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 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±27,91, while the reject rate when performing these actions was 35,86±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 \( \bar{x} \pm \sigma \) | 2nd time \( \bar{x} \pm \sigma \) | \( t \) | \( p \) | \( 1+2 \) |
|-----|--------------------------------|-----------------|-----------------|-----|-----|---------|
| 1.  | Ball reception                 | 59.18±11.97     | 47.36±9.95      | 0.75| \( p>0.05 \) | 106.54±21.61 |
|     | Reject rate,%                  | 47.36±9.95      | 47.36±9.95      |     |     | 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,%                  | 86.63±5.49      | 86.63±5.49      |     |     | 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,%                  | 44.45±5.24      | 44.45±5.24      |     |     | 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,%                  | 26.54±2.52      | 26.54±2.52      |     |     | 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,%                  | 3.11±0.45       | 3.11±0.45       |     |     | 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,%                  | 24.18±3.02      | 24.18±3.02      |     |     | 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,%                  | 13.81±1.68      | 13.81±1.68      |     |     | 51.4±3.34  |
| 8.  | Turnover                      | 15.72±1.13      | 9.72±1.5        | 3.2 | \( p<0.01 \) | 25.63±1.53 |
|     | Reject rate,%                  | 9.72±1.5        | 9.72±1.5        |     |     | 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,%                  | 26.72±2.27      | 26.72±2.27      |     |     | 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,%                  | 4.3±0.59        | 4.3±0.59        |     |     | 41.48±9.18 |
| 11. | Shots on goal by head         | 1.71±0.35       | 1.50±0.34       | 0.43| \( p>0.05 \) | 2.62±0.65  |
|     | Reject rate,%                  | 1.50±0.34       | 1.50±0.34       |     |     | 43.75±12.27 |
| 12. | 11th penalty kicks            | –               | 1               | –   | –   | 1        |
|     | Reject rate,%                  | –               | 1               |     |     | 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,%                  | 2.0±0.37        | 2.0±0.37        |     |     | 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,%                  | 2.27±0.4        | 2.27±0.4        |     |     | 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,%                  | 15.0±0.76       | 15.0±0.76       |     |     | 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,%                  | 57.2±4.32       | 57.2±4.32       |     |     | 35.86±2.01 |

Remark. Significant differences are highlighted in bold.

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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                        | 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  | 2,23  | p<0,05  | 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.

**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. 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. Kostyukevich, G. A. Lysenchuk, V. A. Marchenko reflect similar indices of qualified athletes and V. I. Perevoznik investigated the technical and tactical readiness of veterans of football.

**Table 3**

| No. | Indicators                        | 1st time | 2nd time | p       | Total     |
|-----|----------------------------------|----------|----------|---------|-----------|
| 1.  | Number of attacks of own team    | 7,9±1,26  | 8,73±1,35 | >0,05   | 16,64±2,2 |
| 2.  | Effectiveness of attacking action, % | 70,4±2,86  | 69,83±3,55 | >0,05   | 140,27±3,99  |
| 3.  | Effectiveness of defensive action, % | 78,34±2,86  | 78,57±3,32 | >0,05   | 156,92±3,6 |
| 4.  | Number of attacks from the opposing team | 10,1±1,6  | 11,24±1,69 | >0,05   | 10,63±1,41 |
| 5.  | Effectiveness of attacking action, % | 91,57±1,21  | 89,8±1,3 | >0,05   | 90,77±1,04 |
| 6.  | Effectiveness of defensive action, % | 6,39±0,91  | 7,81±1,14 | >0,05   | 14,21±1,63 |
| 7.  | Number of penetrating attacks of own team | 70,73±3,09  | 70,59±3,81 | >0,05   | 141,95±5,14 |
| 8.  | Effectiveness of attacking action, % | 77,13±3,0  | 78,41±3,85 | >0,05   | 155,45±5,42 |
| 9.  | Effectiveness of defensive action, % | 8,37±1,22  | 10,28±1,63 | >0,05   | 8,34±0,75 |
| 10. | Number of penetrating attacks of the opposing team | 88,83±1,59  | 88,7±1,69 | >0,05   | 89,33±1,4 |
| 11. | Effectiveness of attacking action, % | 76,73±3,19  | 84,5±1,38 | >0,05   | 16,18±2,25 |
| 12. | Effectiveness of defensive action, % | 29,37±1,93  | 26,93±1,53 | >0,05   | 56,31±2,65 |

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

**Table 4**

| Total amount | Fast attacks, | Efficiency, % | Amount | Positional attacks, | Efficiency, % |
|--------------|---------------|---------------|--------|---------------------|---------------|
| 196,92±3,6   | 129,26±4,96   | 82,39±1,71    | 9,33±1,65 | 26,92±2,5           | 17,22±1,72    | 19,43±3,79 |
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.

