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Analysis of the physical fitness of practitioners of Eastern healing systems and martial arts

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ABSTRACT

This experimental study aimed to analyze the physical fitness of people who practice Eastern healing systems and martial arts, in comparison to people who do not practice sport. The study population consisted of all 674 members of the Cultural Institute in Poltava, Ukraine. From this population, participants (n=36) were randomly selected and divided into two groups. The first group (experimental) included people who regularly practiced martial arts or Eastern healing systems. The second group (control) included people who did not practice any physical activity or sports on a regular basis. Each group consisted of 18 people. A set of physical fitness tests was selected for individuals participating in Eastern healing systems and martial arts, with basic and additional tests for different age groups (from 13 years old). The results demonstrated the importance of control in the process of managing the physical fitness of individuals of different ages who systematically practice Eastern healing systems or martial arts. Compared to the control group, the experimental group showed statistically significant better results ($p<0.05$), confirming the effectiveness of regular practice of Eastern healing systems or martial arts. It is essential to promote the practice of Eastern healing systems and martial arts across all age groups and to organize workshops to train young instructors in these systems.

KEYWORDS

Eastern Healing Systems; Martial Arts; Physical Fitness

1. INTRODUCTION

The importance of control in the process of managing the preparedness of people of different ages who are systematically engaged in Eastern healing systems or martial arts (Szczesna et al., 2021). Comprehensive testing and comparison of the results of the experimental groups demonstrated the usefulness of such systematic exercises (Alshaer et al., 2025).

In recent decades, Eastern healing systems and various types of martial arts have become increasingly popular among various segments of the population in all countries of the world (Ambrozy et al., 2024). Such activities increase physical activity, strengthen the health of those involved, help achieve psychological balance, promote familiarization with Eastern cultural values, promote the formation of self-defense skills, and so on (Babych et al., 2022; Kashuba & Goncharova, 2010). However, the organization of exercises in different age groups should be carried out according to training programs that take into account the physiological characteristics of a specific age period. Effective management of the training process and further correction of existing programs can be carried out based on the results of various types of control. The relevance of this study is caused by the failure to observe in practice the optimal selection of exercises and methods for a group of a specific age (Dzhym et al., 2023), the development of individual physical qualities outside the framework of sensitive periods, the use of excessive load volume, etc. In this regard, scientific substantiation of the specified aspects will improve the process of managing the preparedness of people of different ages systematically engaged in eastern health systems and martial arts (Bielec et al., 2021; Iasechko et al., 2022).

More and more developments are being devoted to improving methods of teaching the theoretical component of physical culture and sports (Golod et al., 2022; Dzhym et al., 2023). Individual inventions in the sports environment are recorded as intellectual property (Lasechko et al., 2022). There are known positive scientific and methodological implementations both in the training process of martial arts (Popel et al., 2023; Saienko & Michelman, 2011; Szczesna et al., 2021) and strength sports (Zhamardiy et al., 2020), and in the form of individual types of fitness and yoga, tai chi (Saienko & Michelman, 2011; Shyshkina et al., 2023) for wide use by people of all ages.

The material of this study fills the gaps in research in the direction of systematic training in Eastern healing systems and martial arts. Moreover, the significance of this study lies in highlighting the importance of controlling the training process for individuals of different age groups who regularly participate in Eastern healing systems or martial arts. The researchers believe that different

types of control can lead to better outcomes. Additionally, trainers need a deeper understanding of the effects of these practices on different age groups, some of whom face difficulties in determining the optimal methods for achieving training goals.

The study aims to create a scientific basis for improving the management of these people's training through regular monitoring and evaluation. The authors also explain the rationale for conducting this study, the most striking of which is the growing prevalence of Eastern healing systems and martial arts in a number of countries, as well as the need to organize training in a way that corresponds to the physiological characteristics of each age group.

Based on the above, the study aims to provide a scientific basis for improving the training management process of individuals of different ages who systematically participate in oriental health systems and martial arts, which will contribute to the development of more effective and appropriate training programs for the needs of each age group.

