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THE ROLE OF ORTHOBOTICS AS A HEALTH-PRESERVING EDUCATIONAL TECHNOLOGY IN THE FORMATION OF HEALTH CULTURE OF STUDENTS IN HIGHER EDUCATION INSTITUTIONS IN THE CONDITIONS OF THE COVID-19 PANDEMIC

The article substantiates the role of orthobiotics as the health-preserving technology of teaching student's youth in the formation of their health culture.

The sample of the study consisted of 250 bachelor students. The following theoretical methods were used to solve the research tasks such as: analysis and systematization of psychological, pedagogical and educational sources; methods of empirical research, namely pedagogical experiment (conservative and forming stages); Rokeach research technique of value orientations; methods of mathematical statistics (statistical processing of the results of experimental work and their interpretation). The analysis of the research results made it possible to record the following results: 13% of students have a low level of health culture, 51% have an average level of health culture, 36% of students have a high level of health culture.

The authors consider it expedient to use health-preserving technologies in the process of professional and practical training of student youth, because they are aimed at strengthening physical health and increasing the potential of the human body; learning technologies and education of health culture, as a factor in the formation of life skills, which to the greatest extent determine the education of a motivational and valuable attitude to health; theoretical and practical readiness of future specialists for the development of professionally important personal qualities that contribute to the preservation and restoration of physical, mental and social health, and determine the personal readiness of the specialist for successful professional activity for the benefit of our state. The findings allow us determining the levels of formation of students' health culture, the degree of their readiness for health-preserving activities in the conditions of the COVID-19 pandemic in accordance with the results of the ascertaining experiment. The predominance of low and medium-levels of students' health culture indicates a lack of motivation to use health-preserving technologies as a condition of future professional activity.

We present the comprehensive program's elements of formation of student's youth health culture, which provides the use of educational, research, practical (internship), and extracurricular activities at the higher education institutions

Key words: professional education, healthy lifestyle, health, student youth, prevention.

Actuality of problem. The scale of this pandemic Covid-19 shows that it is not just a matter of health care. We should pay attention to meeting the educational needs of children and young people, as well as to maintaining their health in such pandemic conditions. The physicians cannot solve this issue alone.

The health of the young generation is the crucial indicator of the well-being of society and state. This indicator not only reflects the current situation but also gives a forecast for the future sustainable development of society and state. The restrictions caused by non-pharmaceutical measures such as social distancing have affected education at all levels. These restrictions will affect education in the future as long as

students and teachers cannot have traditional classes at universities. The time spent studying (study time) is one of the most reliable predictions for calculating the opportunity to learn. The long-term interruption of study time not only reduces studying time, but also causes the loss of acquired knowledge and skills.

Generally, the country's workforce, security, political stability, economic and social well-being of the population relate directly to the health of young people. Moreover, the health of young people affects their ability to learn. Every year the number of students with various diseases grows. Therefore, there is a need to revise the existing system of education of children and youth especially during the COVID-

19 pandemic in the world. It is important that teachers develop and implement strategies to mitigate the impact of the COVID-19 pandemic on education. In our opinion, this can help educators from different countries to develop effective responses to current challenges of education. The first and the simplest form of cooperation is the exchange of knowledge about what educational institutions, communities and countries implement today to protect educational opportunities during this pandemic.

In the context of our research, we consider the orthobiotics as the basis of the health-preserving pedagogical technology of teaching student's youth. The students should master this technology during their studies to improve their health and prevent further development of the COVID-19 pandemic in Ukraine. The historiography of the problem proves the relevance of the topic, because the issue of the orthobiotics as a science of health preservation is a separate research area.

Brief Literature Review. The definition of health and its assessment changes throughout the history of medicine studies [2]. It is challenging to define the concept of health, because currently there is no universal criterion for this phenomenon. There are many definitions of health in the scientific literature based on different positions and systems. For instance, A. Svalastog, D. Doner, N. Kristoffersen and S. Gajović state that "the plurality of health definitions reflects the variety of contexts in which health is elaborated" [9]. N. Sartorius, a former director of the World Health Organization, the Division of Mental Health, points out that "the huge challenges that face societies aiming to improve the health of their citizens will not be appropriately answered if we do not change the paradigms of health and disease and design strategies for future work using these new paradigms" [8]. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [11].

