

Physical preparation of football players at the stage of preliminary basic training

Dmitriy Khomitsevich

Educational institution «Polesky State University», Pinsk, Belarus

Purpose: to consider theoretical issues of physical preparation of football players at the stage of preliminary basic training.

Material and methods: in order to get acquainted with the state of the issue under study, an analysis and generalization of scientific, scientific and methodological literature, theoretical provisions on the physical preparation of football players at the stage of preliminary basic training was carried out. Analyzing scientific sources, the questions on the results of the study were considered: the use of means and methods of various orientations in the training of young athletes. The objectives and didactic purpose of the preliminary basic training phase were described. The place of physical training of young football players in achieving a sports result has been determined.

Results: it was found that the selective increase in training loads at all stages of sports training of children and adolescents is determined by the laws of the development of physical abilities. A high level and growth of development at a young age is assessed as a sensitive period and is fundamental for increasing the means of influence on a specific physical quality. Some researchers believe that the best sensitive period for the development of strength in young football players is the age of 13-15 years, others - 14-16 years.

Conclusions: analyzing scientific sources, the following issues were considered based on the research results: the use of means and methods of various orientations in the training of young athletes. In organizing the training process of football players, it is necessary to take into account the high intensity of metabolic processes and the age characteristics of a growing child's body. The relatively low functional development of the cardiovascular and respiratory systems with boys aged 13-14 significantly limits the ability to perform long-term intense loads. As a result of studying the literature, it was found that, in accordance with the playing role, all-round physical training (with an emphasis on speed and speed-strength qualities) of young footballers aged 13-14 is an actual scientific research.

Keywords: physical preparation; physical training; young footballers; preliminary basic training.

Introduction

The search for gifted, capable, promising children who can further achieve high sports results at the domestic and international level is one of the directions for improving the training system in modern sports of the highest achievements. This scientific and practical direction is considered as relevant with clearly expressed organizational, pedagogical, socio-economic and ethical aspects [5; 6]. In the training of young athletes, a variety of means and methods of various orientations are used, the use of which is widely represented in sports, including football, with the predominance of the game method of performing exercises [3; 4; 7; 11].

Physical training of young football players occupies a key place in achieving a sports result. The effectiveness of competitive activities is largely due to the level of physical preparation of football players. Without a sufficiently high level of development of strength, speed, agility and endurance, it is impossible to successfully apply technical techniques and perform the planned tactical actions in the minimum periods of time and throughout the game. Therefore, the activity and effectiveness of team, group and individual technical and tactical actions depend on physical preparation [11, p. 9].

The purpose - is to consider theoretical issues of physical preparation of football players at the stage of preliminary basic training.

Material and methods of the research

In order to get acquainted with the state of the issue under study, an analysis and generalization of scientific, scientific and methodological literature, theoretical provisions on the physical preparation of football players at the stage of preliminary basic training was carried out. Analyzing scientific sources, the questions on the results of the study were considered: the use of means and methods of various orientations in the training of young athletes. The objectives and didactic purpose of the preliminary basic training phase were described. The place of physical training of young football players in achieving a sports result has been determined.

Results of the research

Physical training is one of the most important components of sports training. There are general, functional and special physical training. General physical training is understood as the process of harmonious development of

motor qualities that positively affect the achievements of the football player and ensure the effectiveness of the training process. Functional physical training is focused on creating a special basis necessary for the effective performance of large amounts of work on the development of special motor qualities. Special physical training is aimed at developing motor qualities in accordance with the requirements of the specifics of football and the peculiarities of competitive activity [11, pp. 36-55].

Functional readiness serves as the foundation, the basis for successful work on the development of special physical qualities and abilities. It means the functional capabilities of a football player, manifested in motor actions related to the chosen sport, the body's ability to endure large specific loads, to intensive recovery processes.

Special preparedness is characterized by the level of development of physical qualities, the capabilities of organs and functional systems that directly determine the achievements in football.

