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INCREASING THE EFFICIENCY OF FUNCTIONAL STATES OF HANDBALL PLAYERS AGE 15-16

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ABOUT ARTICLE

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Abstract: In this article, research was conducted on the functional training of 15-16-year-old handball players. During the study, the functional state of young handball players was monitored using the Facebeat device. Based on the results obtained, a set of special exercises optimized for the team's training process was developed and introduced into practice.

Introduction

In our country, popularizing the sport of handball among young people, especially improving the quality and level of the games of our national teams in world arenas, is considered one of the priority areas for the development of this Olympic sport. "It is important to increase and realize the creative and intellectual potential of the younger generation, to form a healthy lifestyle among children and young people, and to widely involve them in physical

education and sports." One of the urgent issues is the scientific and theoretical assessment and analysis of the improvement of the technical and tactical actions of 15-16-year-old handball players during the competition period, the provision of appropriate recommendations based on the results of the analysis, and a serious approach to these recommendations during the training process, as well as the organization and conduct of training based on modern pedagogical technology. Also, the study of the socio-pedagogical aspects of the training of handball players by role, in turn, determines the relevance of the work.

The level of study of the problem. Currently, the main problems are the training of 15-16-year-old handball players, increasing the technical and tactical preparation of corner players in the attack, improving the speed of players' directional running, as well as improving the effectiveness of the game by increasing their physical fitness. An analysis of the scientific and methodological literature on the topic shows that a number of scientists of our republic, Sh.K.Pavlov, J.A.Akramov, F.A.Abdurakhmanov, R.I.Isroilov, X.M.Khabibjonova, A.Sh.Muminov, Sh.F.Tulaganov, have studied the issues of studying speed-strength qualities in handball in training sessions, improving the stability of balance, time-interval differentiation and accuracy of throwing the ball using specialized exercises, and the methodology for assessing the state of the modern system of special strength and coordination training.

The purpose of the study is to improve the functional state of 15-16-year-old handball players during training and competition.

The objectives of the study:

- to analyze the literature available in our republic on the topic;

- to study the volume and intensity of the means during the training and training of 15-16-year-old handball players during the preparatory period;

- to monitor the functional state of 15-16-year-old handball players;

The training process with the 15-16-year-old handball team of the Republican Center for Olympic and Paralympic Sports was selected as the object of the study.

Research results and its implications

The main tasks of each stage of technical training during the improvement of technical skills are:

1) to achieve high stability and reasonable variability of movement skills that form the basis of technical techniques in the selected sport, to increase their effectiveness in competition conditions;

2) partial reconstruction of movement skills, improvement of the kinematics or dynamics of individual parts of the skill in terms of modern scientific achievements and the requirements of sports practice. To solve the first task, the method of complicating external conditions, the method of training in different states of the organism, is usually used; to implement the second, the method of simplifying technical movements, the method of joint influence are used.

The method of complicating external conditions in the performance of technical techniques is implemented in a number of methodological approaches: The methodological method of resisting a conditional opponent is mainly used in sports games and hand-to-hand combat. Elements of fighting with a conditional opponent allow the athlete to improve the rhythm and structure of the execution of the technical technique, achieve stability and efficiency more quickly. It also helps to increase the intensity of the load in training, is an influential psychological factor in cultivating self-confidence, fearlessness and determination.

