

# Influence of volleyball and sports and health tourism on the physical, mental and social state of schoolchildren and students

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## Abstract

**Background and Study Aim.** Based on research results, it has been established that various types of sports games and sports and health tourism are the most popular among schoolchildren and students. Various movements and actions in volleyball have great health benefits. They help strengthen the musculoskeletal system, improve overall metabolism, increase the activity of all organs and systems of all organisms and are a means of active recreation. In the conditions of hiking trip, a particularly important role is played by the high adaptive abilities of the body, based on the reactivity and lability of functional systems. The purpose of the study was to determine the influence of volleyball and sports and health tourism on the physical, mental and social health of schoolchildren and students.

**Material and Methods.** The study involved 60 schoolchildren and 60 male students. Schoolchildren and students were divided into two groups (30 people in each group), who were engaged in volleyball and sports and health tourism sections. The study used methods to assess physical, mental and social health; level of satisfaction with quality of life; well-being, activity and mood.

**Results.** The best indicators for physical health among schoolchildren and students were obtained in favor of those involved in sports and health tourism ( $p < 0,05-0,01$ ). The best level of mental and social health was found among students who spent a year studying in sports and health tourism sections ( $p < 0,05-0,01$ ), while schoolchildren, on the contrary, had the best results obtained from those who were involved in team sports.

**Conclusions.** The results of the study indicate that playing sports games (volleyball and basketball) and sports and health tourism have a positive effect on the physical, mental and social health of schoolchildren and students. These studies indicate that school-age children are characterized by team sports, which are more emotional and serve as an effective means of physical education for this age category. Students are more interested in organizing classes in sports and health tourism, which include participation in competitions in various types of tourism and weekend trips held in the fresh air.

Thus, it can be stated that the influence of sports games and sports and health tourism on the psychological sphere of schoolchildren and students contributes to positive changes in their psyche, creates a persistent, cheerful, active state, generating positive emotions and ensures increased satisfaction with life in general, which in turn affects the health of children and youth.

**Keywords:** volleyball, tourism, students, schoolchildren, health

**Катерина Мулик, Олександр Скалій, Нурлан Мукажанов, Андрей Островський, Володимир Паєвський, Анатолій Абдула. Вплив занять волейболом та спортивно-оздоровчим туризмом на фізичний, психічний і соціальний стан здоров'я школярів та студентів**

**Передумови та мета дослідження.** За результатами досліджень встановлено, що найбільш популярними серед школярів та студентів є заняття різними видами спортивних ігор та спортивно-оздоровчим туризмом. Різноманітні рухи та дії у волейболі мають величезне оздоровче значення. Вони сприяють укріпленню рухового апарату, покращенню загального обміну речовин, підвищенню діяльності усіх органів і систем усіх організму та є засобом активного відпочинку. В умовах туристських походів особливо важливу роль відіграють високі адаптивні здатності організму, що ґрунтуються на реактивності та лабільності функціональних систем. Метою дослідження було визначити вплив занять волейболом та спортивно-оздоровчим туризмом на фізичний, психічний і соціальний стан здоров'я школярів та студентів.

**Матеріал і методи.** У дослідженні взяли участь 60 школярів та 60 студентів чоловічої статі. Школярі та студенти були розподілені на дві групи (по 30 осіб у кожній групі), які займалися в секціях з волейболу та спортивно-оздоровчого туризму. У дослідженні застосовувались методики оцінки фізичного, психічного і соціального здоров'я; рівня задоволення якістю життя; самопочуття, активності і настрою.

**Результати.** Отримано кращі показники у школярів та студентів з фізичного здоров'я на користь тих, хто займається спортивно-оздоровчим туризмом ( $p < 0,05-0,01$ ). Кращий рівень психічного і соціального здоров'я встановлений у студентів, які рік займалися в секціях зі спортивно-оздоровчого туризму ( $p < 0,05-0,01$ ), у школярів навпаки кращі показники у отриманні у тих, які займалися ігровими видами спорту.

