

# COMPARATIVE STUDY ON THE EFFECTIVENESS OF MALE VOLLEYBALL PLAYERS OF FINAL OLYMPIC GAMES 2012

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**Abstract:** *Volleyball in our century is an Olympic sport with tradition, affiliated with over 220 countries and being in constant development. An important characteristic in the volleyball game is the organizational nature, and the attraction of a growing number of investors to raise the standard of the sport. In a modern game of volleyball, defending it no longer cope with the attack became more aggressive in the main block. Current volleyball players specialize only on technical elements. In the men's volleyball games at the 2012 Olympic Games were noted two teams Russia and Brazil that are composed of polyvalent players who may fill some gaps in the game teammates. Within this study, we formulated the hypothesis that to win a game the versatility is the key player on the team.*

**Key words:** *Olympic Games, players, volleyball.*

## 1. Introduction

Volleyball is a sport in which two teams dramatically to compete, you must pass the ball over the net by using only hands. The goal is to make the ball touch the opponent's court.

Each team is allowed three strikes in order to send the ball to the other team's court. Competition develops latent resources, highlighting skills, spontaneity, creativity and aesthetics. The rules are designed to allow demonstration of these skills. With few exceptions, volleyball allows all players to act both at the net (in attack) and land behind (in defense or at serve) [2].

Volleyball game has won over the years due to its popularity, an unanimous appreciation of practice opportunities at all ages, volleyball is a beautiful game and at the same time, an important physical education. Male volleyball became an Olympic sport since being introduced to the Olympics in 1964 by the Japanese.

Volleyball today is constantly evolving, changing the rules of the game for its spectacular [2]. The emergence of a new position as *libero*, the tie-break rule (every mistake is a point for the opponent), hitting the ball even on foot, leading to dynamic playing volleyball, but also creates new ways of approaching planning of training starting with the age referred in our study

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Today, as we mentioned, volleyball game is an Olympic sport, FIVB affiliated with over 220 countries and is in constant development [4].

Great development of volleyball in terms of psycho physical tactical increased performance on field and increased the difficulty practicing it, which led to many athletes to stop along the way to performance or high performance, not being able to attend the training sessions and competitions.

In modern volleyball game, the defense was no longer coped to attack and became more aggressive in the main block. This has led to new ways to address the attack phase. Current volleyball players specialize only on technical elements.

In the men's volleyball games at the 2012 Olympic Games were noted two teams Russia and Brazil that are composed of polyvalent players who may fill some gaps in the game teammates [4].

At the 2012 Olympics in London two finalist teams provided a unique show with twists score when no one believed. Russia won against Brazil after a game of five sets. When no one believed, being led by a score of 2 -0 to sets, the Russian team returned imposing the fate of the game in the final of 3-2 [4].

## 2. Working hypothesis

Within this study we started from the assumption that the players to win a game, the versatility of players of the team are essential.

## 3. Materials and methods

In this study the first thing to use was the observation method. In addition to the observation method we used and statistical processing methods respectively: arithmetic and percentage calculus [1].

In terms of methods of recording, the observation method is a process of recording or written record of the visible, hearing or feeling things. To do this study, we watched most of the games of the two finalists and made notes about the players from the two teams: Russia or Brazil.

Observation is a process that applies to a field whose data, documents or events that the researcher wants to know, to describe, order, classify, quantify, characterize, to determine what is significant in them, causing everyone, the relationship between them and the effects are on others [1].

From these data it follows meanings, explanations or new hypotheses to be experimentally modified. We can say that the method of the observation should not lack in scientific research.

The arithmetic mean ( $\bar{x}$ ) is the indicator that is most often used to characterize the central tendency. It is the amount that replacing all terms of the series does not change their totalized level and therefore is calculated as the sum of the values reported to their number. Its meaning is clear: the individual  $X_1, X_2, \dots$  of the variable  $X$  occurs under the influence of many factors essential and nonessential, systematic and casual, the arithmetic mean is the value that would be recorded if all these factors acted consistently to all units.