The following terms were used in this study. First, Eastern healing systems, which include a wide range of traditional practices originating in Asia, aiming to restore balance and harmony to the body and mind. These systems include techniques such as acupuncture, herbal medicine, massage, and meditation. (Barnes et al., 2008). Second, martial arts, which are traditional fighting systems aimed at self-defense, improving physical fitness, and developing self-discipline. These arts include techniques such as karate, taekwondo, kung fu, and judo (Twemlow & Sacco, 1998). Third, physical fitness management, referring to the process of planning, organizing, and evaluating physical training to achieve specific goals, such as improving physical fitness, athletic performance, or overall health (Bompa & Buzzichelli, 2018)

In light of the above, the researchers hypothesize the following hypotheses:

1. Practicing Eastern healing systems and martial arts leads to statistically significant improvements in functional and physical indicators in the experimental group.

2. The effect of practicing Eastern healing systems and martial arts varies across age groups.

2. METHODS

2.1. Design and Participants

This study was conducted using the experimental method due to its suitability for the nature of the study. The study population consisted of all members of the Cultural Institute in Poltava, Ukraine, totaling 674 individuals. The researchers formed the study groups by dividing the

participants (n=36), who were randomly selected from the study population, into two groups. The first group (experimental) included people who regularly practiced martial arts or oriental health systems. The second group (control) included people who did not practice any physical or sports activities on a regular basis. Each group consisted of 18 people, and the participants were divided into five age groups, as follows: adolescents (13-17 years), students (18-24 years), young people (25-40 years), middle-aged (40-50 years), and older adults (more than 50 years).

2.2. Instruments and Procedures

A number of tests were selected for people who practice oriental healing systems and martial arts, as well as basic and additional tests for different age groups. The selected set of exercises was presented to a group of experienced academics and sports trainers, where the necessary modifications, deletions, and additions were made by them to the selected tests in order to be approved based on their recommendations regarding their suitability for measuring the study sample. Based on this, we selected a set of tests for the contingent involved in Eastern healing systems and martial arts.

For different age periods - adolescence (13-17 years old), students (18-24 years old), youth (25-40 years old), middle age (40-50 years old) and older adults (over 50 years old), ten basic tests and ten additional tests were selected. The basic tests included: Cooper test (I), shoulder joint mobility when abducting a straight arm backwards while lying on the stomach (II), spine mobility when bending forward while standing on a step with hands touching as low as possible (III), high jump from a place using the Abalakov method (IV), flexion and extension of the arms in a prone position (V), hand dynamometry (VI), static balance with open eyes (VII) and closed eyes (VIII), jumping rope for 30 seconds (IX), catching a falling ruler (X). A set of additional tests was provided only for the contingent of age groups of students, youth and middle age period: 30 meter run (I), 100 meter run (II), pull-ups (III), hanging on bent arms on a horizontal bar (IV), long jump from a place (V), throwing a small ball for distance (VI), throwing a 2-kilogram medicine ball with both hands from below forward (VII), longitudinal split (VIII), transverse split (IX), shuttle run 4x9 meters (X).

2.3. Statistical Analyses

To compare the results of the pedagogical tests described above, participants with long-term experience in Eastern healing systems or martial arts were assigned to experimental groups consisting of 18 individuals in each age category. Control groups of the same size and age composition were formed from individuals not actively engaged in physical education or sports.

Mean test scores were compared between corresponding age groups using methods of mathematical statistics, specifically the Student's t-test. All statistical procedures were performed using SPSS software, and differences were considered statistically significant at $p < 0.05$.

3. RESULTS AND DISCUSSION

When comparing the results of the basic tests of the control and experimental groups (see tables 1-2), it is clear that the experimental group has higher scores. Table 1 shows how the basic physical fitness test results differ between the control group (people who do not practice sports) and the experimental group (people who regularly practice Eastern healing systems or martial arts), analyzed across various age ranges.

Table 1. Comparison of the results of basic tests of the control (n = 18) and experimental (n = 18) groups in different age periods