**Висновки.** Результати дослідження свідчать про те, що заняття спортивними іграми (волейболом і баскетболом) та спортивно-оздоровчим туризмом позитивно впливають на фізичний, психічний і соціальний стан здоров'я школярів та студентів. Дані дослідження свідчать про те що, дітям шкільного віку притаманні ігрові види спорту, які є більш емоційні та служать ефективним засобом фізичного виховання цієї вікової категорії. Студенти більш зацікавлені в організації занять зі спортивно-оздоровчого туризму, які включають участь у змаганнях з різних видів туризму та походах вихідного

дня, що проводяться на свіжому повітрі.

Таким чином можна констатувати, що вплив занять спортивними іграми та спортивно-оздоровчим туризмом на психологічну сферу школярів та студентів, сприяє позитивним змінам їх психіці, формує стійкий, бадьорий, активний стан, утворюючи позитивні емоції і забезпечує підвищення задоволеністю життям в цілому, що в свою чергу впливає на здоров'я дітей та молоді.

**Ключові слова:** волейбол, туризм, студенти, школярі, здоров'я.

## Introduction

To achieve results in improving the physical condition of schoolchildren and students, according to scientists [Andrieva O.V. et al., 2005; Malagodi, F. et al., 2024; Nesbitt, A.E. et al., 2021], it is necessary to use fundamentally new approaches, tools and technologies that should meet the individual characteristics of children, adolescents and young people, and contribute to the formation of positive motivation for physical education classes [Mulyk K. et al., 2015].

Despite countless studies by the authors [Klamm, M.M. et al., 2024; Arriscado, D. et al., 2015; Azhyppo, O. et al., 2018], the urgent problem is to find effective ways to increase the physical activity of schoolchildren and students and improve their health through the introduction of a variety of physical education and health activities. According to research results [Li P. et al., 2021; Balchirbay, M. et al., 2018; Nagovitsin, R.S. et al., 2020] it was found that the most popular among schoolchildren and students are various types of sports games, as well as sports and health tourism.

Sports games are one of the most popular forms of organizing sports and recreational activities for schoolchildren of all ages and college youth. First of all, they involve teamwork and are aimed at developing physical qualities, discipline, responsibility, etc. Also, when performing command motor actions, the mood rises, emotional release occurs, and well-being improves [Hamdan Hashem Mohammed, M., 2018; Yang, Q. et al., 2023; Mulyk K. et al., 2015]. Sports games are traditionally popular both among school-age children and students due to their multifaceted effects on the human body, including emotional ones, so they serve as an effective means of physical education. Various movements and actions in sports games are of great health value. They help strengthen the musculoskeletal system, improve overall metabolism, increase the activity of all organs and systems of the entire body and are a means of active recreation, especially for people engaged in intense mental activity, which includes schoolchildren and students.

According to Li P. et al., 2021, the most motivated sports games, such as volleyball, football, basketball, have different magnitudes and intensity of load on the participants. Thus, according to the results of the study, it was found that among the above team sports, volleyball has a load of moderate intensity in relation to football and basketball. Therefore, volleyball can be used as a recreational means to maintain physical fitness and health, for fun, relaxation, competition and building social relationships for children and youth.

In the conditions of hiking trip, a particularly important role is played by the high adaptive abilities of the body, based on the reactivity and lability of functional systems. An increase in such lability under the influence of muscle activity underlies the process of physical training and ensures the functional restructuring of the body during hiking [Skaliy, A. et al., 2023].

It is known that tourist activities have a strong reflex and diverse physiological effect on the body of schoolchildren and students, as a result, a number of local and general reactions to the load arise. Reducing tension and activating mental processes in schoolchildren and students after educational activi-

ties are facilitated by walks, weekend hikes and multi-day hikes, which influence the activation of mental processes, therefore, rapid recovery and even increased mental performance. Sports and health tourism combines various physical exercises, cognitive and educational elements, elements of hardening and adaptation to unusual conditions, has an emotional overtone, increases the physical activity of the body, helps maintain high performance and has a positive effect on mental activity [Abramov V.V. 2011; Hrabovskyi Yu.A. et al., 2008].