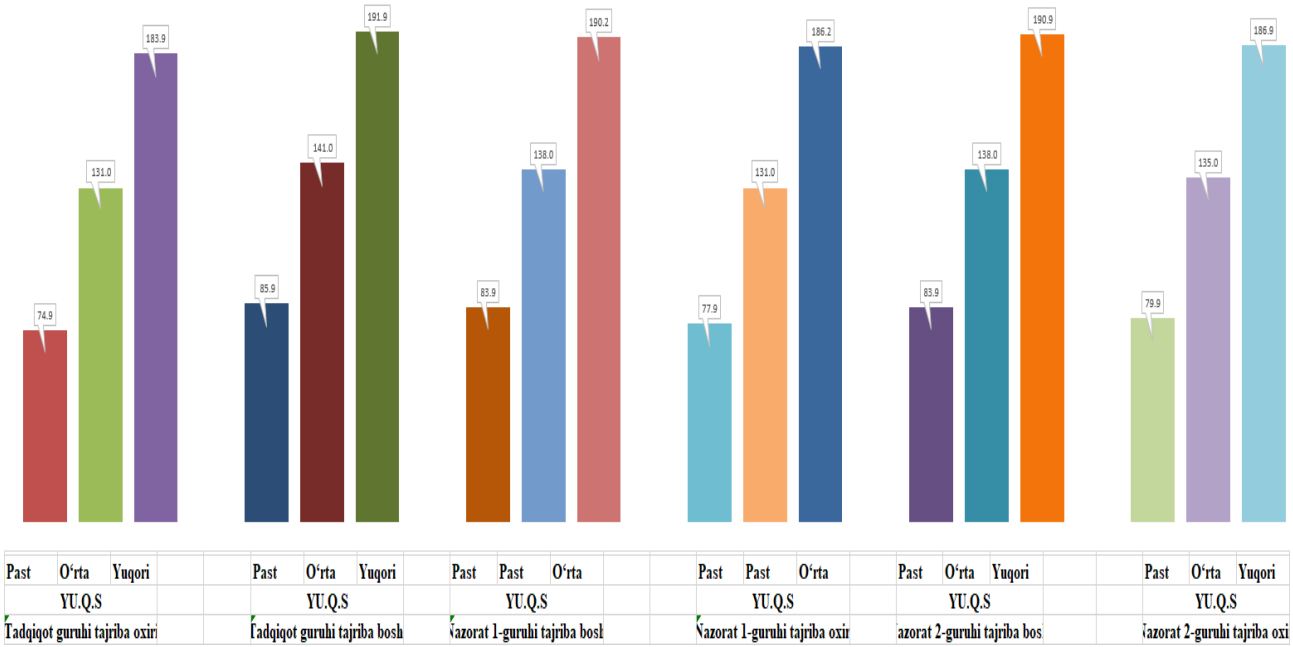
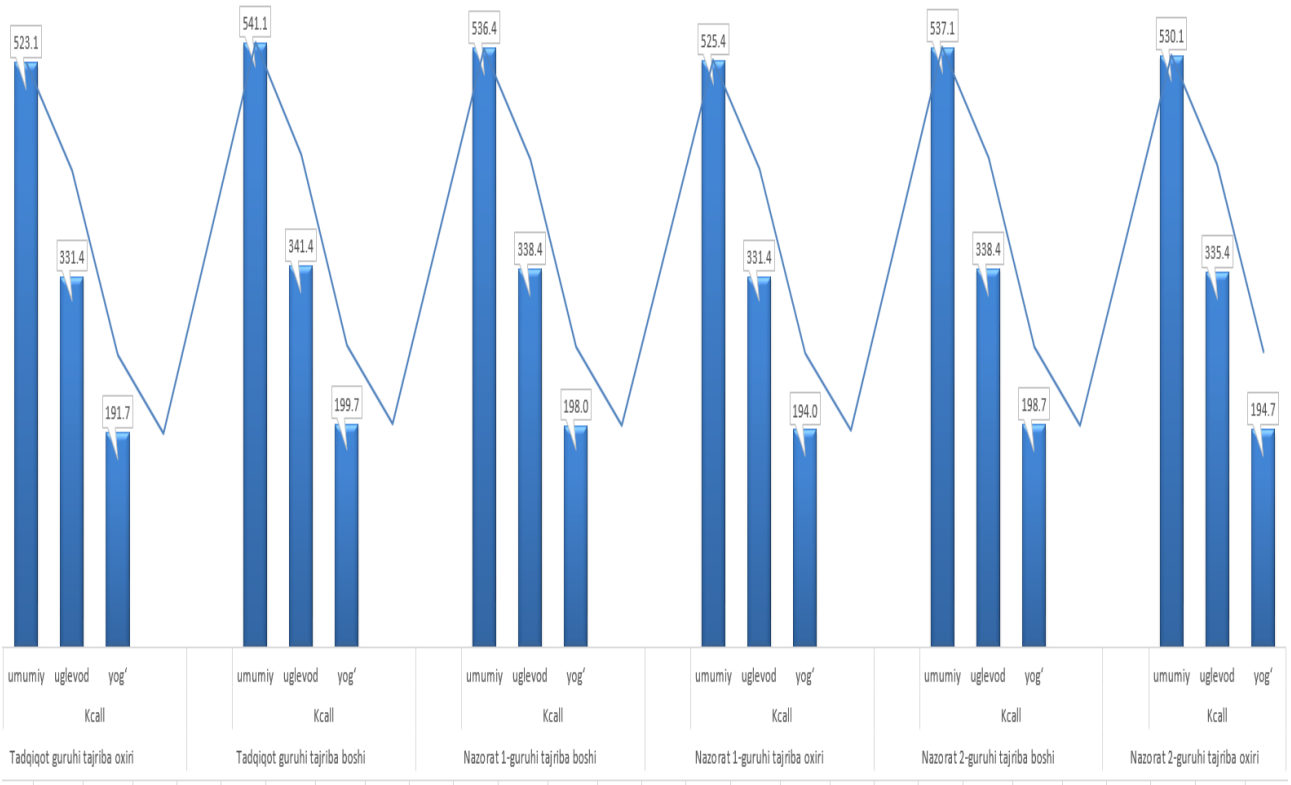


