

MORPHOLOGICAL CHARACTERISTICS OF BODY BUILDING ENGAGED JUNIOR FOOTBALL

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Abstract

The aim of the study is to present physique junior football and to compare their morphology with other teams and representatives of other sports.

Material for analysis was collected in February in 2011, among footballers Youth Sports Training Center, students in grade football at Kujawsko-Pomorskie Football Association in Bydgoszcz. It examined 18 athletes aged 15 to 16 years.

It made the following measurement of somatic: body height, body weight, length of legs, thigh circumference. Carried out the measurements in accordance with the instructions given by Zbigniew Drozdowski (9). On the basis of the materials enumerated for each contestants each following characteristics: the length of the lower limbs, Manouvrier index, Rohrer index, index corpulence.

Then, for each attribute calculated the arithmetic mean (M), the average standard deviation (δ), the probable error of the arithmetic mean (S_M), the probable error of the average standard deviation (S_δ) according to the rules given by M. Arska-Kotlińska and J. Bartz (2). I also established the frequency percent distinct types.

It was found that the morphological structure of the body junior football is typical for the sport, which indicates the formation of a model body building career, which is included in the selection of young players.

Keywords: morphological characteristics, body building, junior football.

I. INTRODUCTION

Football is a team sports game, which involves two teams, each of which has an 11-players. Me June are played on a football field with a length of 90-120 m 45-90 m wide. Game time is 2 x 45 min. with a 5-minute break. Players with the exception throws in the ball used in the game of the lower limbs, also allowed to bounce the ball head and torso, arms uses primarily the keeper. The aim of the game is to score the opponent as many these goals, while disallowing position to lose a goal in its own team. All players are responsible for the result of the meeting, taking part in actions to defend and attack.

In its continual development of football has undergone a number of stages and transformations. With a little more aggressive discipline based on individual technical and tactical training of individual players, has become typical combat sport where the ball takes almost afraid jammed on every inch of the pitch, and the actions of individual players have been completely subordinated to the team.

Currently playing soccer is grown on all continents. The level of this sport in the world puts before the players extremely high demands. Universalism in the game, the pursuit of the so-called. total football requires players not only a perfect mastery of the art of football needed in the implementation of various strategy, but also a good knowledge of the systems used to attack and defend, and adequate physical preparation.

Football is a game of getting a faster, more aggressive, more dynamic. Disciplines is considered to be the type of speed-endurance, where the effectiveness of the game largely depends on the precision footwork, as well as intense. Therefore, from cultivating t ± discipline of sport requires a great movement coordination, which involves a great technique, and a very good efficiency of the organism. Hence t fluorescent lamps football training is not simply to learn the game, but also should result in raising overall physical fitness. Players become faster, stronger, more agile and tougher.

Among the research primarily on somatic characteristics of competitors practicing this sport discipline should be mentioned the work of K. Bibrzycki and J. Niedziałkowski (4) analyzing the construction of somatic players taking part in the competition and the Polish league in season 1979/80. In their study, they tried to assess the interdependence between physique competitors, and the selection and tactical solutions and positioning during the game. Also described the construction of these types Ouch, (according to the typological A. Wanke)

A. Koniarek (13) presented morphological characteristics of the participants in the World Championships in 1966. In their view it can be said that footballers are characterized by high growth and relatively high weight, which results in terms of building a strong indicator Rohrer.

Z. Drozdowski (10) presented the results of morphological diversity of players engaged in the game of football, and competing in the colors of Poznan clubs, KS Lech and KS Warta. Drozdowski chose the following parameters for the analysis of the construction of somatic body: body height, body weight, length of the upper limb, lower limb length, body length, shoulder width, breadth and depth of chest, width of the pelvis, chest circumference measured at the maximum inspiratory and expiratory circuit's arms, thighs and drumsticks. On the basis of measurements calculated momentum indicators chest and torso, barko, pelvis, chest and Rohrer.

Based on the same parameters Shahtul (18) described what was the state of the physical development of soccer players KKS Lech Poznan, who in 1983 won the Polish championship and to what extent there were possibly changes in these characteristics over the 17 years separating those studies it was found that the tested athletes were characterized by a more slender body and at a significantly greater body height, body length and only slightly more body weight than in studies prior to 17 years.