The scientists around the world explore the preservation of public health, including students' health. T. Cassidy & M. Hinds state, "culture can be defined as the ideas, customs, and social behaviour of a particular people or society and when applied to the family health context it reflects the combination of attitudes, customs and models of healthy or unhealthy behaviour exhibited. Many of the negative influences on adolescent health behaviours have been linked to family practices and suggest that family" [3].

The research by Yu. Melnyk & I. Pypenko is noteworthy in the context of our study. These researchers define the place of the concept of health culture in the system of categories "culture" and "health". They conclude that "configuration of various knowledge and opinions on culture and health indicates that there is a close connection and correlation between culture and health. The literature analysis in psychology, medicine,

philosophy and pedagogy allows researching scientists' views on this matter. The place of the concept "health culture" is determined and graphically illustrated in the system of categories "culture" and "health" [6].

Moreover, currently research interests of scholars such as J. Allegrante [1], H. Fore [4], T. Hansel, L. Saltzman, P. Bordnick [5], and others are devoted to various aspects of the COVID-19 pandemic. Our analysis of scientific literature shows that the role of the orthobiotics as the basis of health-preserving technology for young people maintaining their health during the COVID-19 pandemic lacks enough research. Therefore, we aim to further research the outlined topic in this article.

The purpose of the study. The primary aim of this study is to show the role of the orthobiotics as the health-preserving technology of teaching student's youth in the formation of their health culture. The secondary aim is to research the state of the creation of students' ideas about orthobiotics as the health-preserving technology. Thirdly, we aim to analyse the degree of students' readiness to implement the health-preserving technologies in the conditions of the COVID-19 pandemic.

Presentation of the main material of the study. The orthobiotics is the science of health and the ways to preserve it. The orthobiotics is a practical step that develops technologies for each age stage of people's lives and is preventive. Its developments help people to prevent any unwanted processes in their physical, mental, and moral health. In our research, we consider orthobiotics as the basis of health-preserving pedagogical technology of teaching student's youth, which is designed to form a high level of personal health culture.

Therefore, according to contemporary scientific sources health technologies are a set of techniques and methods of organizing the educational process that is safe for the health of students and teachers. Today it is very relevant in the context of statistical data on the COVID-19 pandemic and other diseases in our country.

In our opinion, in a broader sense, the health-preserving technologies are a system of factors that affect the level of health of the individual, which is essentially a preventive activity, on which public health depends. The health-preserving technologies integrate all directions of the higher education institutions' work concerning preservation and formation of the health of subjects of the educational process.

Modern Ukraine actively embraces global trends to improve population's health through education. The main task of modern society is to create such educational system that will not only bring up an educated person, but it will also maintain and develop person's health. The approach of perceiving the orthobiotics as the health-preserving technology for training specialists helps to prevent various psycho-emotional states, affect the ability to form, maintain person's

health in future professional activities. The orthobiotics is the science of self-preservation of health, intelligent lifestyle and work, harmonization of the human and the environment. It examines the principles that help to maintain physical, psychological, and mental health throughout life.

The orthobiotics helps to form a culture of personal health. In this research, we consider the health culture not only as an awareness in the field of health care, which is achieved in the learning process, but as a practical embodiment of the need to lead a healthy lifestyle, to take care of own health and the health of others. Therefore, we aim our further research at identifying the state of health culture, and, consequently, the ideas of the higher education institutions' students about the orthobiotics as the health-preserving technology and the degree of their readiness to implement health-preserving technologies in the conditions of the COVID-19 pandemic.

We have developed and used a set of primary and secondary surveys for each criterion to obtain reliable data on the level of formation of health culture. They included questionnaires with open-ended and closed-ended questions, research interviews, and interviews with teachers and students. Moreover, we collected and analysed the statistical data. During the research, we interviewed 387 bachelor students (from the first year of study to the fourth year of study) of Petro Mohyla Black Sea National University in Mykolayiv. For collecting diagnostic data, we used Rokeach research technique of value orientations to determine the place of health in the hierarchy of students' values. The authors of this study developed them to assess the level of knowledge and ideas about the orthobiotics, as well as readiness to implement healthy technologies. We used the program SPSS Statistics to process the obtained data.

