age of 13-14 years; the duration of sleep in most students is 6-7 hours; slightly increased the time spent in the open air – from 30 minutes to 1.5 hours. The significant positive dynamics is the change in physical activity of students: the number of students regularly engaged in physical activities increased in 2 times. For the last seven years, the low medical activity of young people has remained low: most of them visit doctors not regularly (about 70%), from time to time – about 30%. Some positive dynamics can be considered the increase in the number of students who, in the case of an illness, visit a doctor immediately – 2 times. Even though most of the students do not keep a healthy lifestyle, the desire to have a health-saving lifestyle was expressed by 70% of participants.

This article made a significant contribution to the educational field, as the offered set of health-saving technologies should contribute to the formation of health-saving competence of future teachers, which will be a unique way to overcome the barrier of emotional and professional burnout in the future professional development of a young teacher. The implementation of the offered methodology in the educational process will help to ensure that the teacher and the student always have a concern for their health, which in turn will lead to a desire to develop and improve themselves.

To the interested persons from other cultural environment, it should be noted, based on the study of the problem, that numerous emotional

factors that cause growing feeling of dissatisfaction, accumulation of fatigue, feeling of boredom, decrease of enthusiasm level, feeling of insult, uncertainty, irritability of solution to activity and emotional burnout. Thus we offer to adapt the technologies to their lives, especially for those persons who effectively communicate with others.

The original impact of our study is that in the course of the research, the authors developed technologies for future teachers to form a conscious attitude to their health (psychological and physical), which assist the teacher in overcoming the barriers to professional burnout. Therefore, the experimental implementation of the developed methodology points to overcoming the professional burnout of teachers through the formation of their health-saving competence.

5. Conclusions

Consequently, the developed method promote the correction of somatic health violations applying a complex of health and medical activities without interruption from the educational process; rationing of the workload and prevention of students fatigue; permanent medical-psychological and pedagogical monitoring of the health condition, physical and mental development of students; to develop and implement educational programs for students to develop healthy lifestyle habits and prevent harmful habits; the effective operation of the psychological assistance service to teachers and students in overcoming stress, anxiety; the formation of a friendly relationship among teachers' staff, etc.

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