

Assessment of Health and Physical Fitness of Students by the Results of the Exercises of the "Ready for Labor and Defense" Programme

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Authors' contributions

This work was carried out in collaboration between all authors. Author SVM designed the study, wrote the protocol and wrote the first draft of the manuscript. Author KAV managed the literature searches. Author YGK undertook research analysis. Authors TVS, EFM and SAO managed the experimental process. All authors read and approved the final manuscript.

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ABSTRACT

By the decree of the Russian President from 3/24/2014 No. 172 "About All-Russian physical culture training and sporting programme "Ready for Labor and Defense" it was declared about the revival in Russia of the "Ready for Labor and Defense" programme directed to promoting sport and increase of a number of citizens, leading an active and healthy lifestyle. The purpose of the present research is a comparative analysis of physical fitness of students according to the results of the exercises done from the programme "Ready for Labor and Defense". The authors also tried to state the dependence of quality of doing the exercises from morphological indicators and the

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health level of young men and girls. The research included 314 students of 18-20 year of age, mostly engaged in main preparatory sports groups. The received results demonstrate influence of health level and adaptation opportunities on quality of performing the exercises of the "Ready for Labor and Defense" programme in which such physical qualities as strength, endurance and speed are tested. Such physical qualities as flexibility and coordination depend on morphological features of a body (length of a body and a constitution type) more than on health level. Involving students in performing the exercises from programme "Ready for Labor and Defense", they have a need for increase in physical activity for improvement of the physical shape that makes a positive impact on a state of health.

Keywords: Students; adaptation; health; physical readiness; all-Russian physical culture training programme "Ready for Labor and Defense".

1. INTRODUCTION

One of the general tasks providing strengthening of health of the population is an early health diagnostic, its quantity and quality. The direction based on a health level assessment from the point of view of the theory of adaptation is developing most actively now. The methodical approaches offered by Kaznacheev and Bayevsky [1,2,3] are the basis for these researches. According to their concept, health is considered as an ability of an organism to adapt to environmental conditions, and an illness is a result of failure of adaptation [4,5].

Bayevsky has offered as criterion of adaptation opportunities of a body to define the index of functional changes (IFC). The pre-medical screening based on an index assessment provides system approach to an assessment of a functional condition of the blood circulatory system as an indicator of adaptation opportunities of the whole body [2,3]. This method allows revealing pre-existing states with the functional athletic overexertion which can lead to a disease development.

Degree of intensity of adaptation reactions is caused by the development of functional reserves and physical fitness of a body [3,6]. Decrease in adaptation opportunities of a body is considered as a risk factor of high incidence of disease [7].

On the basis of ideas of adaptation by Kaznacheev and Bayevsky, classification of health levels is suggested. This classification can also be a scale for measurement of adaptation potential [2,4]:

- 1) the first level of health – satisfactory adaptation state;

- 2) the second level of health – the intensity of adaptation mechanisms;
- 3) the third level of health – dissatisfactory state of adaptation, when there is a misalignment between the individual mechanisms of the body;
- 4) the fourth level of health – adaptation failure, the state of disease or pre-existing disease.

To adapt actively to conditions of the most severe competition and social cataclysms as much as possible it is necessary to use the potential opportunities in all spheres of life, the youth is helped by physical culture and sport [8,9].

From the biological point of view, physical training represents the process of the directed adaptation of a body to training influences. The loadings applied in the course of physical training carry out a role of the irritant exciting adaptive changes in a body. Physical activities lead to necessary changes in a body, to reorganization of a metabolism and, finally, to growth of fitness and increase of adaptation [6,10,11].

The president of the Russian Federation Putin, caring about health of younger generation, stated that introduction of new forms of work, a wide choice not only sports, but also recreation activity has to become the most important way of development of physical culture and sport, especially among the youth. It is necessary to support an idea of creation of associations of student's sport clubs. This organization is urged not only to promote development of student's sport, but also to become a means of social mobility for talented and purposeful and active youth! [12].

An introduction of the "Ready for Labor and Defense" programme can make an essential contribution.

Revival of the "Ready for Labor and Defense" programme has been declared in the Decree of the President of the Russian Federation on March 24, 2014 No. 172 "About All-Russian physical culture training and sporting programme "Ready for Labor and Defense" [13].