Control tests	Unit	Groups	Age period													
			Adolescence			Students			Youth			Middle age			Older adults		
			X	m	CG↔EG p1)	X	m	CG↔EG p)	X	m	CG↔EG p)	X	m	CG↔EG p)	X	m	CG↔EG p)
I	m	CG	1504,55	132,34	<0,05	2065,73	130,04	>0,05	2432,62	130,04	>0,05	2332,73	164,64	>0,05	594,32	174,83	>0,05
		EG	2133,52	163,45		2273,11	111,84		2654,73	111,84		2512,94	143,43		773,55	164,21	
II	degree	CG	64,09	2,57	>0,05	71,18	1,85	>0,05	73,87	1,49	<0,05	70,23	1,65	<0,01	67,47	1,96	<0,05
		EG	68,82	2,05		74,29	1,67		80,24	1,32		81,74	1,56		75,62	1,78	
III	cm	CG	5,09	0,82	<0,01	8,73	1,03	<0,05	7,98	1,25	<0,05	5,67	1,04	<0,05	0,05	3,52	>0,05
		EG	10,63	0,72		12,93	0,65		12,13	0,54		10,12	0,71		6,74	0,96	
IV	cm	CG	30,63	1,73	<0,05	31,21	1,88	<0,05	33,74	1,63	<0,05	30,96	1,79	<0,05	27,73	1,96	<0,05
		EG	37,97	1,63		38,76	1,54		41,61	1,51		40,21	1,75		35,91	1,84	
V	mount of times	CG	15,36	1,34	<0,01	26,27	2,16	<0,01	30,93	2,04	<0,01	35,42	2,54	<0,01	20,42	2,74	<0,01
		EG	30,27	2,32		50,44	1,89		70,32	1,67		71,64	1,67		52,42	1,67	
VI	Kg/N	CG	16,64	3,23	<0,05	34,98	3,27	>0,05	39,63	3,43	<0,05	36,63	3,67	>0,05	30,38	3,88	>0,05
		EG	28,36	2,06		43,23	2,43		52,85	2,54		48,64	2,79		36,32	2,47	
VII	sec	CG	45,96	23,74	>0,05	62,73	20,42	<0,01	102,37	16,73	<0,01	93,74	18,34	<0,05	30,52	27,87	>0,05
		EG	65,34	16,53		166,54	14,03		180,94	10,23		175,45	13,56		101,63	21,42	
VII	sec	CG	10,34	5,87	>0,05	17,32	3,24	>0,05	25,21	3,02	>0,05	22,64	3,42	>0,05	10,98	3,99	>0,05
		EG	15,86	3,23		20,77	1,65		28,87	1,54		29,54	1,45		20,12	3,98	
IX	mount of times	CG	56,78	5,64	<0,05	59,53	5,21	<0,01	60,32	4,95	<0,01	66,34	5,64	<0,01	30,69	6,97	>0,05
		EG	80,34	4,57		91,95	4,14		103,65	3,43		99,12	3,65		53,67	5,65	
X	cm	CG	23,98	4,64	>0,05	20,54	3,63	>0,05	21,94	3,65	>0,05	22,43	4,04	>0,05	25,68	4,87	>0,05
		EG	16,45	3,23		12,45	2,65		15,34	2,69		19,02	2,75		20,43	2,93	

Note. *The limiting value of the Student's t-test for n = 18 for p <0.01 is 2.88, for p <0.05 – 2.10; CG = control group; EG = experimental group*

In the following, Table 2 shows how the results of the additional physical fitness tests compare between the control group (non-practitioners) and the experimental group (practitioners of Eastern healing systems or martial arts) across different age ranges.

Table 2. Comparison of the results of additional tests of the control (n = 18) and experimental (n = 18) groups in different age periods

Control tests	Unit	Groups	Age period								
			Students			Youth			Middle age		
			X	m	CG↔EG p)	X	m	CG↔EG p)	X	m	CG↔EG p)
I	sec	CG	6,11	0,96	>0,05	5,61	0,87	> 0,05	5,93	0,97	>0,05
		EG	5,32	0,59		4,74	0,37		5,11	0,64	
II	sec	CG	16,03	2,34	>0,05	14,89	2,01	> 0,05	15,47	2,58	>0,05
		EG	13,23	1,23		12,91	1,34		14,23	1,97	
III	amount of times	CG	8,43	1,64	<0,05	12,64	2,93	< 0,05	10,14	3,04	<0,05
		EG	16,23	2,04		25,87	2,92		20,98	2,03	
IV	sec	CG	16,43	0,98	<0,01	24,54	0,87	< 0,01	25,75	0,95	<0,01
		EG	40,53	0,64		63,78	0,54		71,78	0,65	
V	cm	CG	151,74	7,73	<0,05	162,46	7,34	< 0,01	160,06	7,87	<0,01
		EG	179,47	4,45		202,97	3,57		201,03	3,79	
VI	m	CG	32,34	5,43	>0,05	35,34	4,75	< 0,05	33,29	4,04	<0,05
		EG	48,21	4,34		55,21	3,25		52,12	3,02	
VII	m	CG	10,75	0,73	>0,05	11,08	0,86	< 0,05	10,21	0,95	<0,01
		EG	12,94	0,64		15,24	0,78		18,37	0,99	
VII	degree	CG	165,07	1,38	<0,05	165,97	2,32	> 0,05	163,48	2,89	>0,05
		EG	171,26	1,03		173,07	1,38		172,46	1,98	
IX	degree	CG	155,93	2,01	>0,05	157,88	2,98	< 0,05	156,57	2,65	>0,05
		EG	162,17	1,38		169,34	1,54		161,76	1,79	
X	sec	CG	11,03	0,09	<0,01	10,96	0,07	< 0,01	11,18	0,09	<0,01
		EG	10,47	0,08		10,34	0,04		10,58	0,07	

