

## The influence of Qazaq Kuresi classes on the management of the level of reserves of the athletes' body

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### Abstract

In the Republic of Kazakhstan, specialists in the field of Physical culture and Sports are faced with the problem of increasing interest in practicing folk national sports, based on the creation of both theoretical paradigms and a more evidence-based comprehensive practical database of research in scientific and methodological orientation. The research is aimed at creating a bank of models of bio pedagogical data for coaches and young people engaged in national wrestling, on the influence of Kazakh wrestling classes on the physical fitness of the muscles of the musculoskeletal system of its quality and the cardiac activity of highly qualified wrestlers in the preparatory period of the training process. The research was experimental, and data was analyzed using spss' correlation coefficient. The results revealed the positive effects of the quality of development management on the level of general and special physical fitness of highly qualified athletes of the national team who constantly train in different teams of the republic.

**Key words:** bio pedagogical data; health orientation; motor and functional capabilities; qazaq kuresi; wrestlers.

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## 1. Introduction

In the Republic of Kazakhstan, the issues of sustainable development of physical culture and mass sports were set by the objectives of the sectoral Program of development of physical culture and sports for 2011-2015 and 2016-2020. N.A. Nazarbayev in his speeches emphasized that: "Only a healthy nation can be called competitive". The question "Of raising the prestige, the promotion and popularization of physical culture and sports" was raised at the Republican Conference in Astana on November 18, 2011, and in the January message to the nation, the President of Kazakhstan announced a task - to involve 30 % of the population of the country to physical culture and sports by 2020. (International News Agency KazInform, n.d; Zakon, 2011).

The leading idea of the present researches is connected with the necessity of realization of the problems set in the Republic of Kazakhstan before the specialists in the sphere of Physical Culture and Sport: coaches, teachers of general education, sports schools, colleges and universities, researchers in the field of physical culture and sports to increase interest in doing folk national sports, both in rural and urban areas on the basis of creating theoretical paradigms, but also more evidence-based integrated practical database of scientific and methodological research that optimize the state of the body engaged in folk types of sports (Khamchiev et al., 2013).

The use of modern scientific approaches and biopedagogical technologies make it possible to scientifically substantiate the impact of doing national sports on healthy lifestyles and the reserve capacity of the body, thereby increasing the interest of young people to preserve health, prolonging the active longevity of people engaged in means of national forms of physical culture and sport. The highest value in any society is the human desire for self-preservation of health and its maintenance in order to extend the maximum duration of life without disease.

It is known that the genetic predisposition to disease in humans require people to eliminate risk factors for disease by engaging in moderate physical activity, which is possible through the use of folk games and types of physical culture. But this process must involve parents, physical education teachers, coaches, instructors, fitness trainers, must have in-depth scientific-methodological information validated by model levels to guide application in practice (Gabdrakhmanova, Turetayeva & Doszhanova, 2020). For this purpose, video recordings of lectures and methodical classes on the impact of national sports on the body and health are necessary. There should be developed recommendations for different age groups on the volume, intensity, duration of physical activity and rest intervals, on the formation of skills, which is brought up through awareness and literacy of the population about the knowledge and factors that preserve and train the body health, which with systematic repetition of optimal movements to become a habit and the need for a healthy lifestyle and motor activity and therefore the preservation of health.

The solution of this direction should be based on research related to the search for practical evidence of the positive impact of national sports on healthy lifestyles and increasing efficiency, by means of national sports. It could also be the definition of optimal approaches with the specification of theoretical and practical tasks in the development of physical health, by improving the system of physical education and training of young people in the country, using non-ideological approaches combined with scientific approaches to the optimal use of physical activity to reduce injury, physical overload. "In the modern world, sports and healthy lifestyles, along with economic development, are among the key indicators of the quality of life of citizens, are considered and are an important aspect of social employment" (Astana, 2016).