Considering the above, **the purpose of the study** was to determine the impact of volleyball and sports and health tourism on the physical, mental and social health of schoolchildren and students.

## Material and Methods of the research

### Participants.

The study involved 60 male schoolchildren (14.2±0.8 years) and 60 male students (18.1±0.9 years). Schoolchildren and students were divided into two groups (30 people in each group), who were engaged in volleyball and sports and health tourism sections. Extracurricular classes in the sections were held 2 times a week for 90 minutes and lasted from September to June.

### Ethics Statements and Participants.

This study was approved by the Bioethics Committee for Clinical Research and conducted according to the Declaration of Helsinki. All participants and his parents gave their written consent to research and were informed about the purpose and test procedures and about the possibility of withdrawal of consent at any time for any reason.

### Study design.

The study involved assessing physical, mental and social health - these are methods developed by S. Stepanov [Lemak M.V. et al., 2012]. That is, methods of self-assessment by the subject of each of the named types of health using the proposed questionnaires. By physical health, the author means the dynamic balance of the work of all internal organs and their adequate response to environmental influences. Psychological health is associated with the dominant state of the psyche. Among the particularly significant components of mental health, factors such as personality integration, its harmony, balance, spirituality and orientation towards self-development are valued. Social health is assessed by the influence of society on the individual, determined by the quantity and quality of interpersonal connections, as well as the person's performance of his social functions. Physical health is assessed in points: from 20 to 100. The maximum number of points is considered the best indicator of physical health. Mental health is also scored, but is scored from 0 to 50 points. The lower the score a subject receives on the test, the better his or her level of mental health. Social health is also defined in points from 0 to 32 points. Moreover, the more points scored during diagnosis, the higher the level of social health.

Assessment of the level of satisfaction with the quality of life according to N.E. Vodopyanovaya allows you to characterize satisfaction with current activities, well-being and mental health of a person. In addition, using this technique, you can

identify the greatest satisfaction or discomfort with a certain area of your personal activity [284]. The quality of life index is considered to be very low when assessed at 4-10 points; low – with 11-20 points; medium - with 21-29 points and high - with 30-40 points. Individuals with a high quality of life index exhibit a pronounced optimism and active life position.

Assessment of well-being, activity and mood (WAM) was carried out using a questionnaire. The essence of the assessment is that subjects are asked to correlate their condition with a number of signs on a multi-stage scale. The scale consists of indices (3210123) and is located between thirty pairs of words of opposite meaning, reflecting mobility, speed and pace of ongoing functions (activity), strength, health, fatigue (well-being), as well as characteristics of the emotional state (mood). The subject must choose the number that most accurately reflects his condition at the time of the examination [284]. During processing, the numbers are recoded as follows: index 3, corresponding to poor health, low activity and bad mood, is taken as 1 point; the next index 2 – for 2 points; index 1 – for 3 points and so on to index 3 on the opposite side of the scale, respectively taken as 7 points. Based on the given scores, the arithmetic mean is calculated both overall and separately for activity, well-being and mood.

A statistical analysis of the obtained data was carried out using the licensed program MS Excel. Descriptive statistics indicators were determined: arithmetic mean ( $\bar{X}$ ), representativeness error ( $m$ ) and coefficient of variation ( $V$ ). The Ruffier Index was used to determine the response of the cardiovascular system to physical activity. The significance of the differences was assessed using the t-test (Student's test), the differences were considered significant at ( $p < 0.05$ ) given the small size of the groups. Data processing was carried out using Microsoft Excell's Data Analysis research programs.

