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# Technical and tactical readiness of the team "Helios" (Kharkiv) in the 26th Ukrainian soccer championship in the first league

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**Purpose:** to determine the model characteristics of the technical and tactical readiness of the team that participated in the Ukrainian championship of the first league in order to further improve and correct the training process.

**Material & Methods:** the data were obtained using the method of expert evaluation, the calculation was carried out using the methods of mathematical statistics.

**Results:** analyzed the average values of the registered values for 19 games. Analyzed various technical and tactical actions and their differences in the first and second halves, as well as individual indicators of the game players and the team "Helios" (Kharkiv).

**Conclusion:** quantitative and qualitative (rejection rate) indicators were obtained both for team technical and tactical actions, and separately for each technical and tactical method for each game period.

**Keywords:** technical and tactical actions, total number of actions, reject rate, indicators for the first and second half, attacking and defensive actions of the team.

## Introduction

A great contribution to the construction of model characteristics of competitive activity in football was made by domestic experts [7; 9; 12]. Football experts analyze technical and tactical readiness from young football players [2; 6; 8] to football veterans [11]. Some experts are exploring certain indicators that, in their opinion, lead to a positive result of the game. Among them are: one-touch ball transfers in various zones of the football field [13], ball delivery in the opponent's penalty area [10], etc. There are some studies of the competitive activities of highly skilled football players (Ukrainian Football Premier League), which were conducted with the same the same team for a long time [15]. However, there are practically no longitudinal studies of technical and tactical preparedness of the teams of the First League of Ukrainian football. [3–5].

In our time, when developing quantitative indicators characteristic of a given level of sportsmanship, various approaches can be distinguished [14]. We used the approach associated with the study of a significant set of athletes of different qualifications, establishing the relationship between the level of sportsmanship and the dynamics of changes in a particular indicator.

**Purpose of the study:** to determine the model characteristics of the technical and tactical readiness of the team that participated in the Ukrainian championship of the first league in order to further improve and correct the training process.

## Material and Methods of the research

Studies were conducted using the method of expert evaluation. As experts were involved 5 football professionals. Among them: one master of sports in football, one – candidate master of sports, the rest were players of professional football teams.

All the experts in the past worked with professional and amateur football teams as coaches. From among experts: two professors, one candidate of pedagogical sciences, associate professor; two candidates of sciences in physical education, associate professors of the Department of Football and Hockey of the Kharkov State Academy of Physical Culture. If during the registration of the competitive activity of the Helios team in Kharkov there were debatable questions, they were decided by a majority vote. During the pedagogical observations, the methodology itself assumed mutual control over the indicators of competitive activity, which made it possible to obtain more objective data. So, one of the specialists counted the total number of transfer, and the other, at the same time, slandered the dictaphone which specific players (player number) and which was transfer in the direction and distance.

During the development of model characteristics, the mean –  $\bar{X}$ , was calculated, the sample mean error (the error of representativeness) was  $\pm m$ . The significance of differences was determined using Student's t-criterion according to the generally accepted method [1].

Scientifically-methodical group at the team "Helios", Kharkov, 19 games were registered in their field. In the matches of 26 championships of Ukraine in the first league 18 teams participated. Players "Helios" had 34 games, got 16 wins, 10 – draws, 8 – defeats, the goal ratio was 31–22,58 points scored.

## Results of the research

This study presents averages that were obtained for 19 home games in the 26 championship of Ukraine in football among the teams of the first league. Thus, the total number of technical and tactical actions was  $644,98 \pm 27,91$ , while the reject rate when performing these actions was  $35,86 \pm 2,01\%$ . During the first half, the players of the Helios team performed

338,15±17,45 technical-tactical actions with a rejection rate of 37,48±2,99%. In the second period, the players did 301,4±14,64 technical and tactical actions, with a rejection rate of 40,47±3,03%. Significant differences in these indicators we have not identified (Table 1). Significantly less ( $t=3,2$ ;  $p<0,01$ ) of interceptions in the second period were performed by players of the Helios team in Kharkiv.