The analysis of the scientific and methodological literature on the problems of orientation of studying the peculiarities of development of folk games and national kinds of physical culture and sports in Kazakhstan has shown that the scientists analyze the issues in historical, sociological, culturological and pedagogical aspects to a greater extent. Researchers in the sphere of physical culture of sports of the republic connect their tasks with the importance and significance of using folk games in the country for preservation of its original culture and maintenance of physical fitness and a healthy way of life.

The authors of this research note that along with the importance of using folk games and national sports in the physical training of young people, the lack of development and implementation of folk games and national sports in Kazakhstan in the life and lifestyle of young people is due to their lack of research on the multifaceted issues of theory and practice of sports training on the specific effects of national sports on the body.

The reasons for the lack of popularization of national sports in the youth environment in the scientific literature is associated with the fact that there are very few experts in teaching national sports. In the analysis of the literature, this research focused attention on one more insufficiently investigated and implemented side of preparedness (Kulbayev et al., 2020). It is insufficient experimental substantiation of features of influence of occupations by national kinds, of fights on the development of levels of reserve functional possibilities of organism systems, and their interrelation with display of physical efficiency. Insufficient attention is given in most cases to the biopedagogical side of research, reflecting both its role in sports activities and emphasizing its importance in maintaining the performance and resistance of the biological component of health and resistance to disease on the basis of increasing the reserves of body systems, which reduces the importance for use in the formation of a healthy lifestyle.

In the emphasis in scientific and methodological literature knowledge of national sports predominantly on philosophical directions with arguments about the body, a reduction in research on philosophical - psychological direction removes the understanding of the true biological mechanisms of levels and effects of sport on the body, and therefore the importance and role it plays in a healthy way of life of a person. Revealing of poorly developed directions and sides in an estimation of the state of preparation of organism systems of wrestlers is caused by insufficient development and use in a training process of bio-pedagogical control and experimental research that reduces the proof base of importance of influence of loads of national wrestling occupations on physical and functional health of an organism (Tehdit, 2020; Otanga & Aslam, 2020).

The given parts of the research on the degree of study on assessment of influence of the Kazakh folk types of physical activity on physical qualities, motor activity and functional efficiency of an organism, is an actual and insufficiently studied direction and demands practical scientific and methodical developments, which was the object, subject and purpose of the present series of research. The object of the study in this subsection - educational and training process of training qazaq kuresi fighters of high qualification in the pre-competition period.

### **1.1. Purpose of study**

The subject of the study is aimed at assessing the effectiveness of the use of methodological approaches of coaches to manage the level of physical fitness reserves of general physical and functional fitness for the preparatory period. The purpose of the study of this series - to scientifically substantiate the effectiveness, the ongoing physical training of wrestlers of high qualification, members of the Kazakh national team of qazaq kuresi in the preparatory period for international competitions in different team, regions and cities of the republic in the preparatory period. Research objectives are:

- To determine the levels of physical fitness of wrestlers qazaq kuresi of high qualification in the preparatory period and analyze the models of levels of readiness for the pre-competition period in preparation for the world championship of wrestlers qazaq kuresi.
- To identify the presence of features of the development of reserves of physical and functional fitness of the body and differences in physical fitness in wrestlers, depending on the weight and body weight.
- To give recommendations on the peculiarities of the influence of training of wrestlers kazakhsha kures on the levels of growth of their physical fitness.

## **2. Materials and methods**

### **2.1. Research methods**

Pedagogical (determining the level of reserves of speed and strength indicators and endurance), statistical evaluation  $\bar{X}$ ,  $S_x$ ,  $r$ ,  $p$ ,  $V$ ,  $\%$ . The research was experimental research.

## **2.2. Participants**

The research was conducted on 11 wrestlers of high qualification (masters of sports) the 1st group - 6 wrestlers in the weight category of 60-70 kg and the 2nd group - 5 wrestlers in the weight category of 70-80 kg.