### Results of the research

There are three levels of health: physical, mental and social. In the field of physical education, most often we are talking about physical health. Although it is known that the other two species are an integral part of human health. The data in Table 1 indicate sufficient indicators of all types of health in the two groups. Significantly better indicators were obtained from schoolchildren and students in terms of physical health in favor of those who are engaged in sports and health tourism ( $p < 0,05-0,01$ ). This is primarily due to the fact that most of the classes are organized in the fresh air, during which the body of those

involved is strengthened. There were significant differences between groups in mental health outcomes. Thus, among students, the best level of mental health was found among those who spent a year in sports and health tourism sections ( $t=3.31$ ;  $p < 0.01$ ); among schoolchildren, on the contrary, the best indicators in mental health were obtained among those who trained game sports. Similar results were obtained for indicators of social health ( $p < 0.05$ ), the best indicators were found among students involved in sports and health tourism, and among schoolchildren involved in sports games.

Table 2 presents data on personal assessment of schoolchildren and students' level of satisfaction with quality of life. It was found that students who were involved in team sports assessed the positive aspects of their life activities lower than those who were involved in sports and health tourism during the academic year. On the contrary, among schoolchildren, the highest indicators of satisfaction with the quality of life were found in those who studied for a year in sections on team sports.

The highest scores on the "Training" subscale among tourist students indicate that sports and health tourism activities are more consistent with students' learning satisfaction ( $t=2.83$ ;  $p < 0.01$ ). That is, after systematic training in sports and health tourism, students have a higher attitude towards their learning than students who were involved in team sports. It is likely that the tension and discomfort that arises during training are significantly reduced after engaging in sports and health tourism.

On the "Personal Achievements and Aspirations" scale, significant differences were obtained both in groups of schoolchildren and students. Thus, for students, these differences were obtained in favor of those involved in sports and health tourism ( $t=2,50$ ;  $p < 0,05$ ), and for schoolchildren, on the contrary, for those involved in team sports ( $t=2,15$ ;  $p < 0,05$ ). This may mean that in the process of engaging in both team sports and sports and health tourism, self-respect increases and self-esteem improves, which is extremely important for success in any activity.

On the "Health" and "Communication with Friends" scales, the indicators of those involved in sports and health tourism are at a higher level than their peers from the team sports sections, but no significant differences were found ( $p > 0,05$ ). This is due to the fact that sports and health tourism classes are conducted mainly in the fresh air and the implementation of certain tasks requires constant communication with teammates for coordinated action on the assigned tasks.

Table 1

The influence of volleyball and sports tourism on indicators of physical, mental and social health of schoolchildren and students at the end of the study, points

№	Factors		Volleyball (n=30)		Sports and health tourism (n=30)		Assessment of reliability	
			$\bar{X}_1 \pm m_1$	$V_1$	$\bar{X}_2 \pm m_2$	$V_2$	t	p
1	Physical health	Schoolchildren (n=30)	84,3±1,80	8,5	90,2±2,17	10,2	<b>2,09</b>	<b>&lt;0,05</b>
		Students (n=30)	88,8±1,02	5,4	93,5±1,21	6,1	<b>2,97</b>	<b>&lt;0,01</b>
			<b>t=2,18; p&lt;0,05</b>		t=1,33; p>0,05			
2	Mental health	Schoolchildren (n=30)	16,5±0,78	3,9	19,4±1,02	4,5	<b>2,26</b>	<b>&lt;0,05</b>
		Students (n=30)	18,7±0,75	6,6	15,1±0,79	5,4	<b>3,31</b>	<b>&lt;0,01</b>
			<b>t=2,03; p&lt;0,05</b>		<b>t=3,33; p&lt;0,01</b>			
3	Social health	Schoolchildren (n=30)	23,9±0,52	5,9	22,5±0,43	5,1	<b>2,08</b>	<b>&lt;0,05</b>
		Students (n=30)	24,2±0,43	6,7	26,0±0,71	7,3	<b>2,17</b>	<b>&lt;0,05</b>
			t=0,45; p>0,05		<b>t=4,22; p&lt;0,001</b>			

Table 2

**The influence of volleyball and sports tourism on the level of satisfaction with the quality of life of schoolchildren and students at the end of the study, points**

