



CHARACTERISTICS OF MORPHOPHENOTYPE AND PHYSICAL PERFORMANCE OF YOUNG FOOTBALL PLAYERS AND THEIR RELATIONSHIP TO PLAYING POSITION (LITERATURE REVIEW)

Sh. A. Mustafayeva

assistant of the department of rehabilitation, sports medicine and physical education.
Bukhara State Medical Institute

Article history:	Abstract:
<p>Received: September 10th 2021 Accepted: October 20th 2021 Published: November 30th 2021</p>	<p>Sportsmanship in football players is highly dependent on factors such as weight, body length, physical performance, speed and strength and speed. Physical performance is an expression of human performance, which has movement at its core. It manifests itself in various forms of muscular activity, and this in turn depends on the weakness and motivation of the person for professional activity. Anthropometric indicators weight, height, total dimensions and proportions of the body, somatotype, significantly influence physical performance, sports activity and the choice of sports specialization.</p>
<p>Keywords: Physical Performance, Peculiarities Of Morphophenotype, Young Football Players, Playing Role, Sports Success.</p>	

INTRODUCTION.

At the present stage of development of the training process in youth football is very important information about the structure, and a set of significant relationships between components, types and forms of internal organization of physical fitness of football players. Sportsmanship in football players largely depends on weight and body length, physical performance, speed and strength and speed. Sporting genetics is still at an early stage, but it is discovering. Physical performance is the most important component of an athlete's readiness for competition and is largely determined by the level of functional state of the athlete [33]. Human physical development is influenced by heredity, environment, socio-economic factors, working and living conditions, nutrition, physical activity and sporting activities [19]. Each game sport requires high basic indicators: the level of endurance, speed and power qualities, technical and tactical skills, a stable mentality, team communication and the level of interaction [20].

Physical development is the combination of morphological and functional traits that determine the body's reserve of physical strength, endurance and performance. Physical development is largely determined by hereditary factors (genotype), but at the same time its state after birth (phenotype) depends to a greater extent on living conditions and education. Physical development is one of the indicators of a football player's health [12].

Physical fitness is a process through which a level of fitness is achieved.

General physical training aims at increasing the level of physical development, broad motor preparation as a prerequisite for success in various activities. Specialized physical training is a specialized process that promotes success in a specific activity (type of profession, sports, etc.) that places specialized demands on the motor abilities of the individual. The result of physical training is physical fitness, which reflects the achieved efficiency in the formed motor skills that contribute to the effectiveness of the target activity (which is the focus of training). Physical development is the process of formation, formation and subsequent change during the life of an individual of the morphofunctional properties of his/her body and the physical qualities and abilities based on them.

Physical development is characterised by changes in three groups of indicators:

Body builds indicators (body length, body weight, posture, volume and shape of individual body parts, amount of fat deposition, etc.), which characterise, first of all, biological forms, or morphology of a person.

- Indicators (criteria) of health that reflect the morphological and functional changes in the physiological systems of the human body. The functioning of the cardiovascular, respiratory, vegetative and central nervous systems, digestive and excretory organs, thermoregulatory mechanisms, etc. have a decisive influence on human health.

- The development of physical qualities (strength, speed, endurance, etc.).



The biological law of exerciseability and the law of unity of form and function of the body in its activity are of great importance for the management of physical development in the process of physical education. These laws are the starting point in the choice of means and methods of physical education in each case [18,24].

At present, the task of preparing a highly qualified reserve for professional football is being actualized. The most important task of all sports training is the formation of a high level of functional capabilities of students, as it serves as the basis for the growth of sportsmanship and special physical performance [17].

The selection of gifted and promising athletes is of particular importance for achieving high results in sport. According to R.N. Dorokhov [15,16], sports morphologists and anthropologists are currently facing urgent tasks of searching for new criteria of selection, orientation and improvement of the training process. Achievement of high results in any kind of activity depends on many factors, the main one being the maximum correspondence of individual features of an individual to the requirements of the chosen specialization. In this regard, taking into account the requirements of a particular sport to the human body is the most important condition for the training of highly qualified athletes [1,3,4,32]. It is well known that all physiological and formally physiological features are conditioned by the constitution of the human being, which is the functional unity of all physical and physiological properties of human individuality. When we talk about constitution, we mean the integrity, unity, sustainability of the nature of the features in question.