Selective increase in training loads at all stages of sports training of children and adolescents is determined by the regularities of the development of physical abilities. A high level and growth of development at a young age is assessed as a sensitive period and is fundamental for increasing the means of influence on a specific physical quality. Research by Z.I. Kuznetsova, A.A. Guzhalovskaya, L.V. Volkova, Yagello V. (2000) found that physical qualities in the age aspect develop heterochronously, an increase in the rate of development, their decline and rise is clearly considered. Knowledge of the sensitive periods of age-related development of individual components of physical preparation allows using them with the greatest efficiency to increase the motor potential of young athletes, their abilities and capabilities due to pedagogical influence.

So at primary school age, a more pronounced increase in strength in boys is noted from 11-12 years old. Some researchers believe that the best sensitive period for the development of strength in young football players is the age of 13-15 years, others 14-16 years. By the same period, children begin to show, mainly, the strength of the muscles of the right arm. In adolescence, muscle strength develops quite rapidly. The study of the endurance of schoolchildren to work of different intensities (60, 70 and 90% of the maximum) shows that the greatest growth rate of endurance to cyclic work with an intensity of 90% is observed in boys aged 10-14 years. Football players are 12-14 years old, according to O.V. Zlygosteva, an increase in the force gradient is due to an increase in maximum strength and a decrease in the time to reach it. It was found that in 42% of the study participants the annual increase in maximum strength was 12-14%, in 36% of young football players - 5-8%, 22% of the participants showed an insignificant increase in muscle strength, which was 4-6% [5].

The results of physical preparation testing of young football players aged 14-16, conducted by Y.D. Svistun et al., revealed that they had slightly lower average indicators of the development of speed qualities, dynamic strength, anaerobic and aerobic endurance, in comparison with the normative indicators of the Children's and youth sports school [9].

V.A. Belenko et al. propose a training program using exercises of the «general physical preparedness» block and

the «special physical preparedness» block. In the course of the study, the authors found a high correlation between them in the range from 0.62 to 0.78. More often, a correlation relationship is observed with exercises that characterize the level of physical preparation: running 15 m, 30 m, 60 m, 400 m directly determining the achievements in football [1].

Conclusions / Discussion

The analysis of scientific sources confirms that there are many questions in this direction that require study, clarification, scientific substantiation.

So, according to the research results of A.N. Berdnikova of football players 13-14 years old, a high level of endurance development, which was found in 18.2% of football players, speed-strength readiness - 45.4%, speed-strength endurance - 36.4% and a high level of development of speed abilities - 45, is given, 4% of players [2]. Correction of the training process of athletes according to the technology of individualization of physical training, according to the author, provided a significant increase in the results in field tests: test, hitting the ball at a distance (from 38.6 ± 3.7 m to 40.6 ± 4.4 m), throw-in ball from behind the head (from 13.7 ± 2.1 m to 15.4 ± 1.7 m) and 30 m running on the move (from 4.5 ± 0.2 s to 4.3 ± 0.2 with). The use of the technology of individualization of the training process made it possible to increase the level of endurance and speed readiness, as well as to keep the indicators of speed-power endurance at a high level. The special physical preparation of football players is manifested in exercises with a ball. These exercises require maximum coordination of the manifestation of most physical qualities: strength, agility, agility, flexibility.

As a means of developing physical preparation A.M. Galimov et al. recommend the use of physical exercises of general influence, borrowed from other sports. During the means of dexterity education, S.E. Volozhanin et al. recommend the use of exercises in gymnastics, acrobatics, athletics, motor and sports games [3]. Among the means of physical training, according to V.A. Kharlanov, a significant place is occupied by exercises with objects: stuffed, basketball, volleyball, tennis balls; with a rope, rubber shock absorbers, dumbbells, exercise equipment [10].