In adolescence, a reliable statistical difference is present between such indicators as: mobility of the spinal column, flexion and extension of the arms in a prone position - at $p < 0.01$; Cooper test, high jump from a place, hand dynamometry, jumping rope for 30 seconds - at $p < 0.05$. Comparison of the results of the remaining characteristics also established the advantage of the experimental group, but at $p > 0.05$. Thus, the distance covered by adolescents when performing the Cooper test in the control group had an average indicator of 1504.55 m, and in the experimental group - 2133.52 m. Shoulder joint mobility in the control group was recorded at 64.09 degrees, in the experimental group – 68.82 degrees. When determining the mobility of the vertebral column, the control group showed 5.09 cm, in turn, the experimental group 10.63 cm. In the high jump from a place, the result of the control group was 30.63 cm, the experimental group - 37.97 cm. The control group demonstrated 15.36 flexion and extension of the arms in a prone position, and the experimental group - 30.27. The average values of hand dynamometry in the control group were 16.64 kg/N, in the experimental group – 28.36 kg/N. In the control group, the performance of static balance with open eyes was recorded with a time interval of 45.96 sec, and with closed eyes – 10.34 sec, in the experimental group – 65.34 sec and 15.86 sec, respectively. The number of jumps with a skipping rope in 30

seconds in the control group was 56.78, and in the experimental group 80.34. The results of catching a falling ruler in the control group showed 23.98 cm, and in the experimental group – 16.45 cm.

Comparison of the results of the basic tests of the control and experimental groups of the student age period established a reliable statistical difference between such indicators as: flexion and extension of the arms in a prone position, static balance with open eyes, jumping rope for 30 seconds - at $p < 0.01$; Spinal mobility, standing high jump – at $p < 0.05$. When comparing the results of other characteristics, the advantage of the experimental group is also recorded, but at $p > 0.05$. Thus, the average distance in the Cooper test for the control group was 2065.73 m, for the experimental group - 2273.11 m. The mobility indicators of the shoulder joint in the control group were recorded at 71.18 degrees, in the experimental group - 74.18 degrees.

When determining the mobility of the spine, the control group recorded a mark of 8.73 cm, and the experimental group 12.93 cm. The average result of the control group in high jump from a place was 31.21 cm, the experimental group - 38.76 cm. The results of flexion and extension of the arms in a prone position in the control group were 26.27 times, in the experimental group - 50.44 times. The indicators of hand dynamometry in the control group displayed 34.98 kg / N and 43.23 kg / N in the experimental group. Static balance with open and closed eyes in the control group was recorded at 62.73 s and 17.32 s, in the experimental group - 166.54 s and 20.77 s, respectively. The number of jumps with a rope in 30 seconds was demonstrated by the control group 59.53, and the experimental group - 91.95. In catching a falling ruler, the control group had a result of 20.54 cm, and the experimental group - 12.45 cm.

Comparing the results of the basic tests of the control and experimental groups of young people, a reliable statistical difference is determined between such indicators as: flexion and extension of the arms in a prone position, static balance with open eyes, jumping rope in 30 seconds - at $p < 0.01$; mobility of the spine, mobility of the spine, high jump from a place, dynamometry of the hand - at $p < 0.05$. When comparing the results of other characteristics, the advantage of the experimental group is also recorded, but at $p > 0.05$. Thus, the Cooper test results in the control group were 2432.62 m, and in the experimental group - 2654.73 m. Shoulder joint mobility in the control group was 73.87 degrees, and in the experimental group - 80.24 degrees. The results of spinal column mobility in the control group were recorded at 7.98 cm, in the experimental group - 12.13 cm. In high jump from a place, the control group showed 33.74 cm, and the experimental group - 41.61 cm. In flexion and extension of the arms in a prone position, the control group counted 30.93 times, and the experimental group - 70.32 times. The average wrist dynamometry value in the control group was

39.63 kg/N, in the experimental group – 52.85 kg/N. In the control group, the time of static balance with open eyes was 102.37 s, and with closed eyes 25.21 s, while in the experimental group – 180.94 s and 28.87 s. The number of jumps with a skipping rope in 30 seconds in the control group was 60.32, and in the experimental group – 103.65. In catching a falling ruler, the result of the control group was 21.94 cm, the experimental group – 15.34 cm.

