

# The physical health recovery, the practice of the reproductive method of adaptive physical education

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## Research Article

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# Abstract

The article focuses on the need to introduce modern alternative health-saving methods and technologies of physical education, in particular, health tourism as an important factor in the educational process and a leading factor in the socialization and harmonious development of children and young people with special needs. The problem of physical education of pupil's and student's youth is relevant at the present stage of the development of health tourism. Adaptive physical education is an important factor in the rehabilitation of students who have limited physical health opportunities. We admit that the implementation of the program of health measures to organize the physical activity of students using the natural sedative factors of health tourism will have a great impact on the physical and mental development, social and psychophysical condition of students.

*Purpose.* The purpose of the research is to substantiate the scientific and pedagogical aspects of the reproductive method of adaptive physical education of the student youth with special needs using health tourism. Involvement of this category of students in physical education. To determine the social significance of adaptive physical culture in renewed and maintaining the state of physical and psychological health of people with special needs.

*Approach.* A set of complementary methods by the assigned task is used in the work. Analysis and generalization of domestic and world experience on the problem of renewal and rehabilitation by methods and means of adaptive physical culture were carried out. The scientific special literature was analyzed on the problems of applying means of physical culture, on the complex resumption of physical health. Students of non-physical education institutions of higher education in Kharkiv took part in the research. The questionnaire survey technique is used in the experiment. In this method, we used the questionnaire that consists of 8 questions and was applied to up to 60 individuals regardless of gender.

*Results.* The reproductive method of adaptive physical education is aimed at improving the knowledge in physical rehabilitation and forming the skills of persons with special needs to use natural factors for body resumption. The introduction of a mental-conceptual model increased awareness of health tourism means and methods by 18,5% ( $t = 2,41$ ;  $p < 0,01$ ). Psychological comfort after the proposed measures to preserve the state of physical and psychological health of students with special needs improved by 61,3% ( $t = 3,47$ ;  $p < 0,001$ ).

*Conclusions.* The search for ways to make optimal use of health tourism for the renewal of health and social adaptation of persons with special needs is one of the main areas of adaptive physical education.

## Introduction

Health tourism has recently acquired a leading role in the integrated application of renewal activities in adaptive physical culture. A person who suffered illness or trauma, or has the pathology of a psychophysical condition of childbirth, is in many cases dependent on outside assistance and cannot always find a solution to the problems that are associated with an inability to care for himself (Evseev &

Shapkova, 2000; Vovkanich, 2013). It is common knowledge that adaptive physical culture contributes to the optimal mode of functioning the bodily-motor characteristics and spiritual forces of a young person. Human viability is maintained in an optimal psychophysical state by means and methods of adaptive physical culture (Vinnik & Andreev, 2010; Voloshyn, 2015).

Increasing interest in various aspects of rehabilitation is achieved when mastering knowledge on the basis of general methodical principles, namely: science, consciousness, and activity, visibility, accessibility, systematicity, strength.

There is no doubt that comprehensive rehabilitation can be introduced in the system of body renewal by means of activation of recreational activities of people with different health problems by means and methods of adaptive physical education (Andryeyeva, 2010). One of the effective methods of body renewal is the reproductive method of adaptive physical education, which is aimed at sequencing actions in certain main goals of the activity.

Physical education is considered an important factor in the educational process and a leading factor in the socialization and harmonious development of children and young people with special needs. Recently, the search for alternative health-saving methods and technologies for physical education, in particular health tourism, has intensified.

The problem of organizing recreational tourism as a reproductive method of adaptive physical education in Ukraine is extremely urgent and acquires social importance. Drawing attention to the value attitude to one's health, adaptive physical education ensures not only the receipt of a conscious education but also allows you to form a social and everyday model of a person's personality.

The problem of adapting students with special needs to the physical and social environment was fragmented in the works (Andryeyeva, 2014; Fernandez, J.G., Contreras, O.R., Garcia, L.M., & Gonzalez-Villora, S., 2010; Futornyj, 2014; Karpyuk, 2008; Krutsevych, 2007). Topical issues of formation and development of motor activity, physical and mental abilities of persons with special needs, their subsequent adaptation to their state of physical and psychological health are considered in the works (Briskin, 2006; Ganciu, M. & Ganciu, O, 2013; Krutsevych, 2010; Lazer, A-G., Mihailescu, N. 2018; Martin, J.J., & Whalen, L. 2012; Monastirskij, 2012) and others.

Scientific observations (Richok, T., 2017) relate to the systematization of scientific and theoretical knowledge about the socio-humanistic principles of adaptive physical culture, as well as the use of modern health and information technologies that are used in the process of adaptive physical education of pupil's and student's youth (Infante, G., Goñi, E., & Villaroel, J.D., 2011).