E.A. Maslovsky et al. believe that thanks to the special exercises of complex impact, included in the combinations, there is a positive dynamics of indicators of general and special physical training of young football players [1; 7; 8]. The introduction of the integral training methodology into the training process of 13-14 year old football players, taking into account the complex use of game exercises of physical, technical-tactical and psychological orientation, according to P.P. Kolupanov, contributed to a significant improvement in technical readiness indicators [6].

One of the most important directions of intensification and improvement of the training quality of young football players is the use of the circular training method for the development of motor abilities and the improvement of the technical qualities of athletes. During the research V.P. Guby et al. found that the inclusion of a set of circuit training complexes into the training process allowed not only to increase the level of motor qualities development, necessary for the training and competitive activity of football players, but also to more effectively optimize the training process for the development of motor and technical qualities development [4].

During the period of active biological development, the priority task is not to achieve maximum results, but to comprehensive and harmonious physical development, which will ensure not only the active accumulation of a technical and tactical arsenal, but also the creation of a foundation for a qualitative increase in specific functional reserves in accordance with specialization in conditions of single combat with an opponent, a large number of sudden movements, jumping out, high speed of running, high-speed technique, hitting the ball, speed, strength and jumping are largely needed. To be able to jump well, the necessary speed, and to be able to run well and quickly or to stop, respectively, requires strength. Consequently, one of the most significant physical qualities for a modern football player is speed, including strength, which greatly affect the playing activity of a football player. Also, the performance of game actions (defense-attack and vice versa) requires a high level of development of speed and speed-power qualities, as well as the necessary aerobic and anaerobic components of endurance, that is, this requires differentiation of motor actions of young football players.

The generally accepted definition of speed qualities speaks of speed as a quality that allows you to perform movement in a very short period of time. Speed qualities are very complex and purely nervous and muscular components can be distinguished in them. The first of them consists in the transmission of nerve impulses and brain activity, and the second is associated with the speed of muscle contraction. When the exercise is short-lived and of high intensity, it means the nerve component, since it affects the efficiency and frugality of the movements. Thus, running with maximum speed makes extremely high demands on the athlete's neuromuscular apparatus and the supply of his energy resources. In organizing the training process of football players, it is necessary to take into account the high intensity of metabolic processes and the age characteristics of a growing child's body. The relatively low functional development of the cardiovascular and respiratory systems in boys aged 13–14 significantly limits the ability to perform long-term intense loads. In accordance with the playing role, all-round physical training (with an emphasis on speed and speed-strength qualities) of young footballers of 13-14 years old is a topical scientific research.

Conflict of interest. The authors state that there is no conflict of interest that may be perceived as prejudicial to the impartiality of a state, public or commercial organization.

Financing sources. This article didn't get the financial support from the state, public or commercial organization.