We also calculated the greatest number of technical and tactical actions of all players of the "Helios" team per match (the activity coefficient was also calculated). Thus, the greatest number of technical and tactical actions of the players was 82,0±3,26, while the reject rate in these players was 33,48±2,04%.

The average total number of pass that were performed by the players of "Helios" for 19 games amounted to 348,0±14,16 (Table 2). At the same time, the overall reject rate for pass was 37,5±1,85%. During the first half, 184,52±9,12 pass were carried out, with a rejection rate of 36,13±1,72%. In the second period, the players performed an average of 162,57±7,38 pass, with a rejection rate of 43,95±3,07%. The reject rate when making transfers for the first half is significantly better than the second half ( $t=2,23$ ;  $p<0,05$ ).

The reject rate when performing: short and medium forward passes – 42,4±2,02%, long forward passes – 64,14±1,73%. The number of forward passes is 236,05 ± 7,81, with a reject rate – 47,47±2,0%.

**Table 1**  
**Indicators of technical and tactical readiness of the players of the team "Helios" in the 26 First League Championship, n=19**

No.	Technical and tactical actions	1st time	2nd time	t	p	1+2
		$\bar{X} \pm m$				
1.	Ball reception	59,18±11,97	47,36±9,95	0,75	$p>0,05$	106,54±21,61
	Reject rate,%	–	–	–	–	22,05±2,51
2.	Pass the ball forward (short)	88,0±7,62	86,63±5,49	0,14	$p>0,05$	174,63±12,06
	Reject rate,%	–	–	–	–	41,58±2,69
3.	Pass the ball foot back and across (short)	55,45±6,9	44,45±5,24	1,27	$p>0,05$	105,25±8,97
	Reject rate,%	–	–	–	–	16,92±1,66
4.	Pass the ball forward (long)	26,9±1,59	26,54±2,52	0,12	$p>0,05$	53,27±3,38
	Reject rate,%	–	–	–	–	64,31±2,09
5.	Pass the ball foot back and across (long)	3,3±0,68	3,11±0,45	0,23	$p>0,05$	6,1±0,9
	Reject rate,%	–	–	–	–	55,9±6,77
6.	Head-playing (overhead scramble)	25,63±2,43	24,18±3,02	0,37	$p>0,05$	49,81±4,46
	Reject rate,%	–	–	–	–	37,22±1,89
7.	Dribbling opposition	11,45±1,97	13,81±1,68	0,91	$p>0,05$	25,27±3,35
	Reject rate,%	–	–	–	–	51,4±3,34
8.	Turnover	15,72±1,13	9,72±1,5	<b>3,2</b>	<b><math>p&lt;0,01</math></b>	25,63±1,53
	Reject rate,%	–	–	–	–	27,72±4,02
9.	Tackling	24,27±2,76	26,72±2,27	0,68	$p>0,05$	51,0±3,95
	Reject rate,%	–	–	–	–	58,86±2,76
10.	Shots on goal by foot	2,9±0,48	4,3±0,59	1,84	$p>0,05$	6,54±0,94
	Reject rate,%	–	–	–	–	41,48±9,18
11.	Shots on goal by head	1,71±0,35	1,5±0,34	0,43	$p>0,05$	2,62±0,65
	Reject rate,%	–	–	–	–	43,75±12,27
12.	11th penalty kicks	–	1	–	–	1
	Reject rate,%	–	0	–	–	0
13.	Penalties in the attack zone	2,4±0,47	2,0±0,37	0,67	$p>0,05$	3,81±0,67
	Reject rate,%	–	–	–	–	65,24±8,51
14.	Corner kick	2,45±0,52	2,27±0,4	0,27	$p>0,05$	4,72±0,72
	Reject rate,%	–	–	–	–	65,59±5,83
15.	Throwing the ball in from the sideline	16,0±1,22	15,0±0,76	0,69	$p>0,05$	31,3±1,88
	Reject rate,%	–	–	–	–	15,77±2,56
16.	The total number of TTA for the time (game)	338,15±17,45	301,4±14,64	1,61	$p>0,05$	644,98±27,91
17.	Coefficient of efficiency, %	59,39±4,41	57,2±4,32	0,35	$p>0,05$	64,07±2,48
18.	Reject rate,%	37,48±2,99	40,47±3,03	0,7	$p>0,05$	35,86±2,01

