TRAINING ACTIVITIES FOR YOUNG HANDBALL PLAYERS

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https://doi.org/10.5281/zenodo.17855990

ARTICLE INFO

Qabul qilindi: 01-dekabr 2025 yil
Ma'qullandi: 04-dekabr 2025 yil
Nashr qilindi: 08-dekabr 2025 yil

KEYWORDS

The work of sports game specialists has made a significant contribution to the methodology of training young athletes

ABSTRACT

The current state of world handball is characterized by a sharp increase in competition between teams on the global stage. To achieve victory, it is necessary to find increasingly sophisticated means and methods for training handball players. The methodological foundations of long-term training of young athletes are closely linked to the issue of improving the educational and training process. Sports scientists believe that further improvement of modern sports training methods requires strict alignment between the focus of the educational and training process and the specific requirements of competitive activity in specific sports disciplines. In their work, scientists have given special attention to the female contingent, focusing on sexual dimorphism in athlete training.

Relevance of the study. The current state of world handball is characterized by a sharp increase in competition between teams on the global stage. To achieve victory, it is necessary to find increasingly sophisticated means and methods for training handball players. The methodological foundations of long-term training of young athletes are closely linked to the issue of improving the educational and training process. Sports scientists believe that further improvement of modern sports training methods requires strict alignment between the focus of the educational and training process and the specific requirements of competitive activity in specific sports disciplines. In their work, scientists have given special attention to the female contingent, focusing on sexual dimorphism in athlete training.

The work of sports game specialists has made a significant contribution to the methodology of training young athletes. Although various aspects of training young athletes in team sports have been extensively covered in modern scientific and methodological literature, many important issues related to the structure and system of long-term training for handball players remain poorly understood. Criteria that would enable reliable long-term prediction of success in athletic development in team sports have not yet been clearly formulated. Effective work with young handball players requires a thorough understanding of the methodological

foundations of training elite handball players and a solid understanding of the specific characteristics of long-term training for children.

An analysis of the current handball programs for youth sports schools reveals that, while they serve as the primary documents regulating the training of young athletes from basic training to advanced athletic development, they fail to address a number of specific aspects of modern sports practices. The competitive activities of young handball players remain virtually unexplored, with few studies examining specific aspects of their competitive activities.

Therefore, experts do not have a unified opinion on the sequence of the preparation process; contradictions have arisen between:

- the increase in competitive and training loads in sports and the small number of studies that determine the preservation of players' health;
- increased demands for improving the skills of players and the need to take into account the relationship between competitive activities and the content of the educational and training process at age stages of preparation;
- the need for effective technologies for training handball players at the stages of developing their skills and the insufficient scientific development of these technologies.

Moreover, some coaches do not take into account the developmental patterns of the child's body when choosing the means and methods for training young athletes, and they exceed the necessary intensity of the load in its early stages.

The above contradictions allowed us to formulate the research problem: what is the specific content and ratio of general and special means of improvement for young handball players at age stages of training in accordance with the requirements of competitive activity.

The object of the study is the process of training young handball players.

The subject of the study is the content and ratio of general and special means at the initial stage of training young handball players.

The aim of the study was to establish the correspondence between the content and ratio of general and special means at the initial stage of training of young handball players and the requirements of competitive activity and to experimentally test the effectiveness of the program developed for this purpose.

Research results. Trends in athletic improvement are accompanied by increasing intensification of training loads and a significant "rejuvenation" at all stages of young athletes' preparation. Scientists, for example, T.F. Abramova, have begun to explore the problem of realizing genetic predisposition to achieving new heights in various sports. Investigating the relationship between physical fitness and other developmental components in young athletes is crucial. After all, the identified characteristics of young handball players may have different rates of physical growth, therefore, individualized training is essential.

A classification [3] has been developed that categorizes people of varying heights into five categories: below average, short, average, above average, and tall, each with their own morphological, physical, and mental characteristics. In handball, high-scoring athletes range from 165 to 197 cm in height, while men reach heights between 180 and 213 cm. This wide range of handball player heights indicates that different categories of players need to be considered separately based on their height. Children in handball groups at children's and youth sports schools typically fall into the average and taller categories.

Research [6] indicates that child growth is accompanied not only by an increase in total body size and accelerated morphofunctional maturation, but also by significant variability in individual growth and development rates among members of the same-age population. Therefore, when addressing many issues related to the athletic development of children and adolescents, it is advisable to consider not only their chronological age but also their biological age. This is especially important during critical periods, when structural and functional changes in the body, homeostasis instability, and age-related differences in growth and development rates are most pronounced.

