



Online Publication Date: 20 June, 2010

ORIGINAL RESEARCH

QUANTITATIVE ANALYSIS ON THE PARTICIPATION OF ROMANIAN FEMALE NATIONAL TEAM IN WORLD HANDBALL CHAMPIONSHIP – CHINA 2009

Florin-Valentin Leuciuc (PhD.) – *University Stefan cel Mare of Suceava, Romania***Abstract:**

The 19th Women's World Handball Championship took place in China from 5 to 20 December 2009.

Matchess of C group, group that included Romania, took place in Suzhou.

In analyzing the evolution of the Romanian handball team in the 2009 Women's World Championship there were used the observation methods (direct observation method or simply watching the matches) and the statistical-mathematical method, having as support statistics provided by the organizers through websites of the competition and of the International Handball Federation.

Low efficiency of 9 m line players and of goalkeepers, missed 7m shots in important games led to defeats in all confrontations with the European teams. 9m line players and wing players had a low contribution to the scored goals.

The team showed little psychological preparation, evidenced by the series of negative results recorded after the first defeat, in the next 4 matches they got one win, a draw and 2 defeats.

In the 9 games in dispute there were obtained 5 wins, one draw and 3 defeats. In comparison, the world champion – Russia played 10 matches with 9 wins and one defeat, and world vice-champion won 8 games and lost 2.

At the end of these 9 matches there was an average of 34 scored goals per game and 25.66 received goals. For matches with the European teams the average is 26.25 scored goals and 27.75 received.

Key words: handball, female, world championship, quantitative analysis

Introduction

The 19th Women's World Handball Championship took place in China from 5 to 20 December 2009.

The 110 matches were hosted by 6 cities: Wuxi, Zhangjiagang, Suzhou, Changzhou, Nanjing, Yangzhou. Matchess of C group, group that included Romania, took place in Suzhou.

The playing schedule was a complex one, including a preliminary round involving 24 teams divided into 4 groups (A, B, C, D). In the second stage of the competition, meaning the main round, there were 12 teams, 3 teams from each preliminary group.

In the second round there were formed two main groups (M I, M II), each counting 6 teams.

Teams eliminated after the preliminary round continued to play for the competition named *The President's Cup*, organized in 2 groups (PC I, PC II) each group counting 6 teams, which determined the final ranking of matches.

The nucleus of players trained and participants in World Championship was composed of a total of 18: goalkeepers – 3, wing – 4, backcourt – 6, center back – 2, line players – 3; 14 players being nominated for every match.

C group included national teams of Romania, Chile, Japan, Hungary, Tunisia, Norway. Romanian national team matches were held following the schedule below:

5.12.2009 Romania – Chile (51 – 17)

6.12.2009 Romania – Japan (37 – 28)

7.12.2009 Romania – Hungary (31 – 25)

9.12.2009 Romania – Tunisia (39 – 22)

10.12.2009 Romania – Norway (24 – 25)

Romania achieved 4 wins and one defeat, being the 2nd team in C group ranking. The wins against teams representing areas like Asia (Japan), South America (Chile) and Africa (Tunisia) were achieved at very high score differences, between 9 and 34 goals.

The match with the Hungarian team ended in favor of Romanian players, being a difference of 6 goals, while with Norway they lost to one goal.

In the second stage of the championship, Romania was in the main group II, consisting of teams ranked in places 1 to 3 in C and D groups: Norway, Hungary (C group), Spain, South Korea, China (D group).

There were maintained the results of preliminary round matches with teams of C group (group that included Romania), each team having to play 3 matches, meaning with the other three teams of D group.

In the second stage of groups, Romania got the following results:

12.12.2009 Romania – China (40 – 21)

13.12.2009 Romania – Spain (25 – 26)

15.12.2009 Romania – South Korea (34 – 34)

Romanian Women's Handball Team won against China, got a draw with South Korea and was defeated by Spain.

With the results obtained in the main group, Romania ranked 4, leading to participation in the final round of ranking games (for places 7 to 8):

17.12.2009 Romania – Germany (25 – 35)

Thus, Romania was the 8th in the final ranking of this championship.

Support – method

In analyzing the evolution of the Romanian handball team in the 2009 Women's World Championship there were used the observation methods (direct observation method or simply watching the matches) and the statistical-mathematical method, having as support statistics provided by the organizers through websites of the competition and of the International Handball Federation.

Analysis on participation in World Championship

This analysis takes into account the matches against teams from outside Europe, the matches with national European teams and the quantitative analysis of Romanian national team matches.

In confrontations with European teams (4 matches) Romania got 3 defeats and one victory, and the goal average was 105 to 111.