## **2.3. Organization of the research**

The wrestlers were trained during the preparatory period by different coaches on methods and techniques developed by them. In the pre-competition period wrestlers were gathered at the training camp to prepare for the upcoming competitions. Wrestlers in the initial levels of physical speed and strength preparedness, were taken through the following tests: jumping length from a place (in centimeters), time of running for 30 m (s), hand strength (kg), power endurance: static - time of holding the angle on a horizontal bar (s), dynamic - the maximum number of pulling up on a bar (with an additional load of 10 kg), deadlift (kg); flexibility (cm), HR (beats/min), weight (kg) training (Astana, 2016). The body mass (weight) assessment test served in our studies for an integral evaluation of the degree of metabolism, the level of energy and information processes in the human body.

To evaluate the regional-global manifestation of endurance speed and strength qualities of wrestlers in our studies, we applied such a test as - "deadlift". The test consisted in lifting the bar from the floor and the technique of performing the movement, which allowed to find out the level of inclusion in the muscle work of the muscles, which can be attributed to the global force of the exercise on the muscles of the wrestler, by including the power of the muscles of the buttocks, the rear surface of the legs, the body and back, abdomen, lower back, abdominal muscles that hold and protect internal organs of the abdomen and involved in breathing, gluteal muscles and the rear surface of the thighs.

This test reflects whether or not the wrestler's muscles are well developed, as they strengthen the spine, contribute to optimal control of rotation, extension and twisting of the torso, the ability to consciously engage the abdominal muscles and maintain intra-abdominal pressure, etc. It is known that performing deadlift exercises (power extreme) is used as a common element of physical training and causes an increase in the amount of testosterone hormone, which affects the growth of muscle mass and strength of the athlete and strengthens the lumbar muscles (Shilova,1999; Gussakov et al., 2021).

This test allows you to assess whether the wrestler has well developed muscles that strengthen the spine, contribute to optimal control of rotation, extension and twisting of the torso, the ability to consciously engage the abdominal muscles and maintain intra-abdominal pressure, etc. It is known that the performance of the exercise with deadlift causes an increase in the amount of the hormone of testosterone, which affects the growth of muscle mass and strength of the fighter by strengthening the central nervous system. Thus, the test - the deadlift serves to assess the presence of the power of the physique, assess the level of development of explosive power and the muscles of the body.

The deadlift test is used to assess the power of the muscles that form the physique and the level of development of explosive power and the muscles of the body. The coach of the national team constantly needs to have objective indicators for the selection of more promising wrestlers in qazaq kuresi, characterizing the physical and functional reserves of the athlete, affecting athletic performance. For qualitative selection of highly qualified wrestlers, we should determine individual physical features in order to identify weaknesses that can significantly hinder the realization of high results while establishing their undoubted physical and motor relevance. To implement this question, we evaluated the levels of achieved reserve capabilities by the end of the preparatory and period of wrestlers trained by different coaches.

### 3. Results

The results of the level of qualities of physical fitness in wrestlers of high qualification of qazaq kuresi achieved at the end of the preparatory period are presented in Table 1.

Analysis of HR data showed that the heart rate of all wrestlers was within the average values of the norm for the given age, except for one wrestler, whose heart rate was increased by 13.7% of the norm of a normal person, indicating that the load in the preparatory period may have been excessive for him and cardiac activity experienced circulatory insufficiency.

Calculation of the number of heartbeats per kg of body weight for wrestlers 3 and 4 showed that the normal heart rate of 60-62 beats per minute, at a weight of 66,2-67,5 kg is 1,06,1,12 beats/kg/min, which is higher than the average data on the group and proves the higher blood supply by 34,8,-39,3%, 3% per 1 kg of weight, at rest, as the weight of the athletes was higher and the pulse was lower by 15,1-17,5% than the wrestlers 1,2 having less weight by 6,6-7,1 kg, but a higher pulse, the reaction when there is no economization in the activity of the cardio-vascular system of wrestlers 1,2,5,6 is obvious. Indicators of general physical training of wrestlers of High qualification is shown in Table 1.

