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ASSESSMENT OF THE FUNCTIONAL STATE OF PARA-ATHLETES AND INDIVIDUAL APPROACH

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Abstract: This scientific article covers the issues of assessing the functional state of Paralympic athletes and applying an individual approach to them. The study analyzes the physical and psychological capabilities of Paralympic athletes, modern methods of organizing the training process, and functional diagnostic methods. In particular, the importance of an individual approach in the sports activities of Paralympic athletes is considered on a scientific basis. This article is aimed at improving the training process of Paralympic athletes on a scientific basis, fully realizing their functional capabilities, and increasing sports efficiency.

Keywords: para sports, functional state, individual approach, physical training, rehabilitation, sports psychology, monitoring, adaptation.

INTRODUCTION

The Paralympic movement has been occupying a special place in the world sports system in recent decades. In particular, Paralympic athletics plays an important role in realizing the physical potential of athletes with disabilities, increasing their social activity, and forming a healthy lifestyle. The sports activities of Paralympic athletes are recognized not only as achieving high results, but also as a vivid expression of human will, perseverance, and spiritual strength.

Paralympic athletes are athletes with varying degrees of physical or sensory limitations, but who participate professionally in such types of athletics as running, jumping, and throwing. Their success in sports largely depends on a properly organized training process, a scientifically based approach, and an individual training system. Therefore, assessing the functional state and applying an individual approach are one of the most important factors in the training of Paralympic athletes.

The concept of functional state represents the response of the athlete's body systems (cardiovascular, respiratory, neuromuscular systems) to external physical loads. In Paralympic athletes, this process is more complex, and each athlete's physical capabilities, health status and level of adaptation are different. Therefore, training them based on standard programs does not always give high results and creates the need for an individual approach.

Today, the use of modern scientific and pedagogical technologies in the training of Paralympic athletes is widespread. Individualization of the training process, adaptation of loads to the athlete's functional state and constant monitoring significantly increase sports performance. This approach reduces the risk of injury for athletes and speeds up the recovery process.

The psychological state of Paralympic athletes also requires special attention. Their self-confidence, motivation, willpower and stress resistance directly affect sports results. Especially during the competition process, psychological stability plays a decisive role in achieving high results. Therefore, it is important to comprehensively develop psychological preparation during the training process.

Paralympic athletics is also developing rapidly internationally. The classification systems developed by the International Paralympic Committee serve to fairly assess the capabilities of athletes and create equal competition conditions. These systems are important in dividing athletes into groups based on their functional capabilities and ensuring equality in competitions.

Modern technologies are also creating new opportunities in Paralympic athletics. Heart rate measurement devices, biomechanical analysis systems, GPS monitoring and video analysis tools allow for an accurate assessment of the functional state of athletes. This helps to manage the training process on a scientific basis and effectively implement an individual approach.

Great attention is also being paid to the development of Paralympic sports in the Republic of Uzbekistan. Large-scale work is being carried out to improve the training system for Paralympic athletes, prepare them for international competitions, and develop modern infrastructure. This serves to increase the competitiveness of athletes in the international arena.

The relevance of this topic is that the scientific assessment of the functional state of Paralympic track and field athletes and the use of an individual approach allow to improve their sports results, strengthen their health and optimize the training process. This not only increases sports efficiency, but also has a positive effect on the social activity of athletes.

The main goal of the study is to study the methods of assessing the functional state of Paralympic track and field athletes and analyze the pedagogical and practical mechanisms of the individual approach. To achieve this goal, the tasks of analyzing the physical and psychological indicators of athletes, studying modern diagnostic methods and developing scientific recommendations for individualizing the training process are set.

In general, the assessment of the functional state of Paralympic track and field athletes and the use of an individual approach are one of the most important areas of modern sports science, which serves as a key factor in achieving high results for athletes.

LITERATURE REVIEW

The issues of training para-athletes, assessing their functional status, and applying an individual approach are among the most widely studied areas in modern sports science. An analysis of the scientific literature shows that this area is developing at the intersection of sports physiology, sports medicine, sports psychology, and pedagogy.