Figure 1. Dynamics of heart rate during training and competition at the beginning and end of the study

The results presented in Figure 1 above describe the YU.QS of the handbol players as follows, according to which: Abdikulov.D; Low 76, Medium 127, High 178, Abdumo'minov.S; Low 72, Medium 168, High 128 were determined. Abdinazarov.I; Low 65, Medium 119, High 169 were determined, Abdikhalilov.Sh; Low 62, Medium 125, High 184 were observed. Abdumannobov A; Low 65, Medium 139, High 201 were observed, Abdumutalibov.A; Low 60, Medium 129, High 175 were determined. Abduvohobov.U; Low 71, Medium 134, High 180 were observed. Akbaraliyev. A; The results of Low 78, Medium 141, High 188 were shown. Akhmatkulov. J; Low 67, Medium 137, High 179 were observed, Akhmedov.B; Low 85, Medium 123, High 182 showed the same. Barnayev.D; Low 93, Medium 135, High 195 were determined. Berdaliyev.O; Low 103, Medium 139, High 189 were shown, Buriyev.Y was determined to be Low 95, Medium 130, High 189. Eshkobilov A Low 67, Medium 116, High 189 were the same,

Jurayev.A Low 60, Medium 123, High 176, were determined. General; Low 1199, Medium 2096, High 2942.



Dynamics of kilocalories burned during training in each of the three groups at the beginning and end of the study

In the results presented in Figure 4.2 above, the Kcall of the wrestlers is described as follows, according to which: Abdikulov.D; fat 208, carbohydrate 267, total 475, while Abdumo'minov.S; fat 220, carbohydrate 288, total 508, was determined. Abdinazarov.I; fat 164, carbohydrate 263, total 427, was determined, Abdikhalilov.Sh; fat 189, carbohydrate 300, total 489, was observed. Abdumannobov.A; fat 154, carbohydrate 259, total 413, was observed, while Abdumutalibov.A; fat 171, carbohydrate 277, total 448 was determined. Abduvohobov.U; fat 183, carbohydrate 330, total 513, was observed. Akbaraliyev. A; showed the results of fat

205, carbohydrate 381, total 586. Akhmatkulov. J; showed the results of fat 254, carbohydrate 502, total 756, while Akhmedov. B; showed the results of fat 175, carbohydrate 349, total 524.

In order to control the kilocalorie consumption of the load and its volume during training processes aimed at improving the technical and tactical preparation of 15-16-year-old handball players, based on the indicators obtained from the athletes' Facebeat device, the research team found that at the beginning of the experiment, the total amount of kilocalorie consumption was 541.1, of which the amount of carbohydrates was 341.4, and the amount of fat was 199.7, while by the end of the experiment, the total amount had improved to 523.1, of which the amount of carbohydrates was 331.4, and the amount of fat was 191.7.