Main aim of the revival of the "Ready for Labor and Defense" programme is promotion of sport and increase in number of citizens and leaders having an active and healthy lifestyle.

The "Ready for Labor and Defense" programme as a physical culture training and patriotic education of youth, existed in the USSR from 1931 to 1991. It was a programme for the population aged from 10 till 60.

Those who passed the norms of the "Ready for Labor and Defense" programme were awarded special badges. To earn a badge, it was necessary to execute a set of requirements, for example: to race 100 meters, to do a certain number of push-ups, to jump from a height into water or to throw a grenade. Those who passed the norms according to the records were awarded a golden, silver or bronze badge.

Taking part in the "Ready for Labor and Defense" programme, millions of young men and girls have got comprehensive physical training and physical conditioning. As a result, in 1934 in the country there were 5 million athletes, a half of them had a badge of the "Ready for Labor and Defense" programme.

The "Ready for Labor and Defense" programme was a symbol of sports superiority of the USSR over other states for a long time. It was prestigious to receive a badge of the "Ready for Labor and Defense" programme. In the seventies in the USSR more than 220 million people had the "Ready for Labor and Defense" programme badges.

At the same time the "Ready for Labor and Defense" programme was used as the universal estimated mechanism allowing to allocate the most physically developed representatives of each generation on whom all others have to equal.

The basis of the "Ready for Labor and Defense" programme is made by the exercises allowing to

define a level of development of the main physical qualities: strength, speed, endurance, adroit.

New "Ready for Labor and Defense" programme involves passing norms in the following 11 age groups (levels):

- 1 level – school students of 6-8 years of age (1-2 forms),
- 2 level – school students of 9-10 years of age (3-4 forms),
- 3 level – school students of 11-12 years of age (5-6 forms),
- 4 level – school students of 13-15 years of age (7-9 forms),
- 5 level – school students of 16-17 years of age (10-11 forms),
- 6 level – men and women of 18-29 years of age,
- 7 level – men and women of 30-39 years of age,
- 8 level – the man and women of 40-49 years of age,
- 9 level – men and women of 50-59 years of age,
- 10 level – men and women of 60-69 years of age,
- 11 level – men and women of 70 years of age and more senior.

On the first five levels, the exercises are identical for boys and girls. In the following six age groups (6-11 levels), types of exercises for men and women are different.

The new physical culture training and sporting programme is based on the main principle of voluntariness and availability. For successful passing a norm of the «Ready for Labor and Defense" programme it is recommended for students to be engaged independently in physical culture at least 11 hours a week. According to the Strategy of development of physical culture and sport in the Russian Federation for the period till 2020 the share of the population which is systematically doing physical culture and sport by 2020 shall reach 40%, and among students – 80%. At the moment no more than 29% of the population and 57% of school children and students do the exercises [14,15].

Students represent a special social group united by specific features of work, a way of life, which are characterized by a high level of traffic loads, psychoemotional tension in combination with

hypokinesia. Systematically 17,4% of young men and 11,6% of young women do physical culture and sport (except obligatory studies in a higher education institution). There are significant differences in a way of life and asickness level of students in relation to the level of physical activity. Among the students with a low level of physical activity the number of smokers from 34,5% on the first course increases up to 48,5% on the fifth course, among the students doing sports the number of smokers decreases from 14,5% to 10,2%. Students who do not do sports had catarrhal diseases more often: 49,3% got ill once; 31,5% – twice; 19,2% – three times a year. Students doing sports, this indicator made respectively 14,7%; 7,1%; 5,3% [16].

Results of doing the exercises on flexibility ("an inclination forward from a standing position with direct legs") from the "Ready for Labor and Defense" programme among students of Kazan revealed that in this exercise the type of a constitution, a proportion of length of hands and legs are not considered. Therefore, many students who are regularly doing physical culture and sport for the objective reasons cannot show a notable result [17].

The received results of the researches of dynamics of physical training among the students of Moscow, showed that during a course of physical training only 18% of students increase the level of physical fitness. It means that with 82% of students during the study indicators of physical fitness and a state of health do not improve, and sometimes even are worse. The level of their health is in most cases lower than an average [18].