The study of literature sources proves the importance of a holistic approach to identifying and evaluating health culture. The success of this process depends on the timely receipt and analysis of the necessary information. Formed health culture demonstrates the active life position of students, the optimal level of health education, and the creative nature of student participation in solving relevant problems in professional activities. The students, acting as sub-

jects of health activities, show purposeful action in the creative assimilation of norms and values of health culture. Thus, it is necessary to develop criteria for its formation correctly to determine the level of creation of students' health culture.

We defined the criteria for assessing the formation of students' health culture based on the analysis of theoretical sources and diagnostic data of other researchers дослідників (Boychuk Yu.) [12], (Gribok N.) [13]: showing interest in health-preserving technologies, the availability of knowledge and the nature of the organization of health-preserving activities. It is possible to conclude about a certain level of formed students' health culture when taking into account the content characteristics of each criterion. We defined and characterized each criterion by the relevant indicators that show the levels of formed students' health culture.

We analysed and summarized the obtained results of the survey and determined the average rate of formed students' health culture, taking into account the main criteria and indicators, to be able to determine the level of formation of each criterion of the studied quality. Note that about half of the students (51.1%) belong to the group with a low level of health culture. They have no interest in the health-preserving technologies, limited knowledge of the health-preserving content, and reproductive approach to the organization of the health-preserving activities. In particular, students did not know the basic components of health, healthy lifestyle, and ways to maintain and promote health, the peculiarities of the COVID-19. They did not understand the essence and features of the orthobiotics's functioning in the process of professional activity. Therefore, these students did not even consider their feasibility. The students did not have the necessary knowledge about the negative impact of bad habits (smoking, alcoholism, drug addiction, overeating, etc.) on the human body. They lack the ability to search for information about their own health independently, lack the motivation to lead the healthy lifestyle, and value orientations to acquire relevant skills and abilities. These students were not ready to organize health-preserving activities in their everyday and professional life. In addition, they did not show a current position to acquire the relevant knowledge and to apply it in real life. These students had bad habits and did not want to get rid of them. They put the responsibility for the

Table 1

Criteria and indicators of formed students' health culture

| Criteria of formed health culture | Indicators | | |
|--|---|---|---|
| | Low level | Average level | High level |
| Students showed interest in health-preserving technologies | No interest | The manifestation of situational interest | The manifestation of sustained interest |
| Students know health-preserving content | Availability of mosaic knowledge | Availability of selective knowledge | Availability of a system of knowledge |
| The nature of the organization of health-preserving activities by students | Reproductive nature of the organization of health-preserving activities | Constructive nature of the organization of health-preserving activities | The creative nature of the organization of health-preserving activities |

deterioration of their health to external circumstances and other people. They named some elements of the orthobiotics during conversations, but without a creative approach. These students were unwilling to improve their knowledge and skills in the orthobiotics because they did not understand the need for it. Moreover, the students demonstrated a frivolous attitude towards the COVID-19 pandemic, unwillingness to use protective equipment.

We identified a group of students (34.6%) with an average level of health culture during the experiment. The main feature of this group is the manifestation of situational interest in the health-preserving technologies, the presence of selective knowledge of health content, and a constructive approach to the organization of health activities. This group of students has a superficial, non-systematized knowledge of the orthobiotics. These students receive information about the COVID-19 from the unverified sources (websites, social networks, and friends). The students felt the need to make changes to their way of life only when necessary. For instance, these students noted that they would use protective equipment only for the fear of fine or infection with the Covid-19. Their value orientations to health were of a declarative nature. The students in this group are partially prepared for health-preserving activities, but it is spontaneous, intuitive, and unsystematic in nature. The external circumstances were the motives of this activity; there was a need for help (from teachers, coaches, doctors, friends, parents, etc.). Some of the respondents in this group have bad habits. They were aware of the negative consequences of their impact on the body but did not want to get rid of them. However, they considered themselves partially ready to take responsibility for the self-preservation of health and improvement of their knowledge and skills.