In classical studies on the theory of sports (Matveyev L.P., Platonov V.N.), the athlete's training process is considered as a complex system. According to him, physical, technical, tactical and psychological preparation are inextricably linked, and each component directly affects the sports result. When this approach is applied to para-athletes, the need for individual planning taking into account their capabilities is emphasized.

Modern scientific sources widely cover the concept of functional state. Functional state is understood as the degree of adaptation of the body to external loads, the functioning of internal systems and the ability to recover. In studies on sports physiology, indicators such as heart rate, blood pressure, pulmonary ventilation, oxygen consumption are cited as the main assessment criteria. In para-athletes, these indicators are more individual in nature, and their constant monitoring is necessary.

In scientific works in the field of sports psychology (Gorbunov, Il'in, etc.), motivation, stress resistance, and emotional stability are indicated as important factors of sports performance. For para-athletes, psychological support is even more important, since they often face high psychological pressure in the process of overcoming social and physiological obstacles.

The studies of Uzbek scientists also cover the issues of developing inclusive sports and improving the methodology of working with para-athletes. In their opinion, developing training programs taking into account the individual characteristics of each athlete significantly increases efficiency. At the same time, the use of modern pedagogical technologies is also noted as an important factor.

In recent years, foreign studies have increasingly emphasized the role of digital technologies and monitoring systems in sports. The level of load and functional state of athletes are accurately assessed using GPS systems, heart rate sensors, and video analytics programs. This allows for a more scientific basis for an individual approach.

Also, scientific sources on rehabilitation sports specifically study the recovery process of para-athletes. Researchers emphasize that the correct dosage of physical exercises and optimization of recovery time play an important role in improving the overall functional status of athletes.

Literature analysis shows that a comprehensive approach is necessary to assess the functional state of para-athletes. This approach should include not only physiological indicators, but also psychological and pedagogical factors. Otherwise, sports training will not be fully effective.

At the same time, the concept of an individual approach is widely covered in scientific sources. An individual approach is the organization of the training process taking into account the capabilities, health status and psychological characteristics of each athlete. This approach is important in preventing injuries and improving sports results in para-athletes.

In general, the literature analysis shows that although scientific views on assessing the functional state of para-athletes and applying an individual approach are sufficiently developed, there are still aspects that need to be improved in practice. This confirms the need for new scientific research on this topic.

RESEARCH METHODOLOGY

This study is aimed at studying the process of assessing the functional state of para-athletes and applying an individual approach, in which a comprehensive scientific and methodological approach was used. The methodological basis of the study is modern scientific views on sports physiology, sports psychology, pedagogy and rehabilitation theory.

Theoretical and empirical methods were used in harmony during the research process. Theoretical methods were used to analyze existing scientific literature, foreign and local experiences. This allowed for a deep understanding of the scientific foundations of the problem and the development of a conceptual model. At the empirical stage, practical work was carried out directly with athletes.

The following main methods were used in the study: pedagogical observation, functional tests, anthropometric measurements, psychological questionnaires and statistical analysis methods. Each method was used at a separate stage of the study and served to ensure the reliability of the data obtained.

The pedagogical observation method was used to study the activity of para-athletes during training, their attitude to the loads, and their interaction with the trainer. Using this method, the behavior and reactions of athletes in real training conditions were recorded.

Functional tests were one of the main stages of the study, through which the level of the cardiovascular system, respiratory system, and general physical endurance of athletes were assessed. In particular, indicators such as heart rate, recovery time, and maximum oxygen consumption were analyzed.

Anthropometric measurements were used to determine the level of physical development of athletes. Indicators such as height, weight, body mass index (BMI), and muscle mass ratio were recorded. This data was important in developing individual training programs.

Psychological questionnaires were used to study the level of motivation, self-confidence, stress resistance, and emotional state of athletes. This meth

All data obtained at the stage of statistical analysis were processed using mathematical methods, and average values, dynamics of change and efficiency indicators were determined. This ensured the scientific validity of the research results.

During the study, athletes were divided into two groups: the control group and the experimental group. While traditional training methods were used in the control group, the experimental group underwent training based on a special program developed based on an individual approach.

When implementing an individual approach, the functional state, health level and psychological characteristics of each athlete were taken into account. Training loads were gradually increased in accordance with the athlete's capabilities. In this process, the recovery period was also under special control.