Romania played against teams with which it was in direct competition and the results of these matches led to the 8th position in the final ranking of this championship.

This study took as benchmark data of speciality literature, data regarding the shots' efficiency (shots specific to each game post). (Taborsky F., 2001):

- Efficiency of the whole team in attack: 60%
- Backcourt: 40 – 45%
- Wing: 55 – 60%
- Central part of 6 m line: 60 – 65%
- Counterattack: 70 – 75%
- 7 m shots: 75 – 80%
- Attacks without shots: 15 – 20%;
- Goalkeepers: 35 – 40%.

Comparing the efficiency of the Romanian team to the standards listed above, we notice that its efficiency in attack was of 42,51% and 53 attacks were without shots (22,46%) of a total of 247.

For all indicators, the efficiency is below values recommended by speciality literature. The only values approaching to minimum requirements refer to 9m shots, 7m shots, shots of central part of 6 m line (Table 1).

Goalkeepers' efficiency was as average of 37,99%, falling within the optimum level between 35 and 40% (Table 2).

Team Shots	Goals	Saves	Missed	Post	Blocked	Total	%
6m Shots	23	11	3	2	0	39	58,97
Wing Shots	12	9	2	2	0	25	48,00
9m Shots	22	18	7	2	10	59	37,29
7m Shots	14	0	0	5	0	19	73,68
Fast Breaks	18	6	1	3	1	29	62,07
Breakthroughs	16	5	1	1	0	23	69,57
Totals	105	49	14	15	11	194	54,12
Attacks without shot	0	0	0	0	0	53	21,46
Totals	105	49	14	15	11	247	42,51

Table 1 Attack's efficiency in matches with European teams (Hungary, Norway, Spain, Germany)

Goalkeepers	Total Shots		6m Shots		Wing Shots		9m Shots		7m Shots		Fast Breaks		Breakthroughs	
	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%
Totals	68/179	37,99	14/53	26,42	11/19	57,89	26/50	52	5/13	38,46	5/27	18,52	7/17	41,18

Table 2 Goalkeepers' efficiency in matches with European teams

In matches with teams from outside Europe, 5 in number, they got 4 wins, one draw, goal average 201 – 120.

For each game post, shots percentage falls within or above the minimum. 7 m shots were the negative aspect, the efficiency being below average. Goalkeepers' efficiency was of over 40%, thus helping to achieve the 4 wins (Tables 3 and 4).

There were 73 attacks without shots of a total of 368 (19,84%).

Team Shots	Goals	Saves	Missed	Post	Blocked	Total	%
6m Shots	42	19	1	1	0	63	66,67
Wing Shots	34	9	0	4	0	47	72,34
9m Shots	20	10	11	4	4	49	40,82
7m Shots	17	6	1	4	0	28	60,71
Fast Breaks	65	10	3	3	0	81	80,25
Breakthroughs	23	2	1	1	0	27	85,19
Totals	201	56	17	17	4	295	68,14
Attacks without shot	0	0	0	0	0	73	19,84
Totals	201	56	17	17	4	368	54,62

Table 3 Attack's efficiency in matches with teams from outside Europe

Goalkeepers	Total Shots		6m Shots		Wing Shots		9m Shots		7m Shots		Fast Breaks		Breakthroughs	
	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%
Totals	82/202	40,5	23/55	41,82	17/34	50	27/52	51,92	2/14	14,29	7/24	29,17	6/23	26,09

Table 4 Goalkeepers' efficiency in matches with teams from outside Europe

Analyzing on the whole the 9 matches (5 wins, 1 draw, 3 defeats), the general goal average was 306 – 231.

Team's efficiency in attack was of 49,76%, there were 126 attacks without shots (of a total of 615), their share being of 19,84% (Table 5).

In limits of recommended or superior efficiency there were the goalkeepers (39%) and the following shots: wing (64%), 6m central area (64%), counterattack and second phase (78%), 7 m (76%).

Backcourt players' efficiency (39%) and the 7m shots (66%) fell within the minimum. (Tables 5 and 6).