When carrying out researches among the youth of Tyumen city the results are the following: the average level of physical fitness is 62%, 24,3% – level is lower than an average, 13,7% – level is higher than an average. Dynamics of all-physical training in general positive and makes 12% for the first and second year students, but it considerably decreases with the senior students. However, in this case general endurance as the most problem physical quality is observed [19].

The researches among the youth of the Nizhny Novgorod Region revealed high rates of a self-assessment of their health. It is typical of people of young age. Such diseases as eye diseases (28,6%), diseases of the musculoskeletal device (23,6%) and respiratory organs (12,4%) are mostly spread among the students. More than a

half of students have an average and high level (82,5%) of physical health. Such a factor as "the place of accommodation" makes a greater influence on a state of health, than a family membership. City students, unlike rural ones, have the best indicators of physical health, caloric content of food and component structure of a body [20,21].

Studying numerous publications has allowed us to assume that the level of physical fitness determined by the results of doing the exercises of the "Ready for Labor and Defense" programme is caused by morphological characteristics of a body and a level of health of young student.

Research objective is to carry out a comparative analysis of physical fitness among the students using the results of the exercises done from the "Ready for Labor and Defense" programme and to establish dependences of quality of doing the exercises from morphological indicators and health level.

2. METHODS AND MATERIALS

The research was conducted among 314 students (18-20 years of age) of main and preparatory physical education groups after receiving a positive decision of the local ethical committee of Lobachevsky University of Nizhni Novgorod and the written informed consent.

The determination of health level was carried out by the results of the preventive medical examinations in the Center of Health including methods of anthropometry, a phyziometry, a bioimpedansmetry and cardiointervalographiya. Measurements are made on the certified and regularly calibrated equipment with observance of accurate criteria of an exception, namely: availability at the time of inspection of sharp diseases or an exacerbation of chronic diseases, pregnancies, and also refusal from inspection.

The index of functional changes is determined by the following formula:

$$\text{Index of functional changes} = 0.011 \cdot \text{HR} + 0,014 \text{ SBP} + 0.008 \text{ DBP} + 0.014 \text{ A} + 0.009 \text{ BM} - 0,009 \text{ BL} - 0.27,$$

where HR - means heart rate, SBP and DBP – systolic and diastolic blood pressure,

BW and BL – weight and length of the body, A – age. The assessment of the Index of functional

changes is divided into 4 levels of adaptation capacities [1-3].

Students did the exercises from the "Ready for Labor and Defense" programme after passing medical examination and gaining clearance pass the norms on physical training [22].

The following exercises from the "Ready for Labor and Defense" programme were done:

- By young men: A long jump from the place with a push by two legs, run on 100 m and 3 km, tightening on a high crosspiece;
- By young women: A long jump from the place with a push by two legs, run on 100 m and 2 km, sit-up.

2.1 100-metres Race

The race is held on stadium paths or on any flat platform with a hard coating. 30-metres race is held from standing start, 60 and 100-metres are held from crouch start or standing start. The participants are off by 2 or 4.

2.2 2-3-kilometres Race

The endurance race is held on a racetrack of the stadium or any level stretch. The maximum number of participants of the race is 20.

2.3 Standing Long Jump Double Beat

Standing long jump double take-off is held by a push in a sector for horizontal jumps. The place of pushing away has to provide good coupling with footwear. The participant accepts a starting position: legs at shoulder length, a foot in parallel, socks of legs before the line of measurement. The simultaneous push of two legs is held a jump forward. The move is resolved by hands.

Measurement is performed on a perpendicular straight line from the line of measurement to the next mark left by any part of a body of the participant.

Three attempts are provided to the participant. There is the best result to offset.

Mistakes:

- 1) A spade for the line of measurement or its touch;
- 2) Performance of pushing away from preliminary jumping up;

- 3) Pushing away by legs asynchronously.

2.4 Pulling up on a High Crossbeam

Pulling up on a high crossbeam is held from a starting position: over-grip hanging, hands at shoulder length, hands, a trunk and legs are straightened, legs do not touch a floor, a foot together.

The participant does chin-ups so that the chin has crossed the top line of a crossbeam, then it falls in hung and continues to do an exercise. The number of correctly done pullings up fixed by the account of the judge is set off.