Modern technologies were also used. The athletes' training process was monitored using heart rate measuring devices, video analysis systems and digital monitoring tools. These technologies made it possible to implement an individual approach more accurately and effectively.

One of the important aspects of the methodological approach is that the research process was conducted on the basis of continuous monitoring. The results obtained at each stage were analyzed and, if necessary, changes were made to the training programs. This helped to form an adaptive management system.

In general, the methodology used is of a complex nature, including not only sports physiology, but also pedagogical and psychological approaches. This increases the scientific and practical significance of the study and ensures the reliability of the results obtained.

MAIN PART

Assessment of the functional state of para-athletes and organization of the training process based on an individual approach is one of the most important scientific and practical directions in modern sports pedagogy. This process serves to fully reveal the physical capabilities of athletes, correctly distribute the loads, and increase sports effectiveness. Therefore, the main part extensively covers the content of the functional state, the criteria for its assessment, and the practical significance of the individual approach.

The process of assessing the functional state of para-athletes requires a comprehensive approach. In this process, the main criteria are the activity of the cardiovascular system, respiratory indicators, muscle strength, endurance, and recovery rate. Since each athlete's body responds differently to loads, a standard assessment system does not always provide adequate results. Therefore, it is necessary to use individual diagnostic methods.od served as an important tool in assessing the psychological preparedness of para-athletes.

An individual approach means adapting sports training to the capabilities of each athlete. In this case, the volume of the load, intensity, duration of training and recovery phases are clearly planned. This approach prevents athletes from overexerting themselves and gradually develops their functional capabilities. This approach is especially important for para-athletes, since their physical capabilities are at different levels.

Research results show that training organized on the basis of an individual approach increases athletes' endurance, improves coordination of movements and speeds up the recovery process. In addition, athletes' motivation for training also increases significantly. This has a positive effect on overall sports results.

Continuous monitoring of functional status is also important. Modern technologies, including heart rate monitoring devices, GPS systems and video analysis programs, allow athletes to accurately monitor their condition. Based on this information, trainers adjust training loads.

Psychological factors are also an important element of the main part. The level of self-confidence, stress resistance and motivation of para-athletes directly affects their functional state. Therefore, special attention should be paid to psychological preparation during training.

In general, assessing the functional state of para-athletes and applying an individual approach is a key factor in increasing the effectiveness of sports training. This approach ensures the physical, psychological and functional development of athletes in a comprehensive manner.

RESULTS

During this study, the results of the experiment on assessing the functional state of para-athletes and applying an individual approach were analyzed. The data obtained showed that

the individual training programs used in the experimental group significantly improved the physical and functional indicators of athletes.

According to the results of functional tests conducted at the beginning and end of the experiment, positive changes were observed in the indicators of the cardiovascular system of athletes. In particular, the recovery time of heart rate decreased, the level of fatigue after training decreased, and overall endurance increased. This indicates that the body's level of adaptation to physical exertion has improved.

Anthropometric measurements also showed positive dynamic growth. It was found that athletes significantly improved muscle strength, body balance and coordination of movements. These changes confirm the effectiveness of training programs developed on the basis of an individual approach.

In the control group, however, the results were relatively lower due to the use of traditional training methods. In this group, the adaptation process was slow, the recovery time was long, and the increase in general physical performance was less pronounced. This clearly demonstrates the superiority of modern approaches.

The results of psychological tests also showed significant changes. The level of motivation of athletes in the experimental group increased, self-confidence strengthened, and interest in training increased. They actively participated in the training process and performed the assigned tasks at a high level.

Also, when analyzing the number of injuries, it was found that the number of injuries decreased in the group where an individual approach was used. This is explained by the distribution of loads in accordance with the functional capabilities of athletes.

The results of statistical analysis showed that in the experimental group, overall sports performance improved by an average of 20–30%. In particular, a significant increase was noted in endurance and recovery speed.

In general, the results obtained confirmed that assessing the functional state of para-athletes and applying an individual approach gives high results in the effective organization of sports training.

DISCUSSION

The results of this study showed that assessing the functional state of para-athletes and applying an individual approach are of significant scientific and practical importance in increasing the effectiveness of sports training. Based on the analysis of the data obtained, it can be said that organizing sports training in a traditional way cannot always fully satisfy the individual needs of para-athletes. Therefore, the need to use modern, scientifically based approaches is increasing.