**Remark.** Significant differences are highlighted in bold.

Players of the team "Helios" on average performed per game back and across passes – 111,42±7,08, with a rejection rate of 18,18±1,41%.

The percentage of the number of passes in the total number of technical and tactical actions was 53,22±1,06%.

**Table 2**  
**Indicators of the total number of passes for the first and second halves of the players of the team "Helios", Kharkov, n=19**

Indicators	1st time	2nd time	t	p	1+2
Total passes	184,52±9,12	162,57±7,38	1,87	p>0,05	348,0±14,16
Reject rate,%	36,13±1,72	43,95±3,07	<b>2,23</b>	<b>p&lt;0,05</b>	37,5±1,85

*Remark.* Significant differences are highlighted in bold.

We also registered the attacking and defensive actions of the "Helios" team and the opposing teams that the Kharkiv team met with (Table 3). Not only quantitative indicators were calculated, but also qualitative ones (efficiency indicators,%). Attacking actions are divided into successful, foiled and all. Were also registered (among all attacks) the number and effectiveness of penetrating attacks.

There were no significant differences in the indicators of attacking and defensive actions between the first and second periods.

On average per game, the "Helios" team in Kharkov in the 26th championship carried out 156,92±3,6 attacking actions (Table 4). Of these 129,35±4,56 fast attacks (82,36±1,71%) with an efficiency of 9,53±1,65%; 26,92±2,5 positional attacks (17,22±1,72%) with efficiency 19,43±3,79%.

In different zones of the football field, the players of the "Helios" team could not complete the attacks (Table 4). Thus, in the defense zone of the interrupted attacks there were 8,74±1,28%, on average – 45,98±5,76%, in the attack zone – 33,18±2,87%.

On average, per game the "Helios" team conducted 156,92±3,6 attacking actions (Table 5). Players hit the goal 8,09±1,14 times, the number of goals scored – 1,09±0,34. The indicator of the ratio of the number of goals scored to the number of attacking actions is of interest (0,69±0,22%).

## Conclusions / Discussion

The development of modeling characteristics of competitive activity in football is devoted to many studies of specialists. At the same time, they cover a wide subset of subjects. Thus, in the works of A. V. Dulybsky, S. S. Kuznets and S. Lebedev in co-authorship, indicators of technical and tactical readiness of young footballers of different ages and qualifications are given. V. M. Kostyukovich, G. A. Lysenchuk, V. A. Marchenko reflect similar indices of qualified athletes and V. I. Perevoznyk investigated the technical and tactical readiness of veterans of football. In the

**Table 3**  
**Attacking and defensive actions of the players of "Helios" team in matches with different teams for 26 superiority, n=19**