Mistakes:

- 1) Pulling up breakthroughs or with moves of legs (trunk);
- 2) The chin hasn't risen above a crossbeam;
- 3) Lack of fixing on 0,5 seconds of a starting position;
- 4) Bending of hands occurring asynchronously.

2.5 SIT-UP (Lifting of a Trunk from a Prone Position)

Sit-up (Lifting of a trunk from a prone position) is held from a starting position: lying on a back on a gymnastic mat, hands behind the head, shovels touch the mat, legs are bent in knees at right angle, feet are pressed by a partner to a floor.

The participant does the maximum number of liftings (in 1 minute), touching hips (knees) by elbows and then recovers place.

The number of correctly done liftings of a trunk is set off.

To perform the testing, couples are created, one of the partners does an exercise, another holds his feet and shins. Then the participants interchange the position.

Mistakes:

- 1) lack of touching hips (knees) with elbows;
- 2) lack of touching a mat with shovels;
- 3) fingers are opened "from the lock";
- 4) pelvis shift.

The exercises were estimated according to the rules of execution from methodical instructions to the "Ready for Labor and Defense" programme. The results were evaluated in accordance with the norms of the "Ready for Labor and Defense" programme. They were distributed on 3 groups

meeting the norms of golden, silver and bronze badges. A group of students who failed to do the norm was also created [22,23].

According to the results of survey the personified database was created together with statistical processing with the use of programs of office packet of "EXCEL v8.00" and "Version 4.03 Primer of Biostatistics". Methods of variational statistics, the evaluation method of reliability of results (criterion χ^2) with a confidential interval $p < 0,05-0,001$ were used to fulfil the tasks [24].

3. RESULTS OF THE RESEARCH

The results of "100-meters race" demonstrate that 81,8% of the students managed to meet the norm of "Ready for Labor and Defense" programme (see Fig. 1) of which 34,4% have overcome a boundary only of a bronze badge, 32,5% – of the silver, and 15,0% – the golden badge.

Exercise performance "2-kilometres race (female students) and 3-kilometres race (male students) showed that 36,3% of students failed the test. Only 3,2 % of the students overcame the norm of a golden badge, 19,8% – of the silver and 40,8% – of the bronze badge. The "long jump double beat" exercise appeared to be even more difficult for students – 54,8% of the tested students failed to reach the level even of the bronze badge.

Among the students doing weightlifting exercises – "high bar pull-ups" (male students) and "body lifting from lying position" (female students), – 16,6% of the students did not cope with the tasks. 36,3% of students have done the norm of a bronze badge, 34,4% – of the silver, and 12,7% – of a golden badge.

The results of our own researches were compared to the results of the all-Russian tests [19] which were carried out by The scientific and methodical council on physical culture and sport at the Ministry of Education and Science of the Russian Federation (Tables 1 and 2).

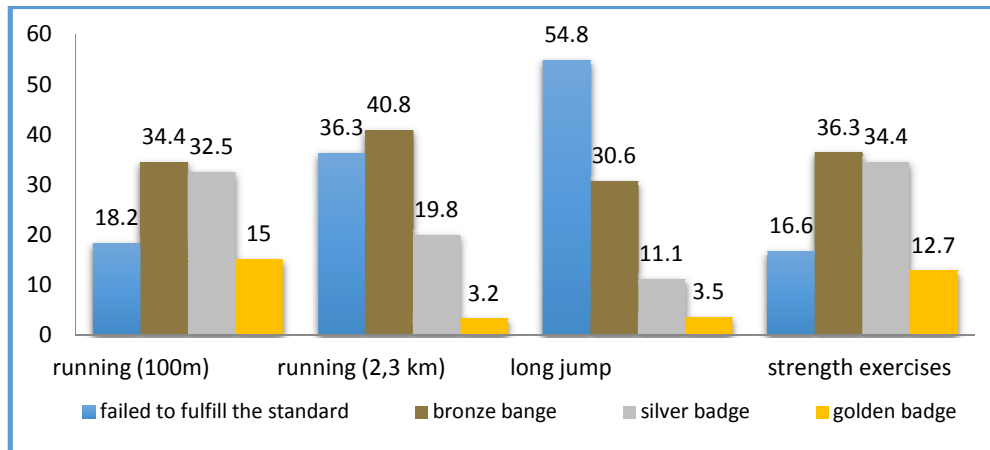


Fig. 1. The results of the exercises of the "Ready for Labor and Defense" programme, done by the students