№	Indicators		Volleyball (n=30)		Sports and health tourism (n=30)		Assessment of reliability	
			$\bar{X}_1 \pm m_1$	$V_1$	$\bar{X}_2 \pm m_2$	$V_2$	t	p
1	Training	Schoolchildren (n=30)	32,4±1,52	8,1	29,8±1,04	8,0	1,41	>0,05
		Students (n=30)	30,0±1,48	10,2	36,5±1,76	10,6	<b>2,83</b>	<b>&lt;0,01</b>
			t=1,13; p>0,05		<b>t=3,28; p&lt;0,01</b>			
2	Personal achievements and aspirations	Schoolchildren (n=30)	34,5±0,87	10,2	31,9±0,84	11,4	<b>2,15</b>	<b>&lt;0,05</b>
		Students (n=30)	32,2±0,79	9,8	35,1±0,85	11,6	<b>2,50</b>	<b>&lt;0,05</b>
			t=1,96; p>0,05		<b>t=2,68; p&lt;0,05</b>			
3	Health	Schoolchildren (n=30)	30,2±0,92	7,5	32,7±0,94	9,7	1,90	>0,05
		Students (n=30)	31,8±1,17	8,9	34,3±1,20	10,8	1,49	>0,05
			t=0,72; p>0,05		t=1,05; p>0,05			
4	Communication with friends (relatives)	Schoolchildren (n=30)	31,6±1,20	7,2	33,2±1,17	6,8	0,96	>0,05
		Students (n=30)	32,1±1,13	6,0	34,4±1,16	8,2	1,42	>0,05
			t=0,68; p>0,05		t=0,73; p>0,05			
5	Support	Schoolchildren (n=30)	29,0±1,02	7,9	32,5±0,97	7,1	<b>2,49</b>	<b>&lt;0,05</b>
		Students (n=30)	30,1±0,95	11,3	33,2±1,06	10,8	<b>2,18</b>	<b>&lt;0,05</b>
			t=0,79; p>0,05		t=0,49; p>0,05			
6	Optimism	Schoolchildren (n=30)	29,6±0,72	10,5	27,7±0,64	9,5	1,97	>0,05
		Students (n=30)	26,2±1,17	9,4	30,4±1,06	9,9	<b>2,65</b>	<b>&lt;0,05</b>
			<b>t=2,48; p&lt;0,05</b>		<b>t=2,18; p&lt;0,05</b>			
7	Tension	Schoolchildren (n=30)	24,3±1,02	7,3	20,2±1,09	7,8	<b>2,75</b>	<b>&lt;0,01</b>
		Students (n=30)	22,0±0,86	8,8	18,2±0,78	5,3	<b>3,27</b>	<b>&lt;0,01</b>
			t=1,72; p>0,05		t=1,49; p>0,05			
8	Self-control	Schoolchildren (n=30)	27,4±1,16	8,7	30,1±1,08	8,1	1,70	>0,05
		Students (n=30)	31,2±1,31	9,6	36,5±1,37	9,5	<b>2,80</b>	<b>&lt;0,01</b>
			<b>t=2,17; p&lt;0,05</b>		<b>t=3,67; p&lt;0,001</b>			
9	Negative emotions	Schoolchildren (n=30)	24,7±0,74	6,4	22,4±0,67	6,4	<b>2,30</b>	<b>&lt;0,05</b>
		Students (n=30)	25,8±0,97	7,8	22,1±0,95	7,2	<b>2,73</b>	<b>&lt;0,01</b>
			t=0,90; p>0,05		t=0,26; p>0,05			
10	Quality of life index	Schoolchildren (n=30)	32,7±1,72	9,3	30,6±1,64	8,9	0,88	>0,05
		Students (n=30)	33,1±1,45	10,2	36,0±1,38	10,4	<b>2,55</b>	<b>&lt;0,05</b>
			t=0,18; p>0,05		<b>t=2,52; p&lt;0,05</b>			

Significant differences ( $p < 0,05$ ) on the "Support" scale in favor of everyone who was involved in sports and health tourism are due to the emergence of like-minded people and the desire to really support each other, which is very important during the period of participation in hiking trip.

