

A model for completing the playing links of the women's student team in mini-football

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Abstract

Objective of the study was to develop and justify a model for recruiting the playing links of a women's student team in mini-football (futsal).

Methods and structure of the study. Scientific work was carried out on the basis of the women's student mini-football (futsal) team of the Moscow Polytechnic University (Moscow) during 2023. Using the modeling method, the playing fours of the sports team were substantiated based on the individual compatibility of the athletes.

Results and conclusions. The results of the research made it possible to establish that in mini-football (futsal), women's student teams play, as a rule, in three units, and individual indicators of physical development and preparedness in each playing unit have significant differences. Such differences determine the compatibility of players in each playing unit, which ultimately determines the specifics of recruiting the entire women's student team in mini-football (futsal).

The optimal selection of players based on morphological indicators and physical fitness allows us to build a model for recruiting the playing units of a female student team in futsal (futsal), thereby creating favorable conditions for achieving high sports results in competitive activities.

Keywords: mini-football (futsal), sports team, model, playing links of, player compatibility.

Introduction. Student sports in the Russian Federation has changed significantly in recent years, because... Professional athletes who are students of higher academic institutions can also take part in competitions. The inclusion of professional female athletes in student futsal (futsal) teams contributes to a significant increase in the class of the team [2, 6]. However, as practice shows, women's student teams in futsal (futsal), staffed by professional and amateur players, are not always able to show high results during competitions [1, 5].

Analysis of special scientific and methodological literature [3, 4] as well as our own observations indicate that the coherence of the game actions of a student team in mini-football (futsal) is largely determined by the compatibility of female athletes in the playing level. The most informative indicators characterizing

the compatibility of players in the playing sections of a women's student team are morphological characteristics, as well as functional, physical, technical-tactical and psychological preparedness of female athletes.

Thus, noting the importance of the individual characteristics of female athletes in the process of recruiting game units, it is necessary to develop a universal model that can be effective in various conditions for the development of a female student team in mini-football (futsal).

Objective of the study was to develop and justify a model for recruiting the playing links of a women's student team in mini-football (futsal).

Methods and structure of the study. Scientific work was carried out at the Moscow Polytechnic University (Moscow) among the women's student futsal (futsal) team during 2023. At the first stage (January-



June 2023), individual indicators of physical development and preparedness of student team players were studied. At the second stage (August-October 2023), using the modeling method, the playing fours of a sports team were substantiated based on the individual compatibility of the athletes. At the third stage (November-December 2023), a model for recruiting the playing units of a women's student team in mini-football (futsal) was developed and justified.

Results of the study and discussion. The development and justification of a model for recruiting the playing units of a women's student team in mini-football (futsal) includes four stages: conceptual, diagnostic, modeling and control.

The conceptual stage includes determining the goals and objectives of recruiting the playing units of the women's student team in mini-football (futsal). The basis of the conceptual stage is an individual-integrated approach, based on determining the patterns of physical development and preparedness of female athletes aged 18-25 years.

The diagnostic stage includes the development of a set of scientific studies that make it possible to determine the indicators of individual physical development and preparedness of each player, identifying his priority indicators, which determine the compatibility of female athletes in the playing level.

The modeling stage includes the creation of a mechanism for recruiting the optimal composition of playing units based on individual compatibility in terms of physical development and preparedness of the female student team in mini-football (futsal).

The control stage made it possible to determine and evaluate the effectiveness of the previous three stages, as well as to make adjustments in the process of training athletes based on roster rotation and selection of the most compatible players within the playing unit.

Thus, the composition of the playing units is determined by the rational distribution of players in the

fours that are most appropriate in terms of their individual parameters.

The results of the analysis of the morphofunctional indicators of the playing sections of the female student futsal (futsal) team indicate that the most experienced athletes (24.5 ± 1.3 years). Length and body weight indicators among players of the women's student futsal team tend to increase from the first to the third line. Thus, among athletes of the first level of the game, the body length is 160.2 ± 3.3 cm; the second – 163.5 ± 4.6 cm and the third – 167.9 ± 4.0 cm, and body weight – 57.0 ± 2.1 ; 59.8 ± 2.7 and 62.6 ± 3.2 kg, respectively (Table 1). The first gaming unit is staffed by the most experienced players with sports experience of 9.2 ± 1.6 years.