The direction of modern wellness technologies of health tourism is presented in the work (Dehtyar, 2002) in the form of creative means of physical education aimed at forming the foundations of rehabilitation and body renewal of children and young people with special needs.

The specifics of entering the student environment, which has a restriction on physical health, reveals the psychological aspects of the process of adapting to the conditions of study at the higher education institution (Ivanyuk I., 2009).

The issue of socio-humanistic principles of adaptive physical culture and social integration of persons with disabilities and their introduction into Ukrainian society is considered in the work (Kogut, I., 2015). A new concept, which consists of a strategy and basic pedagogical activities, in particular the clarification of the mechanism for building a humanistic educational process.

This category of youth during university studies is accompanied by high requirements for the level of physical activity, information overload, and psychoemotional stress. Low physical activity leads to poor mental and physical health, social maladaptation of students.

The problem of improving the health of students with special needs directs specialists to develop innovative methods of physical education aimed at adapting students to the physical and social environment (Kurkova P., & Nemcek D., 2016).

## **Hypothesis**

We admit that the implementation of a program of health activities to organize the physical activity of students using the natural sedative factors of health tourism will have a great impact on the physical and mental development, social and psychophysical condition of students.

**The aim** was to prove the scientific and pedagogical aspects of the reproductive method of adaptive physical education of student youth with special needs by means of health tourism. Involvement of this category of students in physical education. To determine the social significance of adaptive physical culture in renewed and maintaining the state of physical and psychological health of people with special needs.

## **Materials & Methods**

### **Participants**

The research involved 60 persons, regardless of gender, the 1st year students with special needs of 30 boys, 30 girls, 17-18-year old students of non-physical education institutions of higher education in Kharkiv. The research, related to the use of people, met all relevant national rules and institutional policies, followed the principles of the Helsinki Declaration.

The research was conducted in two stages. At the first stage, a primary assessment of the state of physical and psychological health of students with special needs was carried out, a mental conceptual model of adaptive physical education was developed.

At the second stage, a mental-conceptual model of adaptive physical education was introduced, the state of physical and psychological health of the studied students was re-evaluated.

The online survey was conducted to assess the physical and psychological health of students. The questionnaire included 8 questions that were aimed at assessing the psychophysiological potential of modern youth, their value and needs in the areas of physical culture, and motivation for active rest.

The proposed model contributed to the improvement of knowledge in physical rehabilitation and the formation of the skills of persons with special needs to use natural factors for body resumption. The main goal of the model was to substantiate the scientific and pedagogical aspects of the reproductive method of adaptive physical education of student youth with special needs using health tourism.

The mental-conceptual model contained the following activities to renew and preserve the physical and psychological health of students with special needs:

### **Creating conditions for the organization of physical activity of students**

individual daily hygiene with an emphasis on a shower in the morning, shower after physical activity, ventilation; good nutrition; duty of physical effort with intellectual effort; rest and resumption after training (natural and artificial); abandonment of habits (alcohol, smoking, drugs); outdoor activities; exercise at least 3–4 times a week; duration of classes is more than 1 hour; application of new attractive types of physical activity of students (cheer-dance, aerobics, water aerobics, health tourism, dance movements, Scandinavian walking, etc.); daily morning propulsion rights for 15 minutes.

### **Creation of social and psychophysical orientation of adaptive physical education**

attending sports and spectacular events, football matches; wellness walks; establishment of corporate teams to run in the local park; visiting historical and religious landmarks of the city; providing an opportunity to master the knowledge recommended by teachers, sports and scientific literature on various topics.

### **Adaptive physical education environment**

application of interactive forms of educational technologies; use of modern health and leisure systems using affordable health tourism; organization of classes in leisure time for additional education programs; organization of leisure activities using recreational complex, the formation of motor qualities; organization of a system of health and recreational activities.

After improving the knowledge of the studied students in physical rehabilitation and forming the skills of persons with special needs to use natural factors for the resumption of the body, the second questionnaire was conducted.

All statistics were processed using Statgraphics Centurion 18 (Version 18.1.11). The Shapiro-wild test was conducted to determine the normal distribution of data in the study groups.

Validity was considered significant at a five percent significance level ( $p < 0,05$ ), 1 percent significance levels ( $p < 0,01$ ), and 0,1% percent significance levels ( $p < 0,001$ ).

**The research. The presentation of the main material of the research.**

The comparative analysis of the psychophysiological capabilities of students is presented in Table 1.

As a result of the research, awareness of means and methods of health tourism increased among students by 18,5% ( $p < 0,01$ ), the number of persons engaged in active rest increased by 23,6% ( $p < 0,001$ ).

