

# STUDY ON THE EFFICIENCY OF THE GAME ACTIONS IN WOMEN'S HANDBALL WORLD CHAMPIONSHIP DENMARK 2015

LEUCIUC FLORIN VALENTIN  
Stefan cel Mare University of Suceava

Summary: The aim of this study is to analyze the efficiency of the game actions in attack and defense of the participating teams and the trends of the game. The teams have played between 6 and 9 games (places 1-8 - 9 games, places 9-16 - 6 games, places 17-24 - 7 games), was played 88 games for the establishment of the final hierarchy. In the final ranking of the competition in the first 12 teams were 11 from Europe and 1 from America, and among the last 12 have 2 from Europe, 4 from Asia, 3 from Africa and 3 from America. In terms of efficiency indicators that are observed in the first part of the ranking teams they perform consistently, but teams ranked in last positions barely manage to perform in one or two of them. The data obtained can be used as benchmarks of efficiency because they are actual, but should be a study of a longer period of time for the analysis performed to have a high degree of veridicity and data to be used as benchmarks for the following competitions.

Keywords: handball, women, world championship, game actions

### Introduction

The XXII<sup>nd</sup> edition of the Women World Handbal Championship was hosted by Denmark, attended by 24 teams divided into 4 groups of 6 teams.

The competition system has been mixed which included a group phase involving 24 teams, followed by the knockout stage where qualified first 4 ranked in each group, continuing with the phase last 16, quarterfinals, semifinals, finals and ranking matches. The teams eliminated after the group stage played in the President's Cup rankings games that have established the rankings for places 17 to 24.

Participating teams had distribution following by continents: Europe - 13 Asia - 4, America - 4 Africa - 3.

The teams have played between 6 and 9 games (places 1-8 - 9 games, places 9-16 - 6 games, places 17-24 - 7 games), was played 88 games for the establishment of the final hierarchy.

### Material-method

Carrying out the analysis of the matches at the World Championship were used observation (direct by watching games) and statistical and mathematical methods, and as support statistical data (from the website of the competition organizers and at the International Handball Federation).

The aim of this study is to analyze the efficiency of the game actions in attack and defense of the participating teams and the trends of the game.

### Results and discussions

The actions of game that provided the statistical analysis are: efficiency of the throws (6m, wings, 9m, 7m, fastbreak), goalkeepers efficiency, interception and blocked shots.

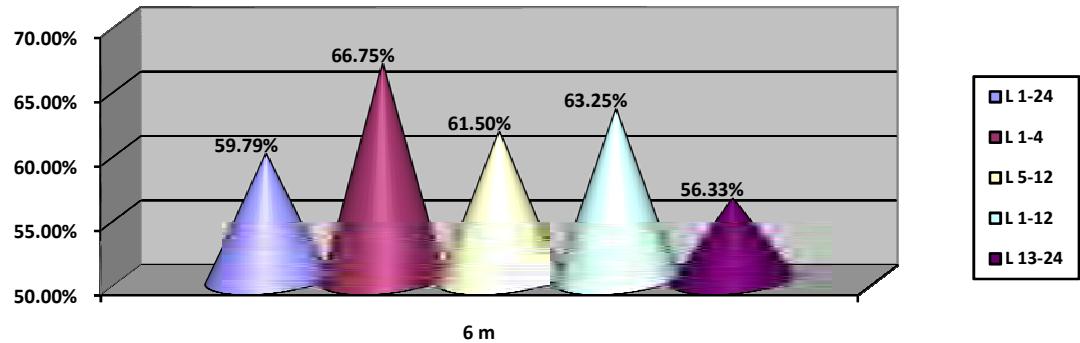
For these actions analysis was performed as follows: for all the participating teams (24), places 1-4, places 5-12, places 13-24 (Table 1).

Table 1 The efficiency of the game actions

Place	Statistica l paramete rs	Shots efficiency (%)			7m shots (%)	Fastbrea k (%)	All shots (%)	Goalkeepe rs (%)	Intercept ions (no.)	Blocke d shots (no.)
		6m	wings	9m						
<b>1-24</b>	X	59,79	49,29	36,63	70,96	72,75	52,88	32,38	32,04	20,46
<b>1-4</b>	X	66,75	53,75	41,00	75,75	77,00	58,25	37,50	42,25	37,50

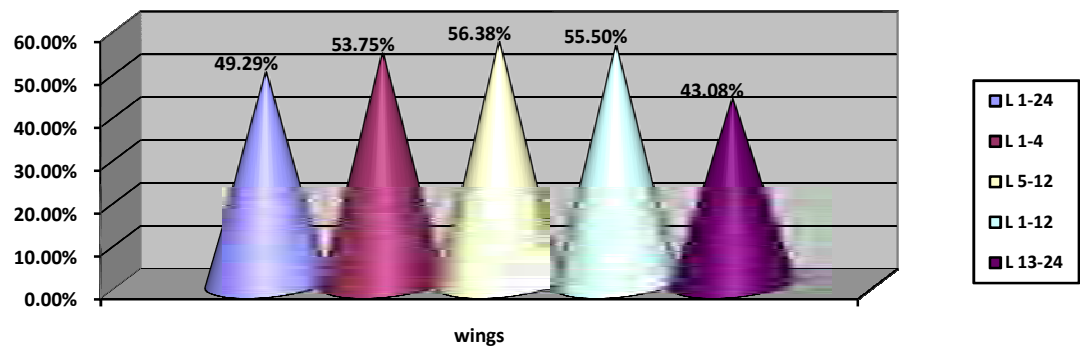
<b>5-12</b>	X	61,50	56,38	40,25	74,13	76,13	58,25	36,25	28,38	20,50
<b>1-12</b>	X	63,25	55,50	40,50	74,67	76,42	58,25	36,67	33,00	26,17
<b>13-24</b>	X	56,33	43,08	32,75	67,25	69,08	47,50	28,08	31,08	14,75

The efficiency of the throws from the central line of 6 m is directly influenced by the place in the final standings, thus registering a decreasing trend as follows: places 1-4, places 1-12, place5-12 s, places 1-24, places 13-24 (table 1, Figure 1).



**Figure 1 The efficiency of the throws from the central line 6m depending on ranking position**

For wings throws the best efficiency have had teams finishing 5-12 and 1-12 palces, followed by places 1-4 (whose efficiency was approximately 2% lower). Then at the great distance (less than 50% efficiency) teams are ranked 13 to 24 places (43.08%) and those places 1-24 (49.29%) (Table 1, Figure 2).



**Figure 2 The efficiency of the wings throws depending on ranking position**

For 9m throw throws the trend is similar to the central area of the semicircle, the ranking place being determined in terms of efficiency (Table 1, Figure 3).