Team Shots	Goals	Saves	Missed	Post	Blocked	Total	%
6m Shots	65	30	4	3	0	102	63,73
Wing Shots	46	18	2	6	0	72	63,89
9m Shots	42	28	18	6	14	108	38,89
7m Shots	31	6	1	9	0	47	65,96
Fast Breaks	83	16	4	6	1	110	75,45
Breakthroughs	39	7	2	2	0	50	78,00
Totals	306	105	31	32	15	489	62,58
Attacks without shot	0	0	0	0	0	126	20,49
Totals	306	105	31	32	15	615	49,76

Table 5 Attack's efficiency (9 matches)

Goalkeepers	Total Shots		6m Shots		Wing Shots		9m Shots		7m Shots		Fast Breaks		Breakthroughs	
	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%	S/S	%
Totals	150/381	39,37	37/108	34,26	28/53	52,83	53/102	51,96	7/27	25,93	12/51	23,53	13/40	32,50

Table 6 Goalkeepers' efficiency (9 matches)

Comparing Romania (8th place) to the top 4 teams (Russia, France, Norway, Spain), we obtain these data in tabular form (Table 7).

	Places I – IV	Romania
		8th place
Efficiency of attacks with shots (%)	57,00	62,58 (51)
Goalkeepers' efficiency (%)	39,75	39,37 (27)
Attacks' efficiency (%)	45,75	49,76 (45)
Goal average	285,75 – 217 +68,75	306 – 231 +75

Table 7 Efficiency of the Romanian team compared to the top 4 teams

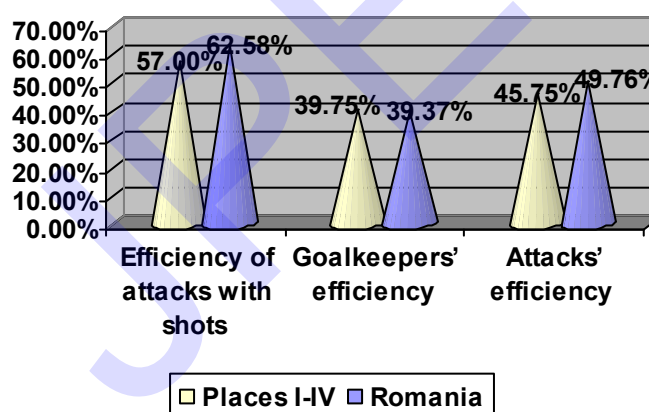


Figure 1 Efficiency of Romania versus the top 4 teams

In parentheses there is presented the efficiency in matches with the European teams, 4 in number.

As a percentage, Romanian team's results are higher than the results of the top four teams, the same situation being also for the goal average. This is due to the results of matches with weak teams that lead to good overall values. The same analysis only for matches with the European teams indicates a decline showing we are well below the values of the top four teams.

The 8th position of Romanian female handball team in the final ranking was due to its modest evolutions against the European teams, winning only one match.

In *Top Scorer*, Romanian line player Ionela Stanca was the 36th with 38 goals.

In *Decisive Passes Top* we noted the backcourt players Carmen Amariei – 26 assists and Narcisa Lecusanu – 23 assists.

Referring to *Top Goalkeepers*, Paula Ungureanu was the 4th, a percentage of blocked shots of 41.

Regarding *Team Fair – Play*, Romania was on 1st place (51 points in 9 matches). This ranking was made comparing data to the number of matches, depending on 4 parameters measured by a certain number of points: yellow card-1 point, 2 minutes elimination – 2 points, red card – 5 points, exclusion -10 points.

Conclusions

The players demonstrated quick perception and rapid decision-making. In defence play, they responded not only to their opponents but exhibited anticipation and took active control of the game.

One-to-one offence play generally led to paired and three-player offence combinations and turned into dynamic offence sets.

Attacks lasted 25-30 seconds, being in line with referees' interpretation of "passive game" rule.

Low efficiency of 9 m line players and of goalkeepers, missed 7m shots in important games led to defeats in all confrontations with the European teams. 9m line players and wing players had a low contribution to the scored goals.

The team showed little psychological preparation, evidenced by the series of negative results recorded after the first defeat, in the next 4 matches they got one win, a draw and 2 defeats.

In the 9 games in dispute there were obtained 5 wins, one draw and 3 defeats. In comparison, the world champion – Russia played 10 matches with 9 wins and one defeat, and world vice-champion won 8 games and lost 2.

At the end of these 9 matches there was an average of 34 scored goals per game and 25.66 received goals. For matches with the European teams the average is 26.25 scored goals and 27.75 received.

To properly prepare a team one should take possession of motorial, technical, tactical and motivation tasks; to learn thinking in a game and to solve situations in complex conditions.

Bibliography

- [1]. TABORSKY, F, (2001), Game performance in handball, European Handball Federation, Eurohandball Periodical, nr. 2, Vienna, p. 26
- [2]. http://www.ihf.info/front_content.php?idcat=327
- [3]. <http://wch09cn.ihf.info/exchange/china/pdf>
- [4]. <http://en.jiangsu2009.cn/>