No.	Indicators	1st time	2nd time	p	Total
1.	Number of attacks of own team				
	Successful	7,9±1,26	8,73±1,35	>0,05	16,64±2,2
	Plucked	70,4±2,86	69,83±3,55	>0,05	140,27±3,99
	Total	78,34±2,86	78,57±3,32	>0,05	156,92±3,6
2.	Effectiveness of attacking action, %	10,1±1,6	11,24±1,69	>0,05	10,63±1,41
3.	Effectiveness of defensive action, %	91,57±1,21	89,8±1,3	>0,05	90,77±1,04
4.	Number of attacks from the opposing team				
	Successful	6,39±0,91	7,81±1,14	>0,05	14,21±1,63
	Plucked	70,73±3,09	70,59±3,81	>0,05	141,19±5,14
	Total	77,13±3,0	78,41±3,85	>0,05	155,41±5,42
5.	Effectiveness of attacking action, %	8,37±1,22	10,28±1,63	>0,05	8,34±0,75
6.	Effectiveness of defensive action, %	89,83±1,59	88,7±1,69	>0,05	89,33±1,4
7.	Number of penetrating attacks of own team				
	Successful	7,63±1,29	8,54±1,38	>0,05	16,18±2,25
	Plucked	29,37±1,9	26,93±1,53	>0,05	56,31±2,65
	Total	37,0±2,34	35,49±2,27	>0,05	72,5±3,69
8.	Effectiveness of attacking action, %	20,17±3,15	23,35±3,11	>0,05	21,86±2,55
9.	Effectiveness of defensive action, %	81,76±2,68	79,51±2,69	>0,05	80,74±1,84
10.	Number of penetrating attacks from the opposing team				
	Successful	6,34±0,91	7,45±1,12	>0,05	13,93±1,57
	Plucked	28,44±2,01	29,81±2,51	>0,05	58,26±3,3
	Total	34,79±2,18	37,4±2,81	>0,05	72,2±3,74
11.	Effectiveness of attacking action, %	18,2±2,68	20,41±2,69	>0,05	19,19±1,85
12.	Effectiveness of defensive action, %	79,79±3,16	76,57±3,11	>0,05	78,08±2,54

*Remark.* No significant differences in the first and second periods were found.

**Table 4**  
**Indicators of fast and positional attacks team "Helios" and their effectiveness, n=19**

Total amount	Fast attacks,			Positional attacks,		
	Amount	%	Efficiency, %	Amount	%	Efficiency, %
156,92±3,6	129,35±4,56	82,36±1,71	9,53±1,65	26,92±2,5	17,22±1,72	19,43±3,79

**Table 5**  
Indicators of the interrupted attacks of the "Helios" team in various areas of the football field, %, n=19

Football field zone	Defense	Central	Attacks
Percentage breakdown of attacks, %	8,74±1,28	45,98±5,76	33,18±2,87

chose a contingent of subjects different, that is, the players of the first league of Ukrainian football.

The results of our study show that the dynamics of changes in the technical and tactical preparedness of the team players influenced a positive result in a particular game and ultimately a place in the standings.

**Table 5**  
Average effectiveness of attacking actions of the football team "Helios", ( $\bar{X} \pm m$ )

Number of attacking actions (n=19)	Number of strikes on goal (n=19)	Ratio of the number of strikes on goal to the number of attacking actions, % (n=19)	Number of scored goals (n=19)	Ratio of the number of goals scored to the number of attacking actions, % (n=19)
156,92±3,6	8,09±1,14	5,15±0,83	1,09±0,34	0,69±0,22

works of specialists, there is a desire to find in indicators of technical and tactical readiness those indicators that significantly affect the positive outcome of the match. Among them are the works of A. A. Pertsukhov on the game with one touch in different zones of the football field, V. V. Mulyk and co-authors of the delivery of the ball to the opponent's penalty area. However, they do not consider the dynamics of changes in technical-tactical readiness indices in long-term studies of the same contingent. V. M. Shamardin is close to our research, which he conducted with the team of the highest league "Dnepr" in Dnepropetrovsk, however, we

The studies were conducted with the aim of correcting the training process of the "Helios" team in Kharkov, selecting methods and means during training and achieving a high level of technical and tactical preparedness of the team players.

**Further research** will be aimed at obtaining model characteristics of the technical and tactical readiness of the "Helios" team in Kharkov and their comparison with the teams of the first league of Ukrainian football and those teams that participate in the games of the Ukrainian Premier League on football.

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