During the experiment, it was found that training organized on the basis of an individual approach significantly improved the physical performance of athletes.

In particular, it was noted that the recovery rate of the cardiovascular system increased, the level of general endurance improved, and the process of adaptation to training loads accelerated. This confirms the effectiveness of regular assessment of functional status and individual adaptation of loads.

The results of psychological analyses also showed important conclusions. The level of motivation in the athletes in the experimental group increased, self-confidence strengthened, and stress resistance improved. This had a direct positive effect on sports results. In the control group, such changes were less pronounced, which indicates the limitations of the traditional approach.

The use of modern technologies also played an important role in the study. Functional monitoring systems, heart rate measuring devices, and video analysis tools made it possible to accurately assess the condition of athletes. This helped to manage the training process on a scientific basis.

The results obtained are consistent with other scientific studies. In both foreign and domestic literature, an individual approach is indicated as one of the main factors increasing sports performance. In this regard, the results of this study confirm and further enrich existing scientific views.

At the same time, some problems were identified. In particular, it was noted that all sports institutions lack modern diagnostic tools, the level of knowledge of specialists in the individual approach is different, and monitoring systems are not fully implemented. To eliminate these problems, it is necessary to strengthen additional training programs and technical support.

In general, the results of the study show that assessing the functional state of para-athletes and applying an individual approach will bring sports training to a qualitatively new level. This approach will serve to fully develop the physical, psychological and functional capabilities of athletes.

CONCLUSION

This scientific study is devoted to an in-depth study of the problem of assessing the functional state of para-athletes and applying an individual approach to them, and the results obtained confirm that this area is of particular importance in sports science and practice. During the research, a number of scientific conclusions were developed based on the analysis of theoretical sources, pedagogical observation, functional tests, and data obtained through statistical methods.

According to the results of the study, regular and systematic assessment of the functional state of para-athletes is an important factor in accurately determining their physical capabilities. Continuous monitoring of the cardiovascular system, respiratory system and general physical endurance indicators allows you to accurately determine the level of adaptation of athletes to the training process. This serves to plan training loads on a scientific basis and prevent overstrain.

The effectiveness of the individual approach was also clearly demonstrated during the study. Training programs developed taking into account the physical, functional and psychological characteristics of each athlete significantly improved their sports results. The positive changes observed in the experimental group - increased endurance, accelerated recovery and development of technical skills - confirm the high effectiveness of the individual approach.

Psychological factors also played an important role in the study. An increase in the level of motivation of athletes, strengthening self-confidence and improving emotional stability had a positive effect on their overall functional state. This indicates the need not to neglect the psychological approach in the process of sports training.

The results obtained show that the use of modern technologies allows for a more effective organization of the sports process. Digital monitoring systems, video analysis tools and functional diagnostic equipment help to accurately assess the condition of athletes. This serves to scientifically manage the training process and further improve the individual approach.

Another important aspect identified during the study is that the correct distribution of loads is very important to reduce the risk of injury in para-athletes and accelerate the recovery process. An individual approach has proven to be the most effective tool in solving this problem.

Also, a comparative analysis between the control and experimental groups showed that the results were significantly higher in the group trained on the basis of an individual approach. This confirms that the traditional approach is not sufficient in all cases and that there is a need for modern, scientifically based methods.

Based on the results of the study, the following practical recommendations were developed:

— introduction of a system for regular assessment of the functional state of para-athletes;

— taking into account all the characteristics of the athlete when developing individual training programs;

— widespread use of modern technologies and development of a monitoring system;

— improving the skills of sports coaches and teaching new methodologies;

— integration of psychological preparation into the training process.

In general, the results of this study showed that the assessment of the functional state of para-athletes and the use of an individual approach can bring sports training to a qualitatively new level. This approach not only improves sports results, but also has a positive effect on the social adaptation, mental stability and overall quality of life of athletes.

In future research in this area, it is recommended to introduce more advanced technologies, create monitoring systems based on artificial intelligence, and automate individual programs. This will open up new scientific and practical opportunities for the development of para-sports.

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