**Table 1** Indicators of general physical training of wrestlers of High qualification RK (1 group n=6) on kazakhsha kuresi (kazak kuresi) at the end of the preparatory period (with the weight of 60-70 kg)

| Name                     | Sport. qualification | Heart rate, beats / min | The weight, kg / Heart rate / beats / min | The time of holding the angle on the crossbar, f / body weight, kg/f | Brush force, kg (F); Body weight, kg / F |             | Running time of 30m, min / weight, kg / f | Max. number of pull-ups on the bar (with an additional load of 10 kg); q-ty; q-ty / body weight (kg) | Deadlift, kg; / body weight, kg | Flexibility, cm; /body weight, kg | Standing jump length, cm / body weight, kg |
|--------------------------|----------------------|-------------------------|---|--|--|-------------|---|--|---------------------------------|-----------------------------------|--|
|                          |                      |                         |   |  | right                                    | left        |   |  |                                 |                                   |  |
| 1 T.H.                   | MC                   | 73                      | 60,8/<br>0,83                             | 23   | 50/<br>1,22                              | 50/<br>1,22 | 4,42<br>/16,5                             | 8<br>/8,85   | 140<br>/2,30                    | 24<br>/2,71                       | 214<br>/3,52                               |
| Heart rate / test result | <                    | <                       | 1,2                                       | 3,17   | 1,46                                     | 1,46        | 13,7                                      | 9,12   | 1,91                            | 3,04                              | 2,93                                       |
| % difference with X      |                      |                         |   | <<br>43,9  | <<br>7,1                                 | <<br>4,4    | <<br>2,7                                  | <<br>69,6  | ><br>8,2                        | ><br>34,8                         | <<br>5,7                                   |
| 2 Н.Д.                   | MC                   | 73                      | 59,4<br>/0,81                             | 33<br>/1,8   | 50<br>/1,19                              | 50<br>/1,19 | 4,38<br>/13,5<br>6                        | 15<br>/3,96  | 150<br>/2,52                    | 20<br>/3,97                       | 225<br>/3,70                               |
| % difference with X      |                      |                         | <<br>9,5                                  | <<br>20,8  | 3,8                                      | <<br>4,4    | 1,8                                       | <24,3  | <1,7                            | ><br>5,6                          | <0,8                                       |
| 3 E. E.                  | MC                   | 62                      | 66,2/><br>1,06;                           | 60   | 54                                       | 51          | 4,67                                      | 18   | 165                             | 19                                | 237  |
| % difference with X      |                      | 15,1                    | 34,9%                                     | ><br>43,9%   | -  | <<br>3,3    | 8,6                                       | <<br>9,1   | ><br>8,2                        | ><br>6,7                          | ><br>2,3                                   |
| 4 X.E.                   | MC                   | 60                      | 67,5/<br>1,12                             | 57   | 55                                       | 52          | 4,32                                      | 21   | 140                             | 24                                | 232  |
| % difference with X      |                      | 17,9                    | 38,3                                      | ><br>36,7  | 2,2                                      | ><br>1,4    | -   | ><br>5,0   | <8,2                            | <34,8                             | ><br>2,3                                   |
| 5 И.Қ                    | MC<br>MK             | 78                      | 69,5<br>/0.89                             | 40   | 54                                       | 50          | 3,99                                      | 22   | 155                             | 10                                | 245  |
| % difference with X      |                      | 8,3                     |   | >4,1   | -  | < 4,4       | 7,3                                       | ><br>11,1  | ><br>1,4                        | <43,9                             | ><br>8,6                                   |
| % difference with X      |                      | 13,7                    |   | <2,43  | >11,52                                   | >13,4       | 7,3                                       | ><br>5,5   | ><br>8,2                        | <43,9                             | 8,3  |