Table 1. Comparing the results of the exercises of the "Ready for Labor and Defense" programme, performed by male students (%)

Types of exercises	Golden badge		Silver badge		Bronze badge		Failed	
	1	2	1	2	1	2	1	2
100-meters race (seconds)	48	11,2	28	39,8	12	37,8	12	11,2
3 kilometres race (minutes)	4	6,1	16	23,5	20	39,8	60	30,6
Long stand jump (cm)	36	7,1	32	20,4	12	28,6	20	43,9
Pulling up on a high crossbeam (times)	28	14,3	20	41,8	16	30,6	36	13,3

Note: 1 – the results of all-Russian studies, 2 – the results of own studies

Table 2. Comparing the results of the exercises the "Ready for Labor and Defense" programme, performed by female students (%)

Types of exercises	Golden badge		Silver badge		Bronze badge		Failed	
	1	2	1	2	1	2	1	2
100-meters race (seconds)	48	16,7	28	29,2	8	32,9	16	21,3
2 kilometres race (minutes)	36	1,9	28	18,1	8	40,7	28	39,4
Long stand jump (cm)	16	1,8	44	6,9	20	31,5	20	59,7
Sit-up (times)	28	12,0	36	31,0	28	38,9	8	18,1

Note: 1 – the results of all-Russian studies, 2 – the results of own studies

The received results helped to carry out a comparative analysis of average values of indicators of the exercises done by the students of various age (Tables 3, 4). The indicator improvement of the "Ready for Labor and Defense" programme among young men, and young girls in age range from 18 to 20 isn't revealed; the changes have multidirectional character.

Average value of the results of exercise "100-meters race" with young men corresponds to the norm of a silver badge (14,8±0,84 and 14,8 respectively), and girls – to the norm of a bronze badge (17,3±0,76 and 17,5 respectively). Average values of the results of the exercises on endurance – "2-kilometers race (young girls) and

3-kilometers race (young man)" do not correspond to the norms of a bronze badge. The same estimates are received while doing the exercise "a long jump from the place by a push with two legs". Average values of the results of the power exercises with the students correspond to the norms of a bronze badge and are close to the characteristics of a silver badge: with young men "high bar pull-ups" – 9,6±2,01 and 9 times respectively; with girls "body lifting from lying position" – 37,3±6,43 and 34 times respectively.

According to the results of the functional changes index all students have been grouped into 4 groups of health (Fig. 2).

Table 3. Average results of the exercises the "Ready for Labor and Defense" programme, done by male students (M+σ)

Types of exercises	Norms of the "ready for labor and defense" programme			Study results			
	1	2	3	18 years	19 years	20 years	all
100-meters race (seconds)	15,1	14,8	13,5	15,0±0,63	14,8±0,88	15,0±1,06	14,8±0,84
3 kilometres race (minutes)	14,00	13,30	12,30	14,55±0,74	13,55±1,17	14,38±0,89	14,15±0,94
Long stand jump (cm)	215	230	240	206,4±22,42	207,3±25,70	207,0±19,68	206,6±23,43
Pulling up on a high crossbeam (times)	9	10	13	9,7±2,12	9,6±2,07	9,1±1,83	9,6±2,01

Note: 1 – bronze badge norms, 2 – silver badge norms, 3 – golden badge norms

Table 4. Average results of the exercises of the Complex, done by female students (M+σ)

Types of exercises	Norms of the "ready for labor and defense" programme			Study results			
	1	2	3	18 years	19 years	20 years	all
100-meters race (seconds)	17,5	17,0	16,5	17,4±0,86	17,2±0,68	17,2±0,67	17,3±0,76
2 kilometres race (minutes)	11,35	11,15	10,30	12,39±0,79	12,16±0,89	12,10±0,83	12,23±0,85
Long stand jump (cm)	170	180	195	157,4±15,58	158,7±15,11	158,3±18,85	157,9±15,68
Sit-up (times)	34	40	47	36,4±6,16	38,2±6,64	38,6±5,43	37,3±6,43