It is typical that before the start of the sports season, players of all levels experience "good" physical condition. It should be noted that the players of the first gaming link have 70% functional readiness for the season, while the second and third have 80 and 90% readiness, respectively.

Control and pedagogical tests made it possible to establish that the players of the first link of the women's student futsal (futsal) team had indicators of speed development (30 m run) - 4.56 ± 0.47 s (7 points, "high" level), significantly exceed the results shown by athletes of the second and third links - 4.82 ± 0.49 and 4.88 ± 0.51 s (5 points "average" level), respectively ($p < 0.05$).

Indicators of coordination readiness (shuttle run 3x10 m) are significantly higher in the second and third game levels - 8.62 ± 0.47 and 8.59 ± 0.55 s (6 points, "above average" level) than in the first four - 8.86 ± 0.52 s (5 points, "average" level), respectively ($p < 0.05$; Table 2).

It was established that the indicators of speed endurance (shuttle run 104m) among the players of the second - 27.4 ± 1.28 s and the third playing line - 28.3 ± 1.09 s (5 points, "average" level) are significantly in-

Table 1. Model of the composition of playing links according to the morphofunctional indicators of female athletes in mini-football (futsal)

Game link number	Age, years	Body length, cm	Body weight, kg	Sports experience, years	Physical condition and sports readiness	Functional readiness for the season, %
1	$24,5 \pm 1,3$	$160,2 \pm 3,3$	$57,0 \pm 2,1$	$9,2 \pm 1,6$	xop.	70,0
2	$22,1 \pm 1,0$	$163,5 \pm 4,6$	$59,8 \pm 2,7$	$6,8 \pm 0,7$	xop.	80,0
3	$19,3 \pm 0,9$	$167,9 \pm 4,0$	$62,6 \pm 3,2$	$3,9 \pm 0,6$	xop.	90,0



Table 2. Model of the composition of game link according to indicators of special physical preparedness of female athletes in mini-football (futsal)

Tests	Game link	Indicators	
		\bar{X}	Points
30 m run, s	1	4,56±0,47	7
	2	4,82±0,49	5
	3	4,88±0,51	5
Shuttle run 3x10 m, s	1	8,86±0,52	5
	2	8,62±0,47	6
	3	8,59±0,55	6
Shuttle run 104 m, s	1	26,06±1,19	7
	2	27,4±1,28	5
	3	28,3±1,09	5
Cooper test, m	1	2200±19,33	4
	2	2700±20,61	6
	3	2500±20,18	6
Standing long jump, cm	1	213,5±8,94	7
	2	206,2±8,67	5
	3	216,6±9,05	7

ferior to the results shown female athletes of the first link – 26.06±1.19 s (7 points, “high” level) ($p<0.05$).

A characteristic point is that the overall endurance indicators of the second and third playing links are at the “above average” level (6 points) - 2700±20.61 and 2500±20.18 m, respectively, which is significantly higher than that of the first playing level - 2200±19.33 m (4 points, level “below average”) ($p<0.05$).

It was revealed that the players of the women’s student mini-football (futsal) team of the first and third game levels have significantly higher speed-strength readiness indicators - 213.5 ± 8.94 and 216.6 ± 9.05 cm, respectively (7 points, “high” level), compared with the second link - 206.2±8.67 cm (5 points, “average” level) ($p<0.05$).

Conclusions. The results of the research made it possible to establish that in mini-football (futsal), women’s student teams play, as a rule, in three units, and individual indicators of physical development and preparedness in each playing unit have significant differences. Such differences determine the compatibility of players in each playing unit, which ultimately determines the specifics of recruiting the entire women’s student team in mini-football (futsal).

The optimal selection of players based on morphological indicators and physical fitness allows us to build a model for recruiting the playing units of a fe-

male student team in futsal (futsal), thereby creating favorable conditions for achieving high sports results in competitive activities.

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