A relatively complete in terms of physique development anthropometry footballers introduced L. Wojciechowski (22) examining the players from Koszalin. It is today on that football should be characterized by medium and high height, weight proportional to body height, waist belt rather narrow chest a little arched. Lower limbs should be of medium length with a relatively short and well-muscled calf, and a long and less-muscled thigh.

Requirements posed by the game of football can be divided into four types: technical, tactical, psychosocial, and physical (motor). The ideal player should have a high level of fitness and technical, have a comprehensive strategy and mental strength, and function well in a team. With some skills, a player can compensate for the weaknesses of others in the game (3).

Success in team sports game is conditioned by the effectiveness of individual behavior of players and their reliability in cooperative. Reliability of individual action is one of the most important criteria for assessing the suitability of the player to the team (19). Currently, the top teams looking to players with an average body height, average body weight, high speed & abilities - strength and a high level of technical sophistication - tactical. Only player's goalkeeper and two center managers should block a defensive stand high growth and relatively higher weight.

Most of the research so far focused mainly on the players playing in higher leagues, on par central, in the oldest age groups. Less attention has been paid to research while juniors in football. Therefore, the aim of my work is an attempt to evaluate the budget mid-body of young players, beginning his sports career.

The aim of the study is to present physique junior football and to compare their morphology with other teams and representatives of other sports.

For this purpose, make up measure the following characteristics of somatic: body height, body weight, length of the lower extremities, thigh circumference. Carried out the measurements in accordance with the instructions given by Zbigniew Drozdowski (9). On the basis of the materials enumerated for each player the following characteristics: the length of the lower limbs, Manouvrier index, Rohrer index, index typology. It also established the incidence rates distinct types.

II. MATERIAL AND METHOD

Analyzed material was collected in February in 2011, among footballers Youth Sports Training Center, students in grade football at Kujawsko-Pomorskie Football Association in Bydgoszcz. All subjects were characterized by a very good state of health. Overall examined 18 athletes including 1 goalkeeper, 8 defenders, six midfielders, three forwards. All subjects were born in 1995.

It made the following measurements somatic: body height, body weight, length of legs, thigh circumference. Carried out the measurements in accordance with the instructions given by Zbigniew Drozdowski (9). On the basis of the materials enumerated and every player the following characteristics:

1. The ordered power exceeds the available capacity of the WTTP. This makes it necessary to limit the area under consideration and to supply a part of it from the EDF west main. The length of the lower limbs by the formula:

$V =$ the height of the body - an increase in the seated position

2 Manouvrier ratio according to the formula:

$I = (\text{height} - \text{increase in the seated position}) / \text{increase in the seated position} \times 100$

It helped me to determine the ratio of the length of the lower limbs and trunk according to the scheme:

x - 84.9 brief extremity
85.0 - 89.9 middle extremity
90.0 - x long extremity

Rohrer index according to the formula:

$I = (\text{body weight (in grams)} - 3 \text{ body height (in inches)}) \times 100$

It helped me to identify the body type given by Kretschmer (according to the classification Curtius):

x - 1.12 leptosomatic
1.13 - 1.34 athletics
1.35 - x picnic

4.1 Typology Indicator (B. Škerlj) according to the following formula:

$$I = (\text{thigh: body height}) \times 100$$

The classification of the index is as follows:

x - 28	skinny
28.1 - 32.0	average
32.1 - x	burly

Then, for each attribute calculated the arithmetic mean (M), the average standard deviation (δ), the probable error of the arithmetic mean (S_M), the probable error of the average standard deviation (S_δ) according to the rules given by M. Arska-Kotlińska and J. Bartz (2). I also established the incidence rates distinct types.

III. ANALYSIS OF THE MATERIAL

1. The ordered power exceeds the available capacity of the WTTP. This makes it necessary to limit the area under consideration and to supply a part of it from the EDF west main. General characteristics of the team

Youth Sports Training Centre, class football at Kujawsko-Pomorskie Football Association in Bydgoszcz, was founded in 2004 on the initiative of the Polish Football Association. The aim was to create a representation of the province and competition in the nationwide competition. The training program is similar to that of the existing sports club Zawisza Bydgoszcz. All subjects are taught in school No. 10 in the Secondary School No. 15 on the street Cherkasy in Bydgoszcz. Class calculated 20 students and is composed of representatives of nine clubs from across the region Kuyavian-Pomeranian. Students outsiders are accommodated in the school dormitory Street Polanka use the same cafeteria. All subjects my players born in 1995, while the length of deceptive ranges from 5-6 years. Most riders passed all stages of training, taking part in the competition each age category.