Table 1  
Adapting students with special needs to the physical and social environment

Nº	Question of questionnaire of students' preparedness for health tourism	Answer options	Group (n = 60)	Before the research	Group	After the research	Confidence assessment  t; p
				$\bar{x}_1 \pm m_1$	(n = 60)	$\bar{x}_2 \pm m_2$	
1.	Awareness of the means and methods of health tourism	Yes	(n = 32)	53,4 ± 3,47	(n = 38)	63,3 ± 2,21	t = 2,41; p < 0,01
		No	(n = 28)	46,6 ± 2,53	(n = 22)	36,7 ± 2,24	t = 2,72; p < 0,01
2.	Are you engaged in active recreation?	Yes	(n = 36)	59,3 ± 3,31	(n = 44)	73,3 ± 2,67	t = 3,29; p < 0,001
		No	(n = 24)	40,7 ± 3,64	(n = 16)	26,7 ± 2,87	t = 3,02; p < 0,001
3.	How many times a week do you exercise?	2-4 times	(n = 38)	63,1 ± 4,63	(n = 48)	80,7 ± 7,77	t = 3,26; p < 0,001
		Never	(n = 22)	36,9 ± 3,83	(n = 12)	19,3 ± 2,92	t = 3,65; p < 0,001
4.	How long do you do physical activity?	1 hour and longer	(n = 32)	53,3 ± 3,92	(n = 39)	65,8 ± 2,35	t = 2,74; p > 0,01
		For bout 20-30 min.	(n = 28)	46,7 ± 2,17	(n = 21)	34,2 ± 2,76	t = 3,56; p < 0,001
5.	Are events take place in the air or indoor?	Gym	(n = 38)	63,4 ± 3,64	(n = 29)	48,3 ± 2,12	t = 3,59; p < 0,001
		Fresh air	(n = 14)	23,3 ± 4,58	(n = 25)	41,6 ± 3,48	t = 3,18; p < 0,001
		Practically no	(n = 8)	13,3 ± 1,47	(n = 6)	10,1 ± 1,01	t = 1,74; p > 0,05
6.	How do you feel during an active rest?	Energy saturation	(n = 25)	42,6 ± 5,18	(n = 39)	65,3 ± 3,94	t = 3,49; p < 0,001
		Ususally	(n = 35)	57,4 ± 6,33	(n = 21)	34,7 ± 3,37	t = 3,17; p < 0,001
7.	Do you feel psychological comfort after health tourism?	Yes	(n = 30)	50,6 ± 6,94	(n = 49)	81,6 ± 5,62	t = 3,47; p < 0,001
		Didn't feel	(n = 30)	49,4 ± 4,94	(n = 11)	19,4 ± 5,11	t = 4,22; p < 0,001

8.	Human relations in active leisure activities.	Improved	(n = 24)	39,8 ± 4,62	(n = 37)	61,7 ± 3,67	t = 3,71; p < 0,001
		Didn't feel	(n = 36)	60,2 ± 4,37	(n = 23)	38,3 ± 5,18	t = 3,23; p < 0,001

The introduction of the mental-conceptual model of adaptive physical education contributed to an increase in the number of students who engage in physical activity by 27,9% ( $p < 0,001$ ).

Despite the absence of reliable significant differences in the increase in the duration of physical activities  $p > 0,01$ , more than 20% of respondents began to perform physical activities longer up to 1 hour or longer. The feeling of energy saturation during active recreation increased at students by 53% ( $p < 0,001$ ).

Psychological comfort after the proposed measures to preserve the state of physical and psychological health of students with special needs improved by 61,3% compared to the initial  $p < 0,001$ .

The obtained data indicate the improvement of human relations by 55% after implementation of the proposed measures  $p < 0,001$ .

## Discussion

By the stated conceptual apparatus using methods of information collection and processing at the operational level, the final goal of the research was to determine the social significance of adaptive physical culture in renewed and maintaining the state of physical and psychological health of students with special needs. The effectiveness of the approach to the introduction of the curriculum on physical education oriented to the student's choice of health programs of adaptive physical education according to the state of health and physical fitness was proved.

The purpose of this research was to determine awareness by means and methods of health tourism, the practical application of physical activity, and active rest during study at institutions of higher education. The results show that statistically significant differences in physical and emotional states at students of the university who were physically active had higher levels of physical and emotional adaptation to physical and social environmental conditions.

If we consider a specific sample from this research, regarding the implementation of weekly exercise and the periodicity of physical exercises, it is interesting to take into account the research (Infante, G., Goñi, E., & Villaroel, J.D., 2011), which showed that physical fitness and physical attractiveness, which are subcategories of physical activity, that are significantly associated with health perception.