|                   |    |                |                         |                |              |                 |              |               |               |               |               |
|-------------------|----|----------------|-------------------------|----------------|--------------|-----------------|--------------|---------------|---------------|---------------|---------------|
| $\bar{X}_1$       |    | 72,7           | 65,6/<br>0,73           | 41,7           | 53,8         | 52,3<br>(>2,8%) | 4,3          | 19,8          | 152,5         | 17,8          | 226,8         |
| Sx/%              |    | 11,0(1<br>5,2) | 4,5<br>(6,8)            | 14,3<br>(34,3) | 3,7<br>(6,9) | 4,3<br>(8,2)    | 0,3<br>(6,9) | 3,3<br>(16,7) | 11,3<br>(7,4) | 6,4<br>(35,9) | 14,0<br>(6,2) |
| % > $\bar{X}$     |    | 33,3           |                         | 33,3           | 33,3         | 16,7            | 33,3         | 50,0          | 50,0          | 62,7          | 50,0          |
| % = $\bar{X}$     |    | 33,3           |                         | 16,7           | 33,3         | 16,7            | 50,0         |               |               |               |               |
| % < $\bar{X}$     |    | 33,4           |                         | 50             | 33,4         | 66,7            | 33,3         | 50,0          | 50,0          | 33,3          | 50,0          |
| $\bar{X}_2$ group | MC | 77,7           | 84,5<br>(81,5-<br>89,3) | 36,4           | 65,6         | 65,4            | 4,5          | 22,2          | 169,0         | 16,0          | 169,0         |
| % > $\bar{X}_1$   |    | 7,2            | 31,0                    | -12,3          | 21,9         | 25,0            | 4,65         | 12,1          | 10,8          | -10,1         | -25,4         |

Let us consider the results of static endurance of wrestlers' muscles in the test of holding the angle on the bar. It was found that the time of holding the angle on the bar was higher on 36,7 - 43,9% for those wrestlers, who had advantage and economical blood circulation at rest is pulse of 60-62 beats/min. The results show that the past preparatory period had a more favorable effect on the cardiac activity of only 2 wrestlers with 66-67 kg, number 3 and 4 in the list. The different level of training in static endurance, reaching 36,7 - 43,9% in wrestlers was revealed, which can significantly affect the overall performance at the competitions.

Analysis of upper extremity strength indicators of the right and left hand, according to the average data was lower in the left hand, indicating greater strength qualities of the right extremity hand. Individual examination of strength revealed in 33.3% no differences between the right and left hand, and one wrestler (16.7%) had higher strength of the left hand. Comparing the strength of the hand in masters of sports in kazakhsha kures with the maximum values found in the scientific literature in athletes' wrestlers, its level was lower by 40%.

In addition, it is obvious that it is more appropriate to compare the indicators of hand strength correlated with body weight, since the muscle mass of wrestlers varies quite a lot in qazaq kuresi from 59 to 100 or more kilograms.

Strength performance in the group of masters of sports in the test of holding the angle on the bar is related to the strength of the grip, with the strength of the flexor muscles on the inner surfaces of the forearms and hands, which is above average values in 62.3% of wrestlers.

The speed qualities of wrestlers in the 30 m running test had an average variation in different wrestlers within 6.9% with individual differences in performance from 1.8 to 9.8%.

The most effective exercise for training, is the very pulling up on the bar. For successful mastering of the physical training standards, it is necessary to perform a certain amount of load. Practical experience shows that the weekly total number of pull-ups in this case should be 60-100 times. This is a challenging task, which can be solved only by well-prepared people during 5-6 weeks of training. A low initial level of preparedness requires a gradual increase in the volume of training load: from 20-30 repetitions per week with a gradual build-up to the specified values.

High correlations of HR with speed work in the test of running for 30 m and flexibility, body weight affects the appearance of strength and the number of pull-ups on the bar with an additional load of 10 kg of body weight, depends, on the strength of the left hand and flexibility were established.