Nine players are representatives of the UUT Kujawsko-Pomorskie. The team participated in the 2009/2010 season in the national junior competition for the cup to them. J. Michalowicz, taking fifth place. P n the other hand the winner of many competitions in the Kujawsko-Pomorskie. Several players with their clubs won the champion league provincial footballers and youngsters and the second and third place in the league provincial and district leagues highest places footballers and youngsters. The group is a representative of Polish (Thomas Prejs), who has scored

several international meetings. Trainings are held five times a week and once a week personal training. In addition, once a week classes are held at the pool or additional care. In addition to training, are conducted in the school physical education classes four hours a week. After all weeks classes, students return home and Saturday games are played in their clubs.

Juniors OSSM KP Petrol stations do not receive any grants from the club, being only dependent on their parents.

2 Characteristics of somatic features.

Table 1 summarized the characteristics of numerical analyzed somatic features. Body height test group of players varies from 162-185 cm individually, with an average 173.77 cm.

As shown in Table 2 listing the comparatively analyzed the characteristics, the subjects of my juniors have an average height of the body close to the youth of the province of Cracow surveyed by Chrzanowski et al (5), but lower than the adolescents from the Poznań surveyed by Cieślík et al (6). Significantly higher compared to the study group, the mean body height can be observed in the Polish representatives of the World Cup in 1978 and first division players of the season 1979/80, only players Basin Sosnowiec retreated under the terms of the young players filling stations OSSM KP Bydgoszcz.

Body weight riders surveyed (Table 1) ranges and from 52 kg to 72 kg, and the average is 63.9 4 kg. From the statements tab. 2 that the juniors OSSM KP Bydgoszcz filling stations have similar weight as the youth of the province of Cracow, and are lighter than the youth of the province of Poznan, the Polish representatives, players and league starters in the season 1979/80 and the players Basin Sosnowiec.

From the data in Table 1 also shows that individual variations in leg length ranges from 75-89, and the average is 82.11 cm. These figures are slightly lower than the value reported in adolescents from Cracow province, while much lower than first league season 1979/80, as well as athletes Basin Sosnowiec (Table 2).

The arithmetic mean of the thigh examined my players is 53.83 inches, with individual spans of 47-61 cm (Table 1) and is higher than the average surveyed their peers from Poznan and Krakow, as well as players Sosnowiec white sails. In terms of the degree of thigh musculature juniors OSSM KP filling stations Bydgoszcz much inferior team to a first-season competition occurring in 1979-1980 (table 2).

Differentiation of typological

On the basis of the ratio Rohrer (Table 3) made determination of body building athletes by Kretschmer (in the classification of Curtius). It found that most of the players is characterized by the athletic type physique, which is 66,7 cm band.

Comparing these data with other test teams and disciplines and sports (table 6) can be noted that the same or similar type athletic frequency obtained Lech Poznan juniors taking part in the competition season 1989/90 (66.7%) and 95/96 (68, 75%), Warta Poznan (72.2%), including subjects juniors Olimpia Poznań and Naprzod Rydułtowy (66.61%) and seniors Metalotexu Żydowo (65%). Slightly more players representing this type of construction you Ouch (81.25%) occurred in the junior team Lech Poznan in UEFA 1993-1994.

Z. Drozdowski (9) showed in their study that 61.2% of sprinters, which is slightly less than the test I have a team of junior athletic type physique. The same author proved that even greater differences divide the surveyed juniors from Bydgoszcz of long-distance runners (53.2%), youth candidate to study Physical Education (43.8%) and volleyball players (6.6%).

In the same table shows that the two players, i.e. 11.1% of the respondents are individuals with picnics specified type physique. A similar incidence of type picnic (12.5%) received juniors Lech Poznan surveyed in 1994. Small group picnics were among sprinters (15.3%), long-distance runners (15.3%), and among the candidates of Physical Education (10%). Only individuals representing their teams or sports such as juniors Warta (5.6%), seniors Matelote (5%), juniors Olimpia and Naprzod (2.78%) had the type of physique. High percent picnics represented volleyball (28.2%) and juniors Lech season 95/96 (25%), while among young players Lech surveyed in 1990 there was not a picnic.