Based on the classification of children by body length, she found clear boundaries in the fitness of young handball players based on their height. Having studied the development of players' skills, she found that tall handball players develop rapidly in all aspects of their abilities until age 14, after which the rate of growth slows. Tall young handball players, thanks to earlier biological maturation (accelerated development), achieve high athletic results, but then their achievements slow down compared to their peers of other heights. Above-average-length boys show a steady increase in physical abilities until age 14, but then their development accelerates, surpassing taller players in some aspects. Boys of average height do not outperform other groups of players in terms of physical fitness, and their development proceeds evenly. Body length and the rate of biological age in boys are closely related.

The author's work presents data on changes in physical qualities in young handball players aged 12-16 years with varying body lengths. A clear pattern of development in boys and young men was identified based on this characteristic. Among the male contingent, a clear correlation was found between the level of biological maturity and the level of physical qualities. This contributed to the definition of training requirements for handball players with varying body lengths at different age stages, which are reflected in the Program for Children and Youth Sports School Students.

The physical development of handball players of various positions undergoes significant changes between the ages of 14 and 16, developing distinct differences. Half-backs at 16 are considered tall in terms of body length, linemen and goalkeepers are considered above average, and wingers are considered average. The lateral and circumferential dimensions of 16-year-old handball players of various positions show minimal differences. This is likely due to the similar biological maturity of 8.4 to 8.9 points for players of various positions at this age.

The dynamics of age-related changes in physical fitness in young handball players of various positions largely reflects the developmental characteristics of adolescents with varying levels of biological maturity rather than changes related to their respective positions. Furthermore, these characteristics depend on the training focus of outfield players and goalkeepers. The study's author developed standards taking into account the specifics of position and biological age. Therefore, when monitoring the fitness and determining the skill potential of young handball players of various positions during the advanced specialization stage, it is necessary to compare individual handball player test results with the standards of the youth sports school program for a given age.

Unfortunately, the authors [4] state that in many cases coaches, having little understanding of medical and biological issues, cannot understand why their student stops progressing, which is currently unforgivable given the abundance of practical recommendations on this issue. Scientists [8] have established that each motor quality has a

strictly defined period of favorable development and training. There are several periods in which the greatest increase in results is associated less with age and more with the child's developmental pattern. According to her data, the biological maturity of 12-13 year old female handball players shows the greatest increase - 22-26%, and then by the age of 14-15 the rate slows to 10-17%. Handball players with a body length above average mature biologically rapidly between the ages of 12 and 13, and then a less significant increase in this indicator from year to year is observed. At 16 years of age, their biological maturity is completed with a significant increase in the indicator.

No consistent pattern of changes in speed-strength fitness among female handball players of varying body lengths was identified across age groups. Across all test tasks used in the study, female handball players demonstrated positive gains in speed-strength fitness between the ages of 12 and 13. After that, only the "Throwing a 1 kg Ball with the Right Hand" test corresponded to an increase in biological maturity, showing a consistently positive increase across all age groups. Across all groups of athletes, wrist strength showed the most significant gains between the ages of 14 and 15. For the other tests, performance fluctuated between improvements and declines. For example, between the ages of 15 and 16, female handball players experienced a decline in their standing triple jump.

It's important to note the test results demonstrated by female handball players at age 16, when they are already eligible to compete in adult championships and international youth competitions. A consistent pattern emerged. From age 15 to 16, tall and average-height female handball players improve their performance to varying degrees, while above-average female handball players show a slight, albeit significant, decline in all speed and jumping tests. No significant differences were found in the biological maturity of female handball players in the different study groups from 13 to 16 years of age. However, above-average female athletes outperform other female players in terms of biological maturity and complete it earlier than others at age 16. This may be the reason for the decline in performance at age 16, when changes in a player's condition occur solely through physical activity, rather than through natural age-related development. In terms of age, the youngest players in these teams were the point forwards, which indicates a shortage of experienced handball players in this most important position at the present stage.

Conclusions. Handball experts disagree on the individualization of physical training for female handball players of various positions at different age stages of athletic development. Between the ages of 12 and 17, the physical development of female handball players is more closely related to the pace of their biological maturation than to the influence of various positions. Furthermore, initial selection for a particular position based on body length plays a role. No significant differences in body length measurements were found between the ages of 12 and 13, but these differences were significant between the ages of 16 and 17. Conversely, differences in girth measurements were significant between the ages of 12 and 13, but no differences were observed between the ages of 16 and 17. Across all age groups, wingers had the lowest weight-for-height index, while goalkeepers, who were the lowest in this indicator at the youngest age, had the highest by the age of 16 and 17. The proportions of the lower limb lengths vary significantly between 12-13 year olds and remain unchanged between 16-17 year olds. The pelvis-to-shoulder width ratio shows the opposite trend.

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