References

1. Belenko, V. A., Saskevich, A. P., Maslovskiy, Ye. A. (2015), «Physical and technical training of young football players based on correlation analysis», *Izvestiya tul'skogo gosudarstvennogo universiteta. Fizicheskaya kul'tura. Sport.* № 4. pp. 77-82. (in Russ.)
2. Berdnikova, A. N. (2018), «Individualization of physical training of footballers aged 13-14», *Chelovek. Sport. Meditsina.* T. 18, № 4. pp. 73–79. (in Russ.)
3. Volozhanin, S. Ye., Aksenov, M. O., Atutov, A. P. (2014), «Special strength training of young football players in mini-football», *Vestnik buryatskogo gosudarstvennogo universiteta.* № 13. pp. 24-29. (in Russ.)
4. Guba, V. P., Leksakov, A. V., Antipov, A. V. (2010), *Integral'naya podgotovka futbolistov [Integral training of football players]: uchebnoye posobiye.* M.: Sovetskiy sport, 208 p. (in Russ.)
5. Zlygostev, O. V. (2013), *Modul'no-tselevoye proyektirovaniye skorostnosilovoy podgotovki futbolistov na etape nachal'noy sportivnoy spetsializatsii [Modular-purpose design of speed-strength training of football players at the stage of initial sports specialization]: avtoref. dis. na soiskaniye uch. stepeni kand. ped. nauk : spets. 13.00.04: Teoriya i metodika fizicheskogo vospitaniya, sportivnoy trenirovki, ozdorovitel'noy i adaptivnoy fizicheskoy kul'tury.* Tul'skiy gosudarstvennyy universitet. Tula. 2013. 22 p. (in Russ.)
6. Kolupanov, P. P. (2010), *Metodika integral'noy podgotovki yunyx futbolistov 13-14 let na spetsial'no-podgotovitel'nom etape [The method of integral training of young footballers 13-14 years old at a special preparatory stage]: avtoref. dis. na soiskaniye uch. stepeni kand. ped. nauk: spets. 13.00.04: Teoriya i metodika fizicheskogo vospitaniya, sportivnoy trenirovki, ozdorovitel'noy i adaptivnoy fizicheskoy kul'tury.* Moskovskaya gosudarstvennaya akademiya fizicheskoy kul'tury. Malakhovka. 22 p. (in Russ.)
7. Saskevich, A. P., Maslovskiy, Ye.A. (2013), «An integrated approach to the physical improvement of young football players 10-14 years old», *Ot idei – k innovatsii: materialy Yubileynoy KHKH Respublikanskoj nauchno-prakticheskoy konferentsii, UO «MGPU im. I.P. Shamyakina», g. Mozyr', 16 aprelya 2013 g. Mozyr': MGPU im. I.P. Shamyakina, 2013 g. pp. 248-249.* (in Belarusian)
8. Saskevich, A.P., Maslovskiy, Ye. A. (2013), «Features of the methodology of physical training of young football players 10-14 years old in the structure of the technique-tactical skills of playing football», *Sbornik nauchnykh rabot studentov Respubliki Belarus' «NIRS 2012» / redkol.: A.I. Zhuk (pred.) i dr. Minsk: BGU, pp. 489 – 490.* (in Belarusian)
9. Svistun, Yu., Gurnovich, Kh., Chornobay, H., Veselov'ska, L., Duda, O. (2008), «Assessment of the functional status of football players aged 13-14 in the winning period», *Moloda sportivna nauka Ukraini: zb. nauk. st. z galuzn fhz. kul'turi n sportu.* Vip. 12. T. 4. pp. 200-204. (in Ukr.)
10. Kharlanov, V. A. (2015), *Otbor, podgotovka i testirovaniye yunyx futbolistov [Selection, preparation and testing of young football players]. Nauchnaya sessiya guap.* pp. 255-258. (in Belarusian)
11. Khizhevskiy, O. V., Saskevich, A. P. (2018), *Osnovy nachal'noy podgotovki yunyx futbolistov [The basics of basic training for young footballers].* Minsk: BGPU, 181 p. (in Belarusian)

Received: 29.11.2021.

Published: 23.12.2021.