Taking into account these results, if students' awareness of means and methods of health tourism has the highest level, they may feel psychological comfort after classes that are associated with physical activity compared to those who aren't physically active and who received lower indicators.



We also found results that coincided with researches that assessed the relationship of regular student athletic activities in different fitness groups. This exists among students where subjects who regularly exercise display higher perceptions of their physical form in comparison with others who don't engage in regular exercise (Alvarez, Cuevas, Lara, & Gonzalez, 2015; Contreras, O.R., Fernández, J.G., García, L.M., Palou, P., & Ponseti, J., 2010).

As they think (Molero, D., Ortega, F., Valiente, I., & Zagalaz, M.L., 2010), the periodicity and duration of physical exercises affect the degree of satisfaction, which positive is associated with the psychological comfort of the person.

One approach is presented in the works (Trojanovska, 2018), which considers adaptive physical culture as part of the general culture, the physical culture subsystem, one of the areas of health activities, which is aimed at meeting the needs of a person with special needs for motor activity, formation, preservation and support of health, personal development, self-realization of physical and spiritual forces, to improve the quality of life, socialization and integration of a person into society.

According to (Klymovych, V., Olkhovyi, O., & Romanchuk, S. 2016), adaptive physical culture is a broader concept compared to curative physical culture and physical education of children who have a deviation in health. Adaptive physical culture is a system of improvement and harmonization of all aspects and properties of a person with deviations in the state of health (physical, intellectual, emotionally strong-willed, aesthetic, ethical, etc.) using physical exercises, environmental and health factors.

The research (Mulik, K., 2016) in the tourism industry, in particular health tourism, aimed at studying the patterns and features of its active form, which allow to eliminate or reduce the influence on a person of adverse factors of everyday reality (nervous emotional overload, hypokinesia, excessive irrational nutrition, etc.). According to the views of (Glazkova, G., Mamonva, O., Gracheva, D., & Pukhovskava, M., 2020), the social aspects of physical education of students with a weakened state of health determine the achievement of social adaptation in the educational environment of the university.

The formation of motivational foundations for physical activity, as the value attitude of young people to a healthy lifestyle, should be aimed at promoting a sense of self-determination among students (Aleksandra-Velickovska, L., Gontarev, S., & Ruzdija, K., 2019). One such kind of research are the researches (Aleksandra, L. & Abraham, C., 2012) evaluated men and women of youth age and found that physical activity of a certain intensity was associated with better physical fitness.

In the context, we agree with the opinion of scientists that the educational aspect of the problem of forming a healthy lifestyle is relevant at the current stage of development by entities (Putrov, S., (2014).

We support the opinion of the researchers (Esnaola, I., Infante, G., Rodriguez, A., & Goni, E. 2011; V. Klymovych, A. Oderov, S. Romanchuk, O. Lesko, & M. Korchagin, 2019) regarding the relationship between social environmental conditions and motivation to improve one's health.

Thus, the reproductive method of adaptive physical education is a very important aspect from the point of view of social intervention, demonstrating the need to improve knowledge in physical rehabilitation and the formation of skills of persons with special needs, to use natural factors to resume the body.

## Conclusions

The analysis of the best domestic and foreign practices in the field of adaptive physical education, in particular, attracting students with special needs to physical activity, organized leisure by means and methods of health tourism, made it possible to develop and experimentally substantiate the effectiveness of the model of physical education of students for health promotion, successful social adaptation and integration into the educational environment of institutions of higher education.

The results of the analysis made it possible to conclude that the means that were used in adaptive physical education were applied adequately to the level of the physical state of health, psychomotor development, functional state of the motor system, previous motor experience, and physical fitness.

The involvement of this category of students in health tourism, in particular, the use of new attractive types of physical activity of students positively affects the formation of adaptive processes, increase resistance, psychophysical stress, the formation of an integrated approach to improving the physical education of students with special needs.

Therefore, the carried-out research confirms that the search for ways to make optimal use of health tourism for the health recovery and social adaptation of persons with special needs is one of the main areas of adaptive physical education.

## Declarations

**Conflicts of interest** – The authors declare that there are no conflicts of interest.

**Prospects for further research.** The subsequent scientific search for ways to optimize the integration of health tourism in the formation of adaptive physical education will help to solve the problem of the national importance of preserving the gene pool of the nation, protecting the national interests of ensuring health safety and preserving the country, and the population of Ukraine as the highest social value on the way to integration into the European Community.

The next perspective of our scientific search will be the study and analysis of forms and methods of overcoming barriers to the introduction and effective functioning of the educational system by students with limited functional capabilities in an inclusive educational environment of an institution of higher education.

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