Note: 1 – bronze badge norms, 2 – silver badge norms, 3 – golden badge norms

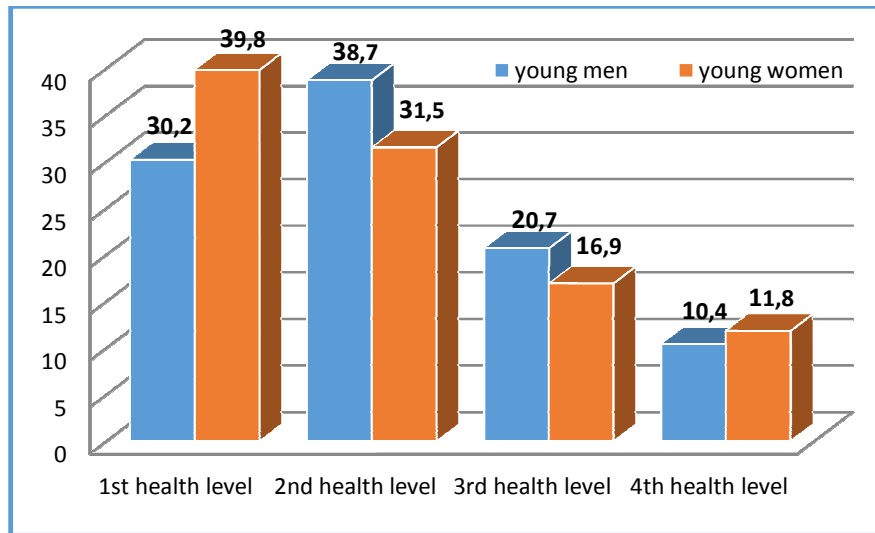


Fig. 2. Distribution of the students according to the health groups, %

The results of the calculations showed that 36,9% of students (young female students are 9,6% more than young male students) have the first health level (satisfactory adaptation); 33,6% of the youth (the number of young male students is 7,2% more) refer to the second health level (adaptation tension); 18,1% of the students (the young male students are 3,8% more) refer to the third health level (unsatisfactory adaptation); 11,4% of the students (young female students are 1,2% more) refer to the fourth health level (adaptation failure). The lack of gender distinctions between the number of young male and female students in each group is confirmed by statistical calculations: $\chi^2=3,75$; $R=0,2903$.

The results of the exercise "100-meters race" show, that students with the first and the second health levels have better results. Among them there are more young students having got silver and golden badges (see Table 5). The "2-

kilometers (female students) and 3-kilometers (male students)" exercise showed significantly low results with the students of the third and fourth health levels; there are no golden badges among them.

The "standing long jump double beat" exercise appeared to be the most difficult. At the same time, there isn't any significant difference among the received rates of the students with different adaptive capacities ($\chi^2=6.60$; $P=0.6789$). In the present distribution of the results (Table 6) no correlation between the successfulness of the exercise performing and the health level can be found. But taking into account the length of a body, the dependence is revealed: Students with a high growth (young females are higher than 170 cm, young males are higher than 180 cm) got four times more results corresponding to silver and golden badges while doing the exercise.

Table 5. Distribution of the results of the exercises of norms of the "Ready for Labor and Defense" programme: 100-meters race, 2-kilometers race (Female students) and 3-kilometers race (Male students) (%)

Health levels	Running (100 m)				Running (2 km or 3 km)			
	1	2	3	4	1	2	3	4
First level	14,8	25,6	42,2	17,4	18,1	45,5	30,6	5,8
Second level	10,8	41,2	29,4	18,6	38,2	42,2	16,7	2,9
Third level	26,3	42,1	26,3	5,3	50,9	40,3	8,8	0
Fourth level	38,1	32,4	17,7	11,8	73,5	17,7	8,8	0
All students	18,2	34,4	32,5	15,0	36,3	40,8	19,8	3,2
Statistics	$\chi^2=30.45$ c/c=9 P=0.0000				$\chi^2=59.23$ c/c=9 P=0.0000			

Note: 1 – failed, 2 – reached the level of the bronze badge, 3 – reached the level of the silver badge, 4 – reached the level of the golden badge

Table 6. Distribution of the results of the exercises of the "Ready for Labor and Defense" programme: Standing long jump, body lifting (Female students) and pull-ups (Male students) (%)

