

# Characteristic of passes of ball games team qualifications

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**Purpose:** to define quantity and efficiency of passes in games of participating teams of world championship 2014.

**Material & Methods:** analysis of scientific-methodical literature, registration of technical-tactical actions, methods of mathematical statistics. The study of competitive activities was conducted with participating teams of world championship 2014.

**Results:** the article shows the quantitative and qualitative indicators of passes in games of high teams qualification.

**Conclusions:** the total of passes of the commands executed by football players in games of world championship 2014, it varies in the range from 242 to 819 where average value is 499,7 passes. Victorious teams surpass losers teams almost in all the quantitative and qualitative indicators of passes.

**Keywords:** ball passes, penalty area, half of a field, efficiency of passes.

## Introduction

The analysis of technical and tactical indicators of the competitive activity in football is considered in two aspects – all-command [8; 13; 14] and individual (on game roles) [2; 3; 12].

Indicators of technical and tactical actions of football players of different qualification are rather fully reflected in works [4; 10].

The analysis of games of the strongest teams of the world allowed experts [1; 5; 15] to plan the following tendencies on which it is possible to lean at an assessment of technical and tactical preparedness of football players.

So, the main mean of conducting a game for the leading teams of the world are passes: their approximate contribution to the sum of TTA makes 56–60%. A flaw when performing short and average passes shouldn't be more than 20%, forward back and across – 10%; when performing long passes a flaw shouldn't exceed 30–45%.

So, as a result of the conducted researches [7] it was established that teams-participants of the World Cup of 2014 carried out 500 passes on average for a game. At the same time the quantity of passes at teams on the WC-2014 varied from 242 till 819 passes.

Results of the research demonstrate that winner teams carried out  $532,8 \pm 20,2$  passes on average for a game, and teams which lost –  $493,7 \pm 13,4$ .

The analysis of the competitive activity of teams of the championship of Ukraine demonstrates [5] that field players carry out 261 passes on average for a game that makes 35,8% of all TTA. Respectively: short passes make 121 (16,5%), average

passes – 92 (12,6%), long passes – 48 (6,6%). The second indicator in a total amount of TTA are ball stops – 164 (22,5%). That is 58,3% of all TTA are the share of passes and stops of a ball on average.

Researches of individual TTA of football players of different qualification allowed establishing [11] that football players of a team of a premier league made 42 short and 5 long passes on average for a game. Football players of the first league carried out 33 short and 9 long passes on average for a match. Football players of the second league of the championship of Ukraine carried out 27 short and 6 long passes on average for a game.

Results of other researches [6; 9] demonstrate that from 900 till 1000 actions with a ball are on matches of a high level from which 350 passes in two and more contacts and 150 – in one fall.

These data are confirmed by results of other researches [10] in which it is noted that the team “Metallist” of Kharkov in games of Cup of UEFA of 2008-2009 was carried out by 108 passes in one contact (attacking 50,6, constructing 57,4) on average for a match. At the same time football players of the team of “Metallist” made 14,4 passes in a defense zone, in an average zone – 77,4, in an attack zone – 16,2.

## The objective of the research

To define the quantity and the efficiency of passes in games of teams-participants of the World Cup of 2014.

## Material & Methods

The competitive activity of teams-participants of the World Cup of 2014 was researched. Research methods: analysis of scientific and methodical literature, registration of technical

and tactical actions, methods of mathematical statistics.

## Results and discussion

From the tab. 1 it is visible that teams in the World Cup of 2014 made  $499,7 \pm 10,2$  passes on average for a game. More of ten teams applied average passes –  $299,7 \pm 7,5$  ( $59,4 \pm 0,4\%$ ).  $123,6 \pm 3,1$  ( $25,0 \pm 0,4\%$ ) were short passes,  $76,5 \pm 1,3$  ( $15,9 \pm 0,3\%$ ) – long.

The results, which are presented in the table, demonstrate that teams had the unequal efficiency of performance of different

passes. So, the efficiency of short passes made  $76,4 \pm 0,6\%$ , average passes –  $79,6 \pm 0,6\%$ , long –  $56,5 \pm 0,9\%$ . At the same time the efficiency of total of passes made  $75,2 \pm 0,6\%$ .

From the tab. 2 it is visible that the quantity of passes in a penalty area of the rival at teams-participants of the WC-2014 varied in the range from 3 till 42, with an average  $18,6 \pm 0,7$ . At the same time efficiency of transfers to a penalty area varied from 0 to 50%, at an average of  $22,3 \pm 1,0\%$ .