The principle of the holistic study of the human being is not in doubt among researchers, but this approach is either not used or is implemented partially and not always methodologically. It is not known to what extent somatic and physiological features in athletes of different specialisations mutually condition each other. Do these parameters combine the same factors in the structure of athletes' physical performance or do they exist relatively independently of each other? There is still no algorithm for reliably assigning athletes at the stage of sports development, taking into account the informative psychophysiological complex, to the sport to which they correspond to a greater degree [11,23]. Assessment of human physical development (PD) is of great practical importance in improving the system of physical education and sports training [21,36,38], and is also one of the informative indicators of the level of health of the population [31].

Morphophenotype of constitution (somatotype, somatic type, body type) is the most accessible to study, relatively stable in ontogenesis and genetically determined characteristic of the integrity of the body. Recently, R.N. Dorokhov's method of determining somatotype has been widely used in our country.

In R.N. Dorokhov's research, constitutional diagnosis is based on the priority of morphological features, and the constitution itself is regarded as a set of general and private constitutions. Somatotype is understood as the equivalent of the term "constitution" [22, 36]. The morphophenotype of constitution (somatotype, somatic type, body type) is the most accessible to study, relatively stable in ontogenesis and genetically determined characteristic of the integrity of the body. Stefko and Ostrowski's scheme [31,39] is used to assess human constitution. The proposed scheme provides for the separation of pure (asthenoid, thoracic, muscular, digestive and abdominal), mixed (combination of elements of pure types) and undefined constitution types. However, this typology is based on somatic features, which introduces a significant subjective part in the evaluation of indicators. For decades, scientists have been working on the development of a fundamentally new system for evaluating constitutional types by using quantitative, metrical features that allow predicting the duration of individual periods of development and serve as the basis for predicting the definitive body size, its component composition and the motor qualities of the athlete.

Body proportions are determined by the ratio of individual parts of the body to its length, i.e. calculated indices of the relative length of the lower and upper limbs, shoulder and pelvic width, etc. It is accepted to distinguish 3 basic types of proportions - dolychomorphic, brachymorphic and mesomorphic. For somatotyping, various authors suggest using the Rohrer, Pirke, Ries-Aysenck, Erisman, shoulder-growth indices; the Kettle and Kettle II indices of available nutrition; the ratio between upper and lower body segments [34,37]. Morphological, functional and motor parameters of a person are conditioned by his type of constitution, which is the medical and biological basis of the differentiated approach in the system of physical education, which involves the need to develop new pedagogical technologies, taking into account individual-typological features of the human body. Football as a sport places high demands on various types of training of young football players [14]. One of the most important aspects of training is the special physical preparation of young football players [25]. It is known that in the process of competitive



activity football players of different roles (goalkeeper, defenders, midfielders, forwards) perform different in volume and intensity of load. The role of the football player determines the necessary level of development of physical abilities. In this regard, in our opinion, the development of physical abilities in the process of training activities should take into account the playing role of young football players.

Among the many indicators of individual characteristics of athletes, anthropomorphological traits are of great interest, as they can determine the manifestation of strength, speed, endurance, etc. [24,26,29].

Anthropometric measurements provide objective data on important morphological parameters of the body - length, weight, chest circumference, etc. They are the basis of somatometric methods for studying human physical development [23,27,28,30]. Data from many studies in different countries around the world show that height, weight, and other morphological parameters play an important role in human physiology, and human health directly depends on these indicators [2, 5, 6,9,10,]. For example, the short stature of a number of people in tropical countries is a consequence of a lack of protein in the diet. Excessive body weight significantly reduces life expectancy. Growth and puberty in children and adolescents in the highlands are much slower than in the lowlands and plains. The geographical conditions of any region have an effect on the body of athletes [7,8,13,38].

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