Control Group 1: In order to control the kilocalorie expenditure of the load and its volume during training processes aimed at improving the technical and tactical preparation of 15-16-year-old handball players, based on the indicators obtained on the Facebeat device, it was determined that at the beginning of the experiment, the total amount of calories consumed was 536.4, of which the amount of carbohydrates was 338.4, and the amount of fat was 198. By the end of the experiment, the total amount had improved to 525.4, of which the amount of carbohydrates was 331.4, and the amount of fat was 194.

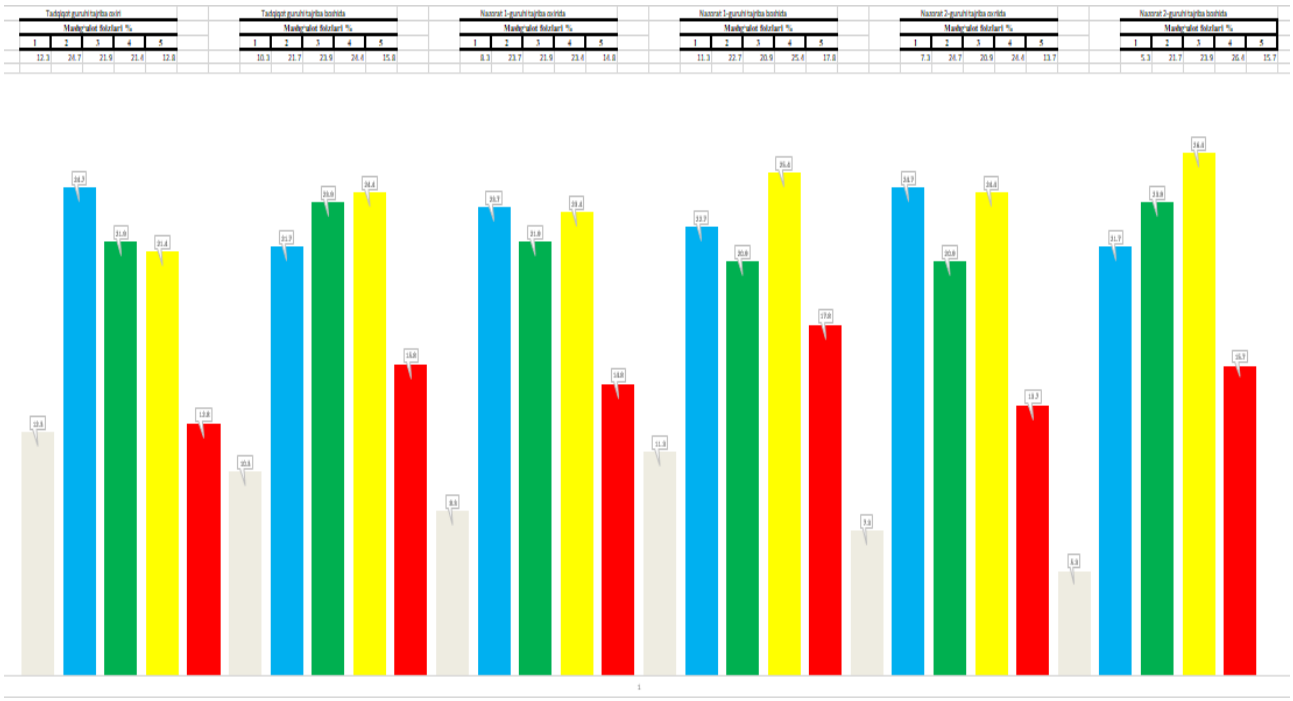


Figure 2. Dynamics of changes in load intensity in the experimental, control, and control 2 groups at the end of the study.

The results presented in Figure 2 above describe the load intensity levels of handball players as follows: In order to control the load and its volume during training processes aimed at improving the technical and tactical preparation of handball players aged 15-16, the heart rate of athletes was studied. According to it, the HR dynamics research group returned low - 85.9, medium - 141, high - 191.9 indicators at the beginning of the experiment, but by the end of the experiment it was found that it had improved to low - 74.9, medium - 131, high - 183.9.