As a result of the conducted researches it was established that on personal and others' half of the field significant differences had the efficiency of passes ( $t=25,8$ ;  $p<0,001$ ). So, the

**Table 1**  
Quantitative indicators of short, average and long passes of teams-participants of the WC-2014

| Indicators      | Quantity         | Specific weight, % | Efficiency, %  |
|-----------------|------------------|--------------------|----------------|
| Total of passes | $499,7 \pm 10,2$ | $100,0 \pm 0,0$    | $75,2 \pm 0,6$ |
| Short passes    | $123,6 \pm 3,1$  | $25,0 \pm 0,4$     | $76,4 \pm 0,6$ |
| Average passes  | $299,7 \pm 7,5$  | $59,4 \pm 0,4$     | $79,6 \pm 0,6$ |
| Long passes     | $76,5 \pm 1,3$   | $15,9 \pm 0,3$     | $56,5 \pm 0,9$ |

**Table 2**  
Quantitative and quality indicators of passes of teams-participants of the WC-2014

| Indicators   | Minimum meaning | Maximum meaning | On average for a game |
|--|-----------------|-----------------|-----------------------|
| Total of passes  | 242             | 819             | $499,7 \pm 10,2$      |
| Short passes, quantity                                 | 59              | 246             | $123,6 \pm 3,1$       |
| Average passes, quantity                               | 122             | 545             | $299,7 \pm 7,5$       |
| Long passes, quantity                                  | 50              | 114             | $76,5 \pm 1,3$        |
| Passes in a penalty area of the rival, quantity        | 3               | 42              | $18,6 \pm 0,7$        |
| Efficiency of passes of a ball, %                      | 56              | 89              | $75,2 \pm 0,6$        |
| Efficiency of short passes, %                          | 57              | 90              | $76,4 \pm 0,6$        |
| Efficiency of average passes, %                        | 59              | 92              | $79,6 \pm 0,6$        |
| Efficiency of long passes, %                           | 37              | 81              | $56,5 \pm 0,9$        |
| Efficiency of passes in a penalty area of the rival, % | 0               | 50              | $22,3 \pm 1,0$        |
| Efficiency of passes on the half of the field, %       | 73              | 98              | $90,8 \pm 0,4$        |
| Efficiency of passes on others half of the field, %    | 49              | 91              | $70,0 \pm 0,7$        |

**Table 3**  
Quantitative and quality indicators of passes of the won and lost teams

| Indicators   | The won teams    | The lost teams   | t           | p                            |
|--|------------------|------------------|-------------|------------------------------|
| Total of passes  | $532,8 \pm 20,2$ | $493,7 \pm 13,4$ | 1,61        | $>0,05$                      |
| Short passes, quantity                                 | $131,5 \pm 5,7$  | $125,1 \pm 4,8$  | 0,86        | $>0,05$                      |
| Percent of short passes, quantity                      | $24,6 \pm 0,5$   | $25,3 \pm 0,5$   | 0,99        | $>0,05$                      |
| Average passes, quantity                               | $320,4 \pm 14,3$ | $293,8 \pm 9,5$  | 1,55        | $>0,05$                      |
| Percent of average passes, quantity                    | $59,5 \pm 0,5$   | $59,2 \pm 0,6$   | 0,38        | $>0,05$                      |
| Long passes, quantity                                  | $81,0 \pm 2,2$   | $74,8 \pm 1,8$   | <b>2,18</b> | <b><math>&lt;0,05</math></b> |
| Percent of long passes, quantity                       | $15,8 \pm 0,5$   | $15,6 \pm 0,5$   | 0,28        | $>0,05$                      |
| Passes in a penalty area of the rival, quantity        | $18,7 \pm 1,5$   | $20,0 \pm 1,0$   | 0,72        | $>0,05$                      |
| Efficiency of passes, %                                | $75,9 \pm 0,9$   | $74,7 \pm 0,8$   | 1,00        | $>0,05$                      |
| Efficiency of short passes, %                          | $77,1 \pm 0,9$   | $76,0 \pm 0,7$   | 0,96        | $>0,05$                      |
| Efficiency of average passes, %                        | $80,2 \pm 0,8$   | $79,0 \pm 0,8$   | 1,06        | $>0,05$                      |
| Efficiency of long passes, %                           | $57,6 \pm 1,4$   | $55,2 \pm 1,3$   | 1,26        | $>0,05$                      |
| Efficiency of passes in a penalty area of the rival, % | $23,5 \pm 1,5$   | $21,9 \pm 1,4$   | 0,78        | $>0,05$                      |
| Efficiency of passes on the half of the field, %       | $91,3 \pm 0,6$   | $90,5 \pm 0,7$   | 0,87        | $>0,05$                      |
| Efficiency of passes on others half of the field, %    | $71,7 \pm 1,2$   | $68,3 \pm 0,9$   | <b>2,27</b> | <b><math>&lt;0,05</math></b> |

efficiency of passes on the half of the field was ranging from 73 till 98%, at an average of  $90,8 \pm 0,4\%$ . At the same time, the efficiency of passes on others half of the field varied from 49 till 91%, at an average of  $70,0 \pm 0,7\%$ .

Quantitative and quality indicators of passes of the won and lost teams-participants of the WC-2014 are presented in the tab. 3.

These tables demonstrate that teams-winners almost surpassed teams which lost in all quantitative and quality indicators. However the reliable distinctions are revealed only in indicators of quantity of long passes ( $t=2,18$ ;  $p<0,05$ ) and ef-

iciency of passes on others half of the field ( $t=2,27$ ;  $p<0,05$ ).

## Conclusions

As a result of the research it was established that teams-participants of the World Cup of 2014 made  $499,7 \pm 10,2$  passes on average for a game, at the same time teams used average passes more often –  $299,7 \pm 7,5$  ( $59,4 \pm 0,4\%$ ), at the efficiency of total of passes of  $75,2 \pm 0,6\%$ .

## Prospects of further researches

Further researches will be devoted to studying of passes in games of the European championship of 2016.

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