On the "Optimism" scale, more significant differences were found among students in favor of those studying in the tourism section ( $t = 2,65$ ;  $p < 0,05$ ), since raising the mood after classes in various types of tourism also determines the subjective perception of the psychological state, such as optimism. Among schoolchildren, higher scores on this scale were obtained from those who played sports games, but reliability was not found ( $p > 0,05$ ).

Indicators on the scales "Tension" and "Negative emotions" in both age groups were obtained significantly lower ( $p < 0,05-0,01$ ) for those who spent a year studying in sections on sports and health tourism, due to the outdoor activities and participation in weekend hikes. Reducing the manifestations of tension and negative emotions is one of the most important processes characterizing the quality of human life. It is possible that a change in the nervous tension that accumulates in schoolchildren and students leads to a decrease in the sub-

jectively perceived state of tension and plays a restorative role in the process of sports and health tourism and requires the use of self-monitoring of health. Self-control among students involved in sports and health tourism is higher by 5.3 points ( $t = 2,80$ ;  $p < 0,01$ ) compared to students involved in team sports; among schoolchildren – by 2,7 points ( $p > 0,05$ ).

The obtained indicators on the "Quality of Life Index" scale indicate a higher level ( $t = 2,55$ ;  $p < 0,05$ ) among student tourists. This means that their overall assessment and satisfaction with their quality of life is much higher, which is one of the most important indicators of improving social health.

Psychologists working in the field of physical education and sports clearly state that integral indicators are very important for those involved in sports. One of these complex indicators is WAM - well-being, activity, mood. To get an answer to the question of how these conditions change in schoolchildren and students as a result of playing sports games and sports and health tourism, testing was carried out using the same technique. The obtained data are presented in Table 3.

The results obtained indicate that during the study period, which lasted a year, schoolchildren who participated in sports games had significantly better indicators on the scale of

Table 3

**The influence of volleyball and sports tourism on indicators of well-being, activity, mood (WAM) of schoolchildren and students at the end of the study, points**

№	Scales		Volleyball (n=30)		Sports and health tourism (n=30)		Assessment of reliability	
			$\bar{X}_1 \pm m_1$	$V_1$	$\bar{X}_2 \pm m_2$	$V_2$	t	P
1	Well-being	Schoolchildren (n=30)	3,9±0,28	2,6	3,1±0,23	2,2	<b>2,21</b>	<b>&lt;0,05</b>
		Students (n=30)	2,7±0,25	2,0	4,0±0,30	2,4	<b>3,33</b>	<b>&lt;0,01</b>
			<b>t=3,20; p&lt;0,01</b>		<b>t=2,38; p&lt;0,05</b>			
2	Activity	Schoolchildren (n=30)	4,1±0,22	1,8	3,9±0,18	3,9	0,70	>0,05
		Students (n=30)	3,6±0,25	2,5	4,5±0,28	4,5	<b>2,40</b>	<b>&lt;0,05</b>
			t=1,50; p>0,05		t=1,80; p>0,05			
3	Mood	Schoolchildren (n=30)	4,5±0,10	7,9	4,2±0,09	7,8	<b>2,23</b>	<b>&lt;0,05</b>
		Students (n=30)	4,3±0,09	8,0	4,6±0,11	8,1	<b>2,21</b>	<b>&lt;0,05</b>
			t=1,49; p>0,05		<b>t=2,81; p&lt;0,01</b>			

well-being ( $t=2,21$ ;  $p<0,05$ ) and mood ( $t=2,23$ ;  $p<0,05$ ). The students obtained significantly better results on all scales in favor of those involved in team sports and health tourism ( $p<0,05-0,01$ ). It should also be noted that sports games had a greater impact on schoolchildren than on students on the scale of well-being ( $t=3,20$ ;  $p<0,01$ ), and sports and recreational tours on students on the scale of well-being ( $t=2,38$ ;  $p<0,05$ ) and mood ( $t=2,81$ ;  $p<0,01$ ).

The diagnostic results indicate a positive dynamics of these conditions and higher rates among student tourists. The orientation of students towards these conditions and the trust of the trainer-teacher is an important condition for preventing the formation of negative emotions regarding training and even the possibility of injury.