Analyzing Table 6 can be seen that the four players (22.2%) tested my team turned out to be leptosomatic. Exactly the same type leptosomatic incidence reported in the junior Warta, among sprinters was 23.5% leptosomatic. Close to each other res obtained Matelote seniors (30%), juniors Naprzod and Olimpia (30.56%), players cultivating long-distance races (31.5%) and juniors Lech appearing in season 89/90 (33.3%). Nearly half leptosomatic is studied by Z. Drozdowski (9) young candidate for the study of Physical Education (46.2%). The highest percentage recorded a group of retinal physicians, examined by the same author (65, 1%). Only one player type leptosomatic was in the youth team of Lech in 1994 and in season 95/96.

Table 4 is included characteristic percentage of respondents taking into account the splitting of the players according to the indicator typology. On this basis we can say that most people represents the average type of body, as much as 72.2%. Stout is four players representing (22.2%) and only one thin (5.5%).

Using the indicator Manouvrier made the classification of body based on the length of the lower limbs referred to the length of the body (Table 5). It turned out that the characteristics of the players middle extremities dominated (61.2%), long extremities were seven or 38.8% of all respondents. There was not one player brief extremities

IV. SUMMARY AND CONCLUSIONS

As a result of analysis of the collected material gives rise to the following concluding observations and conclusions:

1. Tested syndrome is characterized by medium and large body height, and medium and large in relation to its weight, which indicates a strong morphological junior football.
2. Compared with older players present in the first division competition surveyed juniors OSSM KP Bydgoszcz filling stations have smaller circuits of the lower extremities.
3. The team junior footballers from Bydgoszcz dominating type player with an average length of the lower limbs, athletic physique, and the average typology.
4. In determining the frequency of particular body types, both among juniors and seniors dominated the athletic type (over 65%).
5. Features physique of young footballers of the study group are similar and slightly higher than the qualities of body of young people from the province of Poznan and adolescents from Cracow province.

In the light of the developed somatic characteristics and comparative material UUT junior OSSM KP filling stations Bydgoszcz shows a typical for this stage of training and discipline physique. Evidence can that making a selection and selection of youth coaches include in their activities the previous scientific observations indicate that the above-mentioned type of morphology is perfectly realized in the present discipline sport. We can also give that in the course of the development of football already formed a certain type of body build its competitor.

V. REFERENCES

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Table 1 Characteristics of the numerical analyzed features

Feature	Min-Max	m	S_M	δ	S_δ
Body height	162-185	173.77	1.30	5.18	0.91
Body weight	52-72	63.94	1.82	7.27	1.28
Growth seated	87-97	91,66	0.53	2.06	0.37
The length of the lower limbs	75-89	82.11	0.90	3.60	0.63
Thigh	47-61	53.83	0.86	3.34	0.58

Table 2 Comparison of the studied traits

Feature	World Cup Poland 1978 21.	And league Poland 1979-1980 21.	Players Basin Sosnowiec 21.	a child. Poznan 6.	a child. Krakow (5)	Our study
Body height (cm)	177.80	176.81	171.90	176.30	173.78	173.77
Body weight (kg)	73.70	71.71	67.90	64.70	63.79	63.94
Lower limb length (cm)	-	90.48	88.42	-	83.45	82.11
Thigh cm),	-	56.09	53.03	51.50	51.78	53.83

Table 3 Differentiation of inter-subject variability in the light of the typology of Kretschmer

Group surveyed riders	Type leptosomatic		Type athletic		Type picnic	
	n	%	n	%	n	%
n = 18	4	22.2	12	66.7	2	11.1

Table 4 Frequency of body types according to the index typology

Group surveyed riders	Skinny		Average		Stout	
	n	%	n	%	n	%
n = 18	1	5.5.	13	72.2	4	22.2

Table 5 Frequency of body types according to the index Manouvrier

Group surveyed riders	In short extremities		meddle extremities		Long-extremities	
	n	%	n	%	n	%
n = 18	0	0	11	61.1	7	38.8