According to the results of our ascertaining experiment, only 14.2% of students showed a high level of formed health culture. They have a steady interest, and a creative approach to the orthobiotics. Moreover, they consider themselves ready to promote the healthy lifestyle. These students try to lead the healthy lifestyle, have repeatedly participated in actions and trainings dedicated to it. Some of the students had the opportunity to practice some orthobiosis's principles in the process of professional activity during the internship. The students in this group noted, "Being able to take care of your own health in professional activities is a necessary component of professionalism". Such students had adequate ways to maintain and shape their own health during the COVID-19 pandemic, did not have bad habits, adhered adequately to their age and individual day regime (diet, sleep, work and rest, physical exercises etc.). The students of this group have full responsibility for the consequences of their own actions to themselves and to others, which they confirm by their desire to use protective equipment in accordance with the

recommendations of the Ministry of Health of Ukraine. The health occupied the highest positions in the structure of their value orientations. These students know about the structure of health (social, physical, mental and spiritual). They took an active position to leading the healthy lifestyle and healing the body. Besides, they also showed a tolerant attitude to other people's opinions about maintaining good health.

In addition, we conducted parallel surveys of students on the state of their health in order to achieve the goals of our research. The questionnaire consisted of 22 questions about the health and the healthy lifestyle of student's youth.

According to the results of the above mentioned survey, a significant number of students (75%) believe that health depends more on the lifestyle. Note that 41% of students have bad habits. In our opinion, this means that students do not pay enough attention to their health.

Besides, we found an assessment of students' health. Only 15% of respondents described their health as ideal, 50% of respondents – as relatively good. Besides, 29% of respondents considered themselves to be in a group with poor health. About 6% of respondents could not answer this question.

Thus, we conclude, the current state of students' health has a negative trend. We agree with A. Samoshkina's research results that students who regularly do physical exercises have average and higher levels of physical health. In contrast, students who attend physical education classes only within the curriculum of higher education institutions have a lower than average level of physical health [15, p.186]. Such negative dynamics of students' health today poses a threat to the health of youth in the context of the COVID-19 pandemic.

We used Rokeach research technique of value orientations to determine the place of health in the hierarchy of students' values. Our analysis's results show that only 25% of the respondents consider health to be the highest and the most important value. Significantly, more students choose love, financial security, family life and satisfaction as important life values. In our opinion, such indicators show that generally students are not interested in the questions of maintaining health, disease prevention, and leading healthy lifestyle.

Moreover, we found that most students learn about COVID-19 and ways to protect themselves from it through the mass media (90%) and the social media (73%) during our specifying conversation with students. Only 7% of respondents seek information in the official sources of information, such as the websites of the Ministry of Health of Ukraine, the World Health Organization, etc. In addition, 13% of respondents learn about COVID-19 from relatives and friends.

Therefore, in the process of the ascertaining experiment we received data that allowed characteriz-

ing the features and current state of formed students' health culture. The identification of students with low- and middle-level of formed health culture indicates an insufficient use of the educational process potential in the higher education institutions to prepare students to implement the health-preserving technologies in the conditions of the COVID-19 pandemic.

It is impossible to form students' health culture using only the academic disciplines. That is why there is a need to involve a set of educational, research, extracurricular, and practical areas of training. The existing educational work with students does not pay enough attention to the problem of forming health culture, the individual development of the future specialist in the outlined direction. In this regard, we offer a comprehensive program of that quality's formation. The program takes into account the provisions of the Concept of creation of positive motivation for the healthy lifestyle among children and youth [14], as well as the Concept of continuing valeological education in Ukraine. They state that valeological education of children and youth should be about the consistent and systematic development of physical, mental, spiritual, and social components of individual health.

The program developed by us consists of four sections:

The first section of the program "Formation of students' health culture in the educational process" is about the enriching the content of disciplines in orthobiotics. The primary purpose of this section is the sufficient information and the content support about the orthobiotics for students. Achieving this goal involves solving such tasks as analysing the curricula and syllabuses of disciplines and updating disciplines' content of different cycles.

The second section of the program "Formation of students' health culture in the process of research activities of students" is about the appropriate focus of student research. The focus is on students' research topics related to the healthy lifestyle, ways of its formation in different categories of clients, prevention of dangerous diseases (HIV / AIDS, tuberculosis, hepatitis, drug addiction, alcoholism, etc.).