Анотація. Дмитро Хоміцевич. Фізична підготовка футболістів на етапі попередньої базової підготовки. Мета: розглянути теоретичні питання фізичної підготовки футболістів на етапі попередньої базової підготовки. **Матеріал і методи:** з метою ознайомлення зі станом досліджуваного питання проведено аналіз та узагальнення наукової, науково-методичної літератури, теоретичних положень щодо фізичної підготовки футболістів на етапі попередньої базової підготовки. Аналізуючи наукові джерела, розглянуто питання за результатами дослідження: використання засобів і методів різної спрямованості у підготовці юних спортсменів. Описані завдання та дидактична мета етапу попередньої базової підготовки. Визначено місце фізичної підготовки юних футболістів у досягненні спортивного результату. **Результати:** встановлено, що вибіркоче збільшення тренувальних навантажень на всіх етапах спортивної підготовки дітей та підлітків визначається закономірностями розвитку фізичних здібностей. Високий рівень розвитку результатів у юному віці оцінюється як сенситивний період та має основне значення для збільшення засобів впливу на певні фізичні якості. Одні дослідники вважають, що найкращим сенситивним періодом для розвитку сили у юних футболістів є вік 13-15 років, інші - 14-16 років. **Висновки:** аналізуючи наукові джерела, за результатами дослідження розглянуто питання: використання засобів і методів різної спрямованості у підготовці юних спортсменів. Організуючи тренувальний процес футболістів, необхідно враховувати високу інтенсивність обмінних процесів та вікові особливості зростаючого дитячого організму. Відносно низький функціональний розвиток серцево-судинної та дихальної систем у хлопчиків 13-14 років суттєво обмежує можливість виконання тривалих інтенсивних навантажень. В результаті вивчення літератури встановлено, що відповідно до ігрового амплуа комплексна фізична підготовка (з акцентом на швидкісні та швидкісно-силові якості) юних футболістів 13-14 років є актуальним науковим дослідженням.

Ключові слова: фізична підготовка; спортивне тренування; юні футболісти; попередня базова підготовка.

Аннотация. Дмитрий Хомитцевич. Физическая подготовка футболистов на этапе предварительной базовой подготовки. Цель: рассмотреть теоретические вопросы физической подготовки футболистов на этапе предварительной базовой подготовки. **Материал и методы:** с целью ознакомления с состоянием изучаемого вопроса проведен анализ и обобщение научной, научно-методической литературы, теоретических положений по физической подготовке футболистов на этапе предварительной базовой подготовки. Анализируя научные источники, рассмотрены вопросы по результатам исследования: использование средств и методов различной направленности в подготовке юных спортсменов. Описаны задачи и дидактическая цель этапа предварительной базовой подготовки. Определено место физической подготовки юных футболистов в достижении спортивного результата. **Результаты:** установлено, что выборочное увеличение тренировочных нагрузок на всех этапах спортивной подготовки детей и подростков определяется закономерностями развития физических способностей. Высокий уровень развития результатов в юном возрасте оценивается как сенситивный период и имеет основополагающее значение для увеличения средств воздействия на определенные физические качества. Одни исследователи считают, что лучшим сенситивным периодом для развития силы у юных футболистов является возраст 13-15 лет, другие - 14-16 лет. **Выводы:** анализируя научные источники, по результатам исследования рассмотрены вопросы: использование средств и методов различной направленности в подготовке юных спортсменов. При организации тренировочного процесса футболистов необходимо учитывать высокую интенсивность обменных процессов и возрастные особенности растущего детского организма. Относительно низкое функциональное развитие сердечно-сосудистой и дыхательной систем у мальчиков 13-14 лет существенно ограничивает возможность выполнения длительных интенсивных нагрузок. В результате изучения литературы установлено, что в соответствии с игровым амплуа комплексная физическая подготовка (с акцентом на скоростные и скоростно-силовые качества) юных футболистов 13-14 лет является актуальным научным исследованием.

Ключевые слова: физическая подготовка; спортивная тренировка; юные футболисты; предварительная базовая подготовка.

Відомості про авторів / Information about the Authors

Хоміцевич Дмитро Іванович: асистент кафедри фізичної культури і спорту; ЗО «Поліський державний університет»: ул. Дніпровської флотилії, 23, м. Пінськ, 225710, Республіка Білорусь.

Хоміцевич Дмитрій Іванович: асистент кафедри фізичної культури і спорту; УО «Полесский государственный университет»: ул. Днепроvской флотилии, 23, г. Пинск, 225710, Республіка Беларусь.

Dmitriy Khomitsevich: Assistant of the Department of Physical education and sports; Educational Establishment "Polesky State University": 225710, Dneprovskoy flotilii, 23 Pinsk, Republic of Belarus.

ORCID: <https://orcid.org/0000-0003-4494-0216>

E-mail: 15homa@mail.ru