**Table 2** Correlation relationship between the physical indicators of speed and strength, endurance and flexibility of wrestlers qazaq kuresi at the end of the preparatory period (n=6)

| Testing indicators   | Heart rate, beats /min | Weight, kg | Swing time holding the corner on the crossbar (f) | Strength brushes, kg right | Strength brushes, kg left | Running time 30m, f / weigh t, kg / f | Max. number of pull-ups on the bar (with an additional load of 10 kg); q-ty; q-ty / body weight (kg) | Deadlift, kg; / body weight, kg | Flexibility, cm; /body weight, kg | Standing jump length, cm / body weight, kg |
|--|------------------------|------------|---|----------------------------|---------------------------|---------------------------------------|--|---------------------------------|-----------------------------------|--|
|  | 1                      | 2          | 3   | 4                          | 5                         | 6                                     | 7  | 8                               | 9                                 | 10   |
| 1. Heart rate, beats / min   | 1                      | 0,3        | -0,6  | 0,4                        | 0,7                       | -0,8                                  | 0,4  | 0,4                             | -0,8                              | 0,5  |
| 2. Weight, kg  | 0,3                    | 1          | 0,5   | 0,9                        | 0,6                       | -0,6                                  | 1,0  | 0,5                             | -0,7                              | 2  |
| 3. Swing time of holding the angle on the crossbar, f                  | -0,6                   | 0,5        | 1   | 0,4                        | 0,0                       | 0,3                                   | 0,1  | 0,3                             | 0,1                               | 6  |
| 4. Right hand strength, kg   | 0,4                    | 0,9        | 0,4   | 1                          | 0,9                       | -0,5                                  | 0,8  | 0,6                             | -0,6                              | 0,2  |
| 5. Left hand strength, kg  | 0,7                    | 0,6        | -0,01   | 0,9                        | 1                         | -0,5                                  | 0,6  | 0,5                             | -0,5                              | 0,6  |
| 6. Running time (30m, sec)   | -0,8                   | -0,6       | 0,3   | -0,5                       | -0,5                      | 1                                     | -0,7   | -0,1                            | 0,7                               | 1  |
| 7. Max. number of pull-ups on the bar with an additional load of 10 kg | 0,4                    | 1,0        | 0,1   | 0,8                        | 0,6                       | -0,7                                  | 1  | 0,1                             | -0,6                              | 0,1  |
| 8. Deadlift, kg  | 0,4                    | 0,5        | 0,3   | 0,6                        | 0,5                       | -0,1                                  | 0,1  | 1                               | -0,7                              | 0,5  |
| 9. Flexibility, cm   | -0,8                   | -0,7       | 0,1   | -0,6                       | -0,5                      | 0,7                                   | -0,6   | -0,7                            | 1                                 | 0,1  |
| 10. Standing jump length, cm   | -0,5                   | 0,2        | 0,6   | -0,2                       | -0,6                      | 0,1                                   | -0,1   | 0,05                            | -0,1                              | 1  |

The analysis of the correlation coefficient between speed and strength muscle feeders in wrestlers qazaq kuresi showed that during the preparatory period only 62.9% of 8 indicators of the studied physical qualities acquired average correlations between themselves (Table 2), which is clearly not enough and indicates a lack of continuous monitoring and correction of the level of development of physical qualities.

Table 3 presents data on the reaction of the cardiovascular system (CVS) of wrestlers to the maximum test to check the readiness of the special biological readiness of the circulatory system for economic operation of the CVS, characterizing special endurance at the end of the preparatory period. HR was determined at rest, after the maximum test immediately and after 1 minute of rest.