The third section of the program "Formation of students' health culture in the process of internships" is about students mastering the fundamental ways of health-preserving activities, the development of the necessary skills in the process of internships. It is essential to analyse student internships' programs and to supplement them with additional tasks that have a health-preserving focus within the framework of practical training of students.

The fourth section of the program "Formation of students' health culture during extracurricular activities" is about the use of such forms of work as press conferences, forums, round tables, curatorial, educational classes, individual conversations with students, competitions, trainings, etc. The primary purpose

is to organize extracurricular activities for students, which would contribute to forming, strengthening, and maintaining students' health and forming the healthy lifestyle.

Conclusions and prospects for further research.

The situation in the world with the COVID-19 pandemic has necessitated a revision of the existing system of education of children and youth, the introduction of preventive measures aimed at developing personal responsibility for their health, maintaining the healthy lifestyle and conscious abstinence from bad habits.

Based on the analysis of the scientific literature about the role of the orthobiotics we conclude that this health-preserving technology helps to develop readiness for the health-preserving activities and mechanisms of adaptation to crises such as the COVID-19 pandemic.

We consider it recommendable to use the health-preserving technologies in the process of professional and practical training of student's youth. Such technologies aim at strengthening physical health and increasing the potential of the human body, technologies of teaching, and education of health culture, as a factor in the formation of life skills, which most determine the education of value orientations to health. These technologies also aim at the academic and practical readiness of future specialists for the development of professionally important personal qualities that contribute to the preservation and restoration of physical, mental, and social health and determine the a specialist's personal readiness for the successful professional activity.

This research does not cover all aspects of this problem. Further scientific research involves the improvement of professional and practical training of the higher education institutions' students, namely teaching about health-preserving technologies through updating the content of scientific and practical training of future professionals.

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Палагнюк Ю.В., Сургова С.Ю., Файчук О.Л. Роль ортобіотики як здоров'язберігаючої освітньої технології у формуванні культури здоров'я студентів ЗВО в умовах пандемії COVID-19

У статті обґрунтовано роль ортобіотики як здоров'язберігаючої технології навчання студентської молоді у формуванні культури її здоров'я.

Дослідження передбачало проведення констатуючого експерименту, вибірка якого склала 250 студентів-бакалаврів. Для вирішення завдань дослідження використовувалися такі теоретичні методи, як: аналіз та систематизація психолого-педагогічних та освітніх джерел; методи емпіричного дослідження, а саме педагогічний експеримент (конструктивний та формувальний етапи); методика дослідження ціннісних орієнтацій Рокіча; методи математичної статистики (статистична обробка результатів дослідно-експериментальної роботи та їх інтерпретація). Аналіз результатів дослідження дав змогу зафіксувати такі результати: низький рівень культури здоров'я мають 13% студентів, середній рівень культури здоров'я – 51% респондентів, високий – 36% студентів.

Автори вважають доцільним використання здоров'язберігаючих технологій в процесі професійно-практичної підготовки студентської молоді, адже вони спрямовані на зміцнення фізичного здоров'я і підвищення потенціалу людського організму; технологій навчання та виховання культури здоров'я, як чиннику формування життєвих навичок, які найбільшою мірою визначають виховання мотиваційно-ціннісного ставлення до здоров'я; теоретичної і практичної готовності майбутніх фахівців до розвитку професійно важливих особистісних якостей, що сприяють збереженню і відновленню фізичного, психічного і соціального здоров'я, та визначають особистісну готовність фахівця до успішної професійної діяльності на користь нашої держави. Отримані дані дозволяють за результатами констатуючого експерименту визначити рівні сформованості культури здоров'я студентів, ступінь їх готовності до здоров'язберігаючої діяльності в умовах пандемії COVID-19. Переважання низького та середнього рівнів культури здоров'я студентів свідчить про відсутність мотивації до використання здоров'язберігаючих технологій як умови майбутньої професійної діяльності.

У дослідженні представлено елементи комплексної програми формування культури здоров'я студентської молоді, яка передбачає використання навчальної, наукової, практичної (практики) та позааудиторної роботи у закладах вищої освіти.

Ключові слова: професійна підготовка, здоровий спосіб життя, здоров'я, студентська молодь, превенція.