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Training students from Astrakhan State Medical University for the norms of RLD (ready for labor and defense) complex fulfillment using non-traditional kinds of sport

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Abstract: Scientists underline evident physical fitness and health state level decrease among the students of the Russian Federation connected with COVID-19 pandemic. Higher educational establishments of Russia continue to train students for the norms of RLD complex fulfillment, in spite of still going COVID-19 pandemic. The present article considers the application of the methodology using non-traditional kinds of sport (yoga, baduantszin, Yoshiro Tsutsumi gymnastics, Tibetan gymnastics do-in and others) during physical culture lessons at Astrakhan State Medical University for a successful RLD complex norms fulfillment. ***The aim of the research***. Training students for the norms of RLD complex fulfillment. Research methods. Information sources analysis, pedagogical testing, experiment, methods of mathematical statistics, the received results analysis and summarizing. ***Results.*** The organized research work helped to define more considerable changes among the female students from the experimental group. There the training process included the methodology using non-traditional kinds of sport, directed toward the results improvement of RLD complex norms fulfillment. The female students from the experimental group improved the results (P<0,01). ***Conclusion.*** According to all results of the tests students from the experimental group fulfilled RLD norms getting gold and silver badges10 It proves the effectiveness of the presented methodology of health improvement using non-traditional kinds of sport.

Keywords: health, students, non-traditional kinds of sport, COVID-19 pandemic, physical fitness, norms of RLD complex.

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Introduction

During recent decades scientists in the sphere of medicine and pedagogics underline evident health state level decrease among students. It was revealed that nowadays more than 54% of students at higher educational establishments of Russia are included into a special and preparatory health groups and 20% of students are exempted from physical culture lessons because of poor health state.

During two years we also see the level of coronaviral infection increase because of COVID-19 pandemic among young people, especially during autumn-winter period 2021 and winter period 2022 ("omicron" strain). At a present stage it is important for students to strengthen the immunity and psycho-physical health, follow rational nutrition and day regimen, develop the ability to cope with stress, as most of them had already experienced coronaviral infection and it is necessary for them to organize organism rehabilitation after the disease [3,6].

In spite of three years of COVID-19 pandemic higher educational establishments of Russia continue to train students for the norms of All-Russian physical culture-sports "Ready for Labor and Defense" complex fulfillment at physical culture lessons.

However, in the opinion of the scientists, the means and methods of physical upbringing process

at higher educational establishments turned out to be not productive for these objectives realization, especially during the pandemic [1,7].

The tests, held in September 2021, revealed a low level of physical state and functional readiness among the students of many higher educational establishments, which proves poor health level and the restricted development of physical qualities (endurance, dexterity, quickness, flexibility and strength) [2,4,8].

Especially great difficulties students have during the norms of RLD complex fulfillment directed toward flexibility testing (a lean standing on a gymnastic bench) [5].

Nowadays searching for new ideas to introduce into physical upbringing process at higher educational establishments for physical state improvement, health level increase and even development of physical qualities in order to fulfill RLD norms successfully becomes more urgent.

Non-traditional kinds of sport integration (eastern gymnastics) into the system of physical upbringing at higher educational establishments is one of the most effective ways of the presented problem solution.

Materials and methods

Pedagogical research was organized at Astrakhan State Medical University since September 2021 till June, 2022. Since the end of October, 2021 till the middle of November, 2021 and the second week of February 2022 students of Astrakhan SMU had distance learning because of COVID-19 pandemic.

The female students of the 1st course of Astrakhan SMU took part in the experiment (n=85). They were included into the preparatory or main medical health groups. The control group included 42 people, the experimental group included 43 people.

There were no valid differences at the beginning of the pedagogical research (September, 2021) both in the control and experimental groups.

Physical culture lessons with the female students from the experimental group were organized in accordance with the created by the author complex methodology of non-traditional kinds of sport (yoga, baduantszin, Yoshiro Tsutsumi gymnastics, Tibetan gymnastics do-in and others). In the control group the lessons were organized in accordance with the work program of "Physical culture" department of Astrakhan State Medical University. Statistical data handling was organized using standard methods of variation statistics with the help of Microsoft USA. The validity of differences was according to Student criterion.