Table 6 Summary of depots somatic covered by the typology of Kretschmer

Team sport or discipline	Type leptosomatic	Type athletic	Type picnic	Author
Volleyball	65.1	6,6	28,2	Z. Drozdowski (10)
Sprinters	23.5	61.2	15.3	Z. Drozdowski (10)
Players engaged on long runs	31.5	53.2	15.3	Z. Drozdowski (10)
Youth candidate to study Physical Education	46.2	43.8	10,0	Z. Drozdowski (10)
Juniors Lech Poznan - season 89/90	33.3	66.7	0	D. Baryła (15)
Juniors Naprzod Rydułtowy and Olimpia Poznań	30.56	66.67	2.78	T. arrived (17)
Metalotex Żydowo	30	65	5	M. Antkowiak (1)
Juniors Warta Poznan	22.2	72.2	5,6	J. Pawlak (15)
Juniors Lech Poznan - season 1993/94	6.25	81.25	12.5	M. Przybylski (16)
Juniors Lech Poznan - season 1995/96	6.25	81.25	12.5	A. Cod (7)
Juniors OSSM KPZPN Bydgoszcz	22.2	66.7	11.1	own research

Table 7 Summary of material

Last name and the name of	Body height	Body weight	The increase in the sitting position	Thigh	The length of leg lower
Bartoszek Adam	180	69	92.	54	88
Bembenek Hubert	170	61	88	55	82
Boładź Simon	174	65	91.	53	83
Borecki Charles	182	67	97	53	85
Brzezinski James	175	68	90	56	85
Chabowski Fabian	168	55	88	51	80
Chudzinski Maciej	179	62	95	53	84
Dejewski Thomas	185	68	96	53	89
Gregorek Peter	170	2	90	61	80
Gwizdała Sebastian	165	55	89	49	76
Muzalewski Seweryn	168	63	90	56	78
Damian Nowak	174	71	93	60	81
Siegert Oscar	162	52	87	PLN 50	75
Stolkowski Daniel	179	70	96	54	83
Stolkowski David	176	65	93	54	83
Chellah Charles	169	52	90	47	79
Luke Wandowski	177	68	93	54	84

Zaworski Patryk	175	68	92.	56	83
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Table 8 Summary of material

Name and surname	Rohrer index	Indicator tężości	Indicator Manouvrier
Bartoszek Adam	1.18	30.0	0.95
Bembenek Hubert	1.24	32.3	0.93
Boładź Simon	1.23	30.4	0.91
Borecki Charles	1.11	29.1	0.88
Brzezinski James	1.27	32.0	0.86
Chabowski Fabian	1.16	30.3	0.90
Chudzinski Maciej	1.08	29.6	0.88
Dejewski Thomas	1.07	28,6	0.92
Gregorek Peter	1.46	35.9	0.88
Gwizdała Sebastian	1.22	29.7	0.85
Muzalewski Seweryn	1.33	33.3	0.86
Damian Nowak	1.35	34.5	0.87
Siegert Oscar	1.22	30.9	0.86
Stolkowski Daniel	1.22	30.2	0.86
Stolkowski David	1,19	30.7	0.89

Chellah Charles	1.07	27,8	0.87
Luke Wandowski	1.23	30.5	0.90
Zaworski Patryk	1.27	32.0	0.90

Table 9 Summary of material

Name and surname	Age	Field position	Membership Club
Bartoszek Adam	15	back	Zawisza Bydgoszcz
Bembenek Hubert	15	attacker	Chasing Mogilno
Boładź Simon	15	helper	Zawisza Bydgoszcz
Borecki Charles	15	helper	AD USW Bydgoszcz
Brzezinski James	15	goalkeeper	Victoria Korora
Chabowski Fabian	15	attacker	Wda World
Chudzinski Maciej	15	helper	Chemist Bydgoszcz
Dejewski Thomas	15	back	Olimpia Grudziadz
Gregorek Peter	15	back	Chemist Bydgoszcz
Gwizdała Sebastian	15	back	Wda World
Muzalewski Seweryn	15	helper	Elana Torun
Damian Nowak	15	helper	Chemist Bydgoszcz
Siegert Oscar	15	helper	Chemist Bydgoszcz
Stolkowski Daniel	15	attacker	Legia Chelmza
Stolkowski David	15	back	Legia Chelmza

Chellah Charles	15	back	AD USW Bydgoszcz
Luke Wandowski	15	back	AD USW Bydgoszcz
Zaworski Patryk	15	back	Chemist Bydgoszcz