The middle age period showed a reliable statistical difference between such indicators as: shoulder joint mobility, flexion and extension of arms in a prone position, jumping rope in 30 seconds - at $p < 0.01$; mobility of the spine, high jump from a place, static balance with open eyes - at $p < 0.05$. When comparing the results of other characteristics, the advantage of the experimental group was also established, but at $p > 0.05$. Thus, the distance length in the Cooper test for the control group was 2332.73 m, and for the experimental group it was 2512.94 m.

The result of shoulder joint mobility in the control group was 70.23 degrees, and in the experimental group - 81.74 degrees. The level of mobility of the spinal column in the control group was recorded at 5.67 cm, in the experimental group – 10.12 cm. The results of the standing high jump in the control group were 30.96 cm, in the experimental group – 40.21 cm. The flexion and extension of the arms in the prone position in the control group was 35.42 times, in the experimental group – 35.42 times, experimental group – 71.64 times. The following indicators were recorded in the dynamometry of the hand: 36.63 kg / N - in the control group, 48.64 kg / N - in the experimental group. In static equilibrium with open eyes, the control group had a time of 93.74 s and 22.64 s with closed eyes, while the experimental group had 175.45 s and 29.54 s, respectively. The control group made 66.34 jumps with a skipping rope in 30 seconds, while the experimental group made 99.12. The control group's performance in catching a falling ruler was recorded at 22.43 cm, while the experimental group made 19.02 cm.

In older adults, a reliable statistical difference is observed only between the indicators of flexion and extension of the arms in the prone position - at $p < 0.01$; shoulder joint mobility, high jump from a place - at $p < 0.05$. When comparing the results of other characteristics, the advantage of the experimental group was also established, but at $p > 0.05$. Thus, in the Cooper test, the following distance was established: 1594.32 m for the control group and 1773.55 m for the experimental group. In the indicators of shoulder joint mobility, the control group showed 67.47 degrees, and the experimental group - 75.62 degrees. The mobility of the spinal column in the control group was recorded at 0.05 cm, and in the experimental group – 6.74 cm. In the high jump from a place, the control group showed 27.73 cm, and in the experimental group – 35.91 cm. In flexion and extension

of the arms in a prone position, the control group demonstrated 20.42 times, and the experimental group - 52.42. Dynamometric diagnostics of the hand recorded 30.38 kg/N in the control group and 36.32 kg/N in the experimental group. Static balance in the control group was 30.52 s with eyes open and 10.98 s with eyes closed, while in the experimental group it was 101.63 s and 20.12 s, respectively. The number of jumps with a skipping rope in 30 seconds was 30.69 times in the control group and 53.67 times in the experimental group. In the falling ruler catching test, the control group's result was 25.68 cm, while the experimental group's result was 20.43.

When comparing the results of additional tests of the control and experimental groups of the student age period, a reliable statistical difference was found between the following indicators: hanging on bent arms on a horizontal bar, shuttle run 4x9 meters - at $p < 0.01$; pull-ups, long jump from a place, longitudinal split - at $p < 0.05$. The results of other characteristics also have an advantage for the experimental group, but at $p > 0.05$. Thus, the results of running 30 meters are recorded with a time of 6.11 s for the control group and 5.32 s for the experimental group. In the 100-meter run, the average indicators of the control group were 16.03 s, and those of the experimental group - 13.23 s. The number of pull-ups in the control group was recorded at 8.43, and in the experimental group – 16.23. In the bent-arm hang on the horizontal bar, the control group showed a time of 16.43 s, and the experimental group - 40.53 s. In the standing long jump, the result of the control group was 151.74 cm, and the experimental group - 179.47 cm. In the small ball throw for distance, the control group demonstrated a mark of 32.34 m, and the experimental group - 48.21 m. The results of the control group in throwing a medicine ball were recorded with a result of 10.75 m, and the experimental group - 12.94.