Statistical method [3]. As mathematical statistics method depends on the study of masses phenomena, of connections and correlations, significance of results obtained on samples and anticipate their evolution parameters. Arithmetic mean is calculated using the above relationship (1)

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

In equation (1) we noted

$\Sigma$  – um

$X_i$  – Individual values

$n$  – The number of cases

Percentage calculation is done using the rule of three

Example:  
 10 shares ..... 100%  
 5 shares ..... x%  
 $X = 5 * 100/10 = 50\%$

**4. Results and Discussion**

After observing the two teams during the tournament's the efficiency of the actions that have been successful are noted in the table below:

*Percentage of successful actions*

Table 1

Team	Spikes %	Service %	Blockage %	Reception %
Russia	35.89	1.55	3.07	56.93
Brazil	35.26	1.34	2.21	69.10

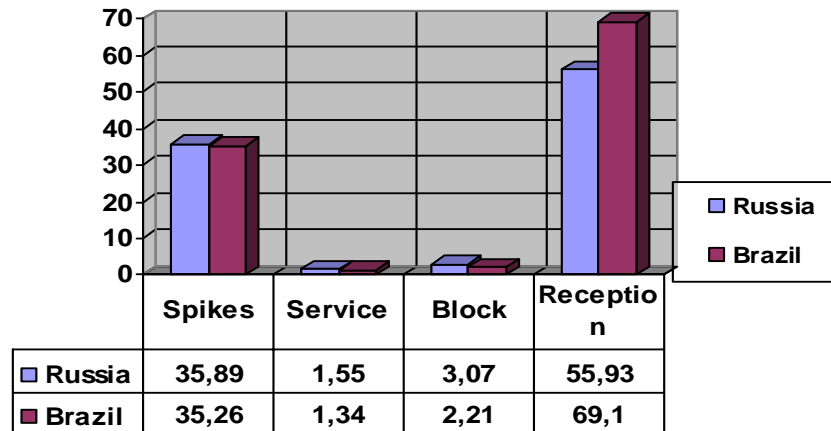


Chart no.1 *Success of the two teams during games at the Olympics*

From Figure 1 it can be seen that during the tournament Russia's top team in Chapters spikes with a percentage of 0.64%, at service by 0.21% and by 0.86% blockage. Brazilian team led only to the reception phase with a percentage of 13.17% over the Russians.

In the table no.2, has been total number of the players of both teams during the tournament and the percentage of successful actions. For direct point we gave 1 point for recovered and played balls, we gave 0.5 points and 0 points for wrong actions.

*Efficiency players of both teams during the tournament*

Table 2

Player	Spikes		Blockages		Services		Total shares
	No. Spikes	% Success.	No. Block.	% Success	No. services	% Success.	
M.M. (Russian)	124	43.06	11	0.65	13	0.45	148
S.T. (Rus)	111	42.89	8	0.56	10	0.44	129
E. M. (Brazil)	75	40.12	9	0.55	4	0.38	106
M. D. (Russian)	65	39.41	16	0.55	4	0.36	85
De Sousa (Braz)	72	34.03	9	0.31	2	0.32	83
Los Santos (Braz)	46	32.15	16	0.55	10	0.31	72
T. S. (Russian)	56	35.98	4	0.75	12	0.41	72
AD (Braz)	47	29.34	5	0.56	4	0.32	56
K. T. (Russian)	45	32.65	8	0.50	1	0.50	54
V. C. (Russian)	35	34.66	13	0.55	6	0.50	54
V. N. (Braz)	39	28.75	6	0.33	3	0.33	48
R. B. (Braz)	7	32.97	6	0.16	7	0.16	20
Total actions Russia	436 actions		60 actions		46 actions		
Arithmetic mean Russia	72.66 / Player	38.108%	10 / Player	0.59%	7.66 / Player	44.33%	
Total actions Brazil	286 actions		51 actions		5.0 actions		

In the final game Russia after being led by 2-0 in sets was able to impose score 3-2 after in one exhausting game. In the table no.3 are observed the superiority

percentages of the main technical elements of the game of volleyball, which led to the award of this game.

*The score obtained by the two finalists*

Table 3

	Russia				Brazil			
	Point	Tot.	%	Mean	Point	Tot.	%	Mean
Service	4	107		0.80	Service	8	109	1.60
Spikes	62	131	31.30%		Spikes	59	