Results and discussion

In September, 2020 and June, 2022 we organized physical fitness testing among female students of Astrakhan State Medical University. Most tests were similar to the tests of RLD complex for 18-24 year-old women (VI level).

The tests held at the beginning of the pedagogical experiment showed that the results of female students from the control and experimental group didn't have valid differences (P>0,01).

In June 2022 during statistical analysis of tests results in the experimental group we revealed valid differences (P<0,01) (table):

– press-up- in the control group we see 0.7 times index improvement, the increase was 8,3% (P>0,01); in the experimental group– 4.4 times result improvement, the increase was 53,6%, (P<0,01);

– abdominal crunch (body lifting (amount of times within 1 minute)) – in the experimental group there was 8.2 times index increase, the increase – 32,8%, (P<0,01); in the control group –2,9 times index improvement, the increase was 11,5%, (P<0,01);

– flexibility (lean forward from a standing position on a gymnastic bench, cm) – in the control group there was 0,3 cm index improvement, increase – 4,8%, (P>0,01); in the experimental group –6,3 см index improvement, the increase was 100%, (P<0,01);

– 30 meters running – in the control group there was 0,9 sec. Index improvement, the increase was – 11,5%, (P<0,05); in the experimental group there was 1 sec. index improvement, the increase was 14,7%, (P<0,01);

– standing long-jump – in the experimental group there was 7,6 cm index improvement, the increase was – 4,6%, (P<0,01); in the control group there was 3 cm index improvement, the increase was 1,8% (P<0,01).

Table

Female students' indices change at the experimental and control groups during the period of the experiment

Indices	Before the experiment ($\bar{X}$ ±m)		Increase %	P	After the experiment ($\bar{X}$ ±m)		Increase %	P
	(n1=42)	(n_2=43)			(n1=42)	(n_2=43)		
Press-up: (amount of times)	8,4±0,61	8,2±0,63	8,3	>0,01	9,1±0,81	12,6±0,91	53,6	<0,01
Body lifting (amount of times within a minute)	25,1±1,53	25±0,99	11,5	<0,01	28±1,33	33,2±1,53	32,8	<0,01
Lean forward from a standing position on a gymnastic bench (cm)	6,2±0,87	6,3±0,14	4,8	>0,01	6,5±1,62	12,6±0,19	100	<0,01
30 meters running (s)	6,9±1,53	6,8±0,94	11,5	<0,05	6,1±0,74	5,8±1,37	14,7	<0,01
Standing long-jump (cm)	162±0,14	165±1,04	1,8	<0,01	165±1,04	170,2±1,53	4,6	<0,01

Analyzing the results of the tests during the pedagogical research, we revealed that the indices of female students from the experimental group in June 2022 were considerably higher than the results of the students from the control group. There was significant indices increase in the experimental group in the following tests: "Abdominal crunch", "Press-up", "Flexibility".

According to all results of RLD complex norms in June 2022 among the female students from the experimental group we underline RLD complex tests fulfillment getting gold and silver badges. Among the students from the control group there was insignificant indices increase at the end of the pedagogical experiment, but the norms of RLD complex were not fulfilled.

Conclusion

Due to COVID-19 pandemic scientists see evident health state and physical fitness worsening among students of Russia. As a result of the experienced coronaviral infection students are not always ready to use traditional means of physical upbringing (running, jumping, body-building and others) for successful RLD complex norms fulfillment.

The female students from the experimental group at Astrakhan State Medical University showed great results during RLD complex norms fulfillment owing to the methodology of non-traditional kinds of sport use (yoga, baduantszin, Yoshiro Tsutsumi gymnastics, Tibetan gymnastics do-in and others) during physical culture lessons. For most tests they received gold and silver badges of RLD complex, which proves the effectiveness of the presented methodology.

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