### Discussion

Our research is aimed at identifying the influence of team sports and sports and health tourism on various types of health of schoolchildren and students. Scientists have also analyzed the impact of the use of team sports in different areas of research [Yuni Astuti et al., 2024:]. The use of team sports, which include sports games and sports tourism, is an important component of physical training, as it not only contributes to the development of physical skills, but also builds key communication and social skills. Participation in the listed sports involves systematic physical activity that helps improve overall health. These sports also promote well-being and promote the values of teamwork and collaboration, develop leadership skills, foster commitment to shared goals and teach students how to work effectively in a group. In a team environment, players learn to work toward a common goal, support each other's strengths, and compensate for each other's weaknesses.

Many scientific works have been devoted to the study of motives for engaging in sports and health tourism. It has been established that sports and health tourism is also very popular among students, this is due to: the need for social interaction with peers, the need for aesthetic satisfaction from the environment, acquiring new skills and physical development during hikes [Rejón-Guardia et al., 2023]. Sports tourism is of great health importance for different groups of the population. A study is devoted to the issue of student health [Hammoudi Halat et al., 2023]. It is staying in natural conditions and the positive influence of climate, forest resources, and landscape features that greatly contribute to the relief of stress, positive mood and general health of the tourist. Low mountain areas are especially suitable for this.

The study by Li P. et al., 2021 aims to quantify the physi-

cal and physiological responses of college students participating in three common leisure sports. Research results have shown that volleyball has advantages over other team sports in terms of intensity and duration of training sessions. Therefore, our research was aimed at identifying the impact of volleyball on various levels of the health of schoolchildren and students.

A study by Majed Saleem El-Saleh et al., 2023 found links between emotional arousal and skill in college basketball players. The researchers concluded that players' capabilities, their physical and psychological energy, and the control of their thoughts, emotions and feelings towards and during competition contribute to the development of performance and positive reflection on the mood and health of students. Pereira, J. et al., 2015 also emphasize that confidence is a player's belief in his abilities and confidence in his talents, accepting challenges that test his resilience, knowing his strengths and weaknesses, and using them all to achieve better results. for the player and the team as a whole. This was also confirmed in our study on the influence of volleyball and sports and health tourism on schoolchildren and students.

Study results Nesbitt, A.E. et al., 2021, confirmed that physical activity is a therapeutic approach to address student mental health. Based on the results of factor analysis [Hilman A. Y., 2020], it was established that in order to form sanogenic thinking among student youth, it is necessary to develop qualities and properties. Sanogenic thinking is aimed at achieving the psychological well-being of the individual, eliminating negative habits, and managing one's own emotions. We have proven and confirmed the data that strengthening the health of students and schoolchildren by increasing their emotional state reduces internal conflict, tension and can improve health as a result of an in-depth analysis of problem situations.

We have found that sports and health tourism activities throughout the year cause positive psychophysiological changes in the body of both schoolchildren and students. But students were most influenced by classes in sections on sports and health tourism, thereby improving their attitude to their work, self-control, self-esteem, perception of health, support from friends, optimism while reducing tension and the degree of manifestation of negative emotions, reducing the level of exhaustion and professional stress, sensitivity to crisis decreases.

### Conclusions

The results of the study indicate that playing sports (volleyball and basketball) and sports and health tourism have a positive impact on the physical, mental and social health

of schoolchildren and students. These studies indicate that school-age children are characterized by team sports, which are more emotional and serve as an effective means of physical education for this age category. Students are more interested in organizing classes in sports and health tourism, which include participation in competitions in various types of tourism and weekend trips held in the fresh air.

Thus, it can be stated that the influence of team sports and sports and health tourism on the psychological sphere of schoolchildren and students contributes to positive changes in their psyche, creates a stable, cheerful, active state, generating positive emotions and ensures increased satisfaction with life in general, which in turn queue affects the health of children and youth.

#### Author Contributions

Kateryna Mulyk: study design, data collection, statistical analysis, manuscript preparation.

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The authors declare no conflict of interest.

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