Health levels	Standing long jump				Body lifting, pull-ups			
	1	2	3	4	1	2	3	4
The first health level	50,4	33,1	11,5	5,0	10,7	30,6	43,0	15,7
The second health level	61,8	26,5	8,8	2,9	9,8	38,2	37,3	14,7
The third health level	47,4	36,8	14,0	1,8	24,6	47,4	22,8	5,3
The fourth health level	61,7	23,5	11,9	2,9	44,1	32,4	14,7	8,8
All students	54,8	30,6	11,1	3,5	16,6	36,3	34,4	12,7
Statistics	$\chi^2=6,60$ c/c=9 P=0,6789				$\chi^2=58,19$ c/c=9 P=0,0000			

Note: 1 – failed, 2 – reached the level of the bronze badge, 3 – reached the level of the silver badge, 4 – reached the level of the golden badge

Among the students, who performed the "pull-ups" exercise (male students) and "body lifting from lying position" (female students), the dependence of high results on health level has been revealed: among the student with first and second health levels there are much more silver and golden badges and less number of those who failed passing the norms of the "Ready for Labor and Defense" programme on strength exercises.

4. DISCUSSION

The results of the conducted research show that the weakest point in physical fitness of the students is the endurance shown in cross-country race (2 km and 3 km) i.e. where the crucial role is played by the possibilities of cardiovascular and respiratory systems. The same results correlate with the low level of physical health. Such a tendency is traced in the majority of higher education institutions of the country. The researches of students' physical fitness from 30 higher education institutions of Russia, including the young men of preinduction age carried out by Scientific and methodical council on physical culture and sport at the Ministry of Education and Science of the Russian Federation showed that an average result in 3-kilometer race is 13,41 minutes. (This is 2 points according to the program of the discipline "Physical culture"); an average result in 100-meters race is 13,9 seconds (3 points); an average result in pulling up in hanging on a crossbeam is 12 times (4 points) [19].

While doing the exercises on endurance (2-kilometers and 3-kilometers race) a third of the students haven't coped with the task and received the unsatisfactory marks, demonstrating insufficient development of this physical quality and respectively justifying a low health level.

The exercise "the long jump from the place a push with two legs" was even more difficult for the students. 54,8% of them could not do even the norm of a bronze badge. Difficulty of performance of this exercise is revealed by other researchers too. It means the incorrectness of this norm to physiological opportunities of the most of young men and girls. The researches, conducted among the students of the city of Kazan have also revealed a great difficulty in doing the exercise "long jumps from the place with a push two legs" [17].

Among the students having the first and second health levels while doing the exercises of the "Ready for Labor and Defense" programme, a number of the youth with the marks corresponding to silver and golden badges is more than among the students with the third and the fourth level of health, except the exercise "a long jump from the place".

5. CONCLUSION

The results of the research show that the influence of the health level and adaptation opportunities on the quality of performing the exercises of the "Ready for Labor and Defense" programme, in which such physical qualities as strength, endurance and speed are tested. Such physical qualities as flexibility and coordination depend on morphological features of a body (length of a body, a constitution type) more than of a health level.

Involving students in performing the exercises of the "Ready for Labor and Defense" programme, they have a need for increase in physical activity for enhancement of the physical shape that makes a positive impact on a state of health.

To arouse students' interest in doing physical exercises within the "Ready for Labor and

Defense" programme, it is necessary to create the corresponding conditions: To determine the best students in a group, at a faculty, at a university; to inform the public about the best achievements of the students on the "Ready for Labor and Defense" programme; to establish allowances to grants for achievements in the "Ready for Labor and Defense" programme; to issue the relevant document as a record book of the athlete with indication of the level of achievements in the "Ready for Labor and Defense" programme, etc.

It should be noted that along with the approval of the "Ready for Labor and Defense" programme, the Government of Russia prepared and signed several resolutions which help to create additional motivation for passing the norms of the "Ready for Labor and Defense" programme. So, a citizen who has executed norms of the "Ready for Labor and Defense" programme on a golden badge will have health and moral satisfaction, and also they will get financial benefit. The children doing sports and successfully passing the norms of the "Ready for Labor and Defense" programme in case of entering a higher education institution will have an advantage before those who are indifferent to sport [13,15,20].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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