It was found that the ganbol players in the control group 1 had low -83.9, medium - 138, high - 190.2 at the beginning of the experiment, and by the end of the experiment, they had improved to low -77.9, medium - 131, high - 186.2. It was found that the ganbol players in the

control group 2 had low -83.9, medium - 138, high - 190.9 at the beginning of the experiment, and by the end of the experiment, they had improved to low -79.9, medium - 135, high - 186.9.

Control Group 2 In order to control the kilocalorie consumption of the load and its volume during the training processes aimed at improving the technical and tactical preparation of 15-16-year-old handball players, based on the indicators obtained on the Facebeat device, it was determined that at the beginning of the experiment, the total amount of kilocalorie consumption was 537.1, of which the amount of carbohydrates was 338.4, and the amount of fat was 198. By the end of the experiment, the total amount had improved to 525.4, of which the amount of carbohydrates was 331.4, and the amount of fat was 194.

Conclusion

Based on the results obtained using the Facebeat device below, the average load intensity zones in the training processes aimed at improving the technical and tactical preparation of 15-16 year old handball players indicate that at the beginning of the experiment, the research group had 10.3 minutes in intensity zone 1, 21.7 minutes in intensity zone 2, 23.9 minutes in intensity zone 3, 24.4 minutes in intensity zone 4, and 15.8 minutes in intensity zone 5. At the end of the experiment, it was found that the load intensity zones had improved by 12.3 minutes in intensity zone 1, 24.7 minutes in intensity zone 2, 21.9 minutes in intensity zone 3, 21.4 minutes in intensity zone 4, and 12.8 minutes in intensity zone 5.

The average intensity zones of the load in the training processes aimed at improving the technical and tactical preparation of 15-16-year-old handball players in the control group 1, based on the indicators obtained on the Facebeat device below, were 11.3 minutes in intensity zone 1, 22.7 minutes in intensity zone 2, 20.9 minutes in intensity zone 3, 25.4 minutes in intensity zone 4, and 17.8 minutes in intensity zone 5 at the beginning of the experiment. At the end of the experiment, it was found that the intensity zone 1 improved by 8.3 minutes, 23.7 minutes in intensity zone 2, 21.9 minutes in intensity zone 3, 23.4 minutes in intensity zone 4, and 14.8 minutes in intensity zone 5. The average duration of the load intensity zones during

training sessions aimed at improving the technical and tactical preparation of 15-16-year-old handball players in the control group 2, based on the indicators obtained using the Facebeat device below, was 5.3 minutes in intensity zone 1, 21.7 minutes in intensity zone 2, 23.9 minutes in intensity zone 3, 26.4 minutes in intensity zone 4, and 15.7 minutes in intensity zone 5 at the beginning of the experiment. At the end of the experiment, it was found that the load intensity zones improved by 7.3 minutes in intensity zone 1, 24.7 minutes in intensity zone 2, 20.9 minutes in intensity zone 3, 24.4 minutes in intensity zone 4, and 13.7 minutes in intensity zone 5. Of course, if we mention the main reasons for the improvement in these results, we can say that we achieved this result by introducing a special set of optimized exercises into the training process of young handball players.

References:

1. Abdurakhmanov F.A. - Theory and methodology of handball. Textbook -T.: Scientific technical information-press, Tashkent 2021. 276 p.

2. Abdurakhmanov F.A., 2020. Theory and methodology of handball / three. Textbook, "Scientific technical information-press publishing house", Tashkent. 2020. - 278 p.

3. Akramov J.A. Handball / Textbook, -Tashkent. "Leader Press", 2008 - 408 p.

4. Muminov A. Checking the level of physical technical and tactical preparation of athletes involved in sports games in the sport of handball // NamDU Scientific Bulletin. – 2024. – No. 11. – P. 927-930.

5. Muminov A. CHECKING THE LEVEL OF PHYSICAL TECHNICAL AND TACTICAL PREPARATION OF ATHLETES ENGAGED IN SPORTS GAMES IN THE SPORT OF HANDBALL // NamDU Scientific Bulletin. – 2024. – No. 11. – P. 927-930.