Further research will be aimed at obtaining model characteristics of the technical and tactical readiness of the “Helios” team in Kharkiv 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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References
1. Denisova, L.V., Khmelnitskaya, I.V. & Kharchenko, P.A. (2008), izmereniya i metody matematecheskoy statistiki v fizicheskom vospitanii i sporte [Measurements and methods of mathematical statistics in physical education and sport]. Olimpiyskaya literatura, Kiev. (in Russ.)
2. Dulibskyi, A.V. (2001), Modeliuvania taktynychkh dii u protsesi pidhotovky yunatskykh komand z futbolu [Modeling of tactical actions in the process of training youth football teams]. Naukovo-metodychnyi (tekhnicnyi) komitet FFU, Kyiv. (in Ukr.)
3. Zhurid, S.M. (2011), “Investigation of the technical and tactical readiness of the Helios team in Kharkiv for the first round of the 20th championship of Ukraine in the first league in 2011-2012”, Slobozans’kij naukovo-sportivnij visnik, No. 4, pp. 46-50. (in Ukr.)
4. Zhurid, S.M. & Rebaz, Sleman (2015), “Technical and tactical readiness of the Helios team in Kharkiv in the 24th championship of Ukraine in the first league 2014-2015”, Slobozans’kij naukovo-sportivnij visnik, No. 4(48), pp. 40-45, doi: 10.15391/snsv.2015-4.007. (in Ukr.)
5. Zhurid, S.M. (2017), “Technical and tactical readiness of the Helios team in Kharkiv in the 25th championship of Ukraine in the first league”, Slobozans’kij naukovo-sportivnij visnik, No. 1 (57), pp. 36-40, doi: 10.15391/snsv.2017-1.006. (in Ukr.)
6. Koval, S.S. (2011), “Comparative analysis of the dynamics of technical and tactical readiness of young football players 10-12 years old”, Slobozans’kij naukovo-sportivnij visnik, No. 2, pp. 135-143. (in Russ.)
7. Kostiukevych, V.M. (2014), Teorii i metodika sportyvnoi podgotovky (na prykladi komandykh ihrovykh vydiv sportu) [Theory and method of sports training (on the example of team playing sports)], Vinnytsya. (in Ukr.)
8. Lebedev, S.I., Zhurid, S.M. & Rebaz, Sleman (2015), “Analysis of indicators of competitive activity and special technical preparedness of football players of 10-12 years old”, Slobozans’kij naukovo-sportivnij visnik, No. 5(49), pp. 52-56.
9. Lisenchuk, G.A. (2003), Upravlenie podgotovok futbolistov [Soccer Players Training Management], Kiev. (in Russ.)
10. Mulik, V.V., Perevoznik, V.I. & Pertsukhov, A.A. (2015), “Characteristics of the Episodary of the Grid in the Penalty Directions of the Commander”, Slobozans’kij naukovo-sportivnij visnik, No. 3 (47), pp. 75-79. (in Russ.)
11. Perevoznik, V.I. (2004), Osoblyvosti pobudovu trenuvannoho protsesu futbolistiv veterans: avtoref. dys. na zdobuttia nauk. stepenya kand. fiz. vykhy. [Features of the construction of a training process for veteran veterans: PhD thesis abstract]. Kharkiv, 20 p. (in Ukr.)
12. Perevoznik, V.I. & Marchenko, V.A. (2012), “Study of technical-tactical actions of the Metalist team in Kharkiv in the first half of the 20 and 21 Championships of Ukraine in the Premier League (2010–2012)”, Slobozans’kij naukovo-sportivnij visnik, No. 5(2), pp. 62-67. (in Russ.)
13. Pertsukhov, A.A. & Koval, S.S. (2016), “Analysis of the quantitative and qualitative indicators of the ball passes in the games of highly qualified teams”, Slobozans’kij naukovo-sportivnij visnik, No. 1(51), pp. 57-60. (in Russ.)
14. Platonev, V.N. (1997), Obshchaya teoriya podgotovki sportistov v olimpiyskom sporte [The General Theory of Training Athletes in Olympic Sport], Kiev. (in Russ.)
15. Shamardin, V.N. (2012), Tekhnologiya podgotovki futbolnovy komandy vysshey kvalifikatsii [Technology of preparation of the football team of the highest qualification], Dnepropetrovsk. (in Russ.)

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