**Table 3:** Correlation indexes of functional reaction of cardiovascular system of wrestlers to the special maximum test, throws characterizing the special endurance at the end of the preparatory period.

| Indicators | Weight, kg | Quality of throws, score | Number of receptions | Resting heart rate, beats / min | Heart rate, max (beats / min) | Heart rate, after 1 min, beats / min | Heart rate, recovery, after 1 min of rest,% |
|------------|------------|--------------------------|----------------------|---------------------------------|-------------------------------|--------------------------------------|---|
|            | 1          | 2                        | 3                    | 4                               | 5                             | 6                                    | 7   |
| the weight | 1          | 0,2                      | 0,4                  | -0,4                            | 0,4                           | 0,6                                  | -0,1  |

|                           |     |      |      |      |      |     |      |
|---------------------------|-----|------|------|------|------|-----|------|
| The quality of the throws | 0,7 |      | 0,5  | 0,2  | -0,1 | 0,1 | 0,1  |
| Number of receptions      | 0,7 | 0,4  |      | 0,4  | 0,4  | 0,3 | -0,3 |
| Resting heart rate        | 0,7 | -0,3 | 0,4  |      | 0,4  | 0,3 | -0,3 |
| HR max                    | 0,1 | 0,3  | -0,1 | 0,6  |      | 0,4 | 0,4  |
| Heart rate, after 1 min   | 0,1 | -0,3 | 0,2  | -0,1 | -0,9 |     | 0,4  |

The indexes of the correlation coefficient of interdependence of the cardiovascular system reaction to the special maximum test, dummy throws, characterizing the special speed-force endurance at the end of the preparatory period in 10.2% of wrestlers were above average values, and in 2.0% of wrestlers' high correlations.

Analysis of cardiac system performance of wrestlers showed the level of SSS recovery, which ranged from 58.3% to 95.7%, indicating a weak physiological preparedness of the system in 50% of wrestlers in this weight class and the lack of processes of biological control of the body by the coaches.

Correlation indices at the end of the preparatory period of the functional reaction of the cardiovascular system (CVS) of wrestlers to the special maximum test, dummy throws, characterizing special physical qualities such as maximum speed and power endurance were at the level below average for 87,7% of wrestlers, and 10,2% of wrestlers have interrelations above average values and 2,0% have high relations, which indicates insufficient formation of the regulation of physical qualities and circulatory system.

#### 4. Discussion

While holding an angle on the bar, engage the broadest muscles of the back, the posterior and anterior bundles of the deltoids, the small and large pectoral muscles, and the small and large pectoral muscles. Located on the front surface of the rib cage. Complexes of strength exercises must necessarily include exercises aimed at strengthening these muscles, as this exercise involves: 1) the broadest muscles of the back. 2) rear bundles of deltoid muscles they pull back the humerus; 3) small and large pectoral muscles participate in the beginning (in the first half) of pulling up; 4) biceps, located on the front parts of the shoulder bones, bend the arm at the elbow joint; 5) hand and finger flexors located on the inner surfaces of the forearm and hand ensure a firm grip. If they are poorly developed, the hands fall off the bar, and the occupants are forced to stop the exercise, even if the other muscles can do the work (Astana, 2016; Varmus & Kubina, 2018).

The data obtained convince us that to develop the strength of the hand muscles, a complex of strength exercises is necessary, which must necessarily include exercises aimed at strengthening the strength of the hand muscles with the control of their effectiveness (Gussakov et al., 2021; Smirnov & Stukalenko, 2021). Efficiency of cardiovascular system of highly qualified wrestlers according to the indices of heart rate at rest corresponded to the indices of untrained sportsmen, and the recovery reaction of cardiovascular system after the maximum speed-power test was from 58,3% to 71,3% for 50%, for another half of athletes up to 95,7%, which indicates a weak physiological preparedness of the wrestlers system of this weight category (60-70kg) and the lack of processes of biological control of the body by coaches.

#### 5. Conclusion

Analysis of the level of readiness for the pre-competition period in preparation for the world championships showed that the management of the reserve capacities of the muscular and cardiovascular system providing the potential levels of physical fitness of fighters qazaq kuresi high qualification in the preparation period were different and require further correction, as not all athletes have reached the standard requirements.

The individual possibilities of differences in maximum speed and strength physical fitness in wrestlers depending on body weight were revealed and analyzed, which showed that and only 33.3% of



wrestlers had above-average results of the relationship with the cardiovascular system, and the remaining wrestlers were at a low level, indicating a lack of science-based correction in their training.

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