Flexibility of the control and experimental groups: in the longitudinal split it was 165.07 degrees and 171.26 degrees, in the transverse – 155.93 degrees and 162.17 degrees. In the 4x9 meter shuttle run test, the average time indicator of the control group was 11.03 sec, and of the experimental group – 10.47 sec. Comparison of the results of additional tests of the control and experimental groups of young people showed a reliable statistical difference between such indicators as: hanging on a horizontal bar with bent arms, standing long jump, shuttle run 4x9 meters - at $p < 0.01$; pull-ups, throwing a small ball for distance, throwing a stuffed ball, side splits - at $p < 0.05$. The results of other characteristics also have an advantage for the experimental group, but at $p > 0.05$. Thus, the result of running 30 meters in the control group was 5.61 s, and in the experimental group - 4.74 s. In the 100-meter run, the control group showed a time of 14.89 s, and the experimental group - 12.91 s. In pull-ups, the control group demonstrated 12.64 times, and the experimental group –

25.87 times. The indicators of hanging on bent arms on the horizontal bar were 24.54 sec for the control group and 63.78 sec for the experimental group. The standing long jump for the control group was 162.46 cm, and for the experimental group – 202.97 cm. Throwing a small ball for distance determined the distance of 35.34 m for the control group, 55.21 m for the experimental group. In medicine ball throwing, the results of the control group were 11.08 m, and those of the experimental group were 15.24 m. Flexibility in the longitudinal and transverse splits in the control group was 165.97 degrees and 157.88 degrees, in the experimental group - 173.07 degrees and 169.34 degrees. The results of the 4x9 meter shuttle run were as follows: 10.96 sec - for the control group and 10.34 sec - for the experimental group.

The results of additional tests of the control and experimental groups of the middle age period showed a reliable statistical difference between such indicators as: hanging on a horizontal bar with bent arms, standing long jump, throwing a medicine ball - at $p < 0.01$; pull-ups, throwing a small ball for distance - at $p < 0.05$. The results of the remaining characteristics also have an advantage in the experimental group, but at $p > 0.05$.

Thus, the average time in 30-meter running for the control group was 5.93 sec, for the experimental group – 5.11 sec. The results of 100-meter running for the control group were 15.47 sec, for the experimental group – 14.23 sec. The number of pull-ups for the control group was 10.14, and for the experimental group – 20.98. The time of hanging on bent arms on the horizontal bar was recorded as 25.75 sec for the control group and 71.78 sec for the experimental group. The control group showed 160.06 cm in the standing long jump, while the experimental group showed 201.03 cm. In throwing, the control group had the following results: a small ball for distance - 33.29 m, a stuffed ball - 10.21 m; in turn, the experimental group - 52.12 m and 18.37 m, respectively. In the 4x9 meter shuttle run, the control group demonstrated a time mark of 11.18 sec, while the experimental group - 10.58 sec.

Based on the conducted research, a statistically reliable advantage of the results of the experimental group, which systematically engaged in Eastern healing systems or martial arts, was established. In each age period, the following advantages of physical qualities are recorded according to the basic tests: in adolescence – strength, flexibility, speed-strength qualities; in students and among young people - strength, coordination abilities, speed-strength qualities, flexibility; in middle and old age – strength, speed-strength qualities, flexibility. These results are consistent with the results of other studies (Xi, 2024; Yildirim, 2014).

According to additional tests, the advantages of physical qualities are displayed in relation to age periods as follows: in students and young people - strength, coordination abilities, speed-strength qualities, flexibility; in middle age - strength, speed-strength qualities. Various positive health indicators, characteristics of motor activity and psychophysiological state have been recorded in people who have dedicated their lives to practicing Eastern healing systems or martial arts. The results were also consistent with the study's hypotheses, and the findings of this study were consistent with previous research (Ambrozy et al., 2024; Alshaer et al., 2025; Zhamardiy et al., 2020).

4. CONCLUSIONS

The results demonstrated consistency with the hypotheses, demonstrating the importance of control in the process of managing the physical fitness of individuals of different ages who systematically practice Eastern healing systems or martial arts. A comparison of the results of the groups participating in the experiment also showed a statistically significant advantage for the experimental group, proving the usefulness of systematic lessons in Eastern healing systems or martial arts. This study recommends promoting the practice of Eastern healing systems and martial arts for all age groups, and organizing workshops to teach these systems to young trainers.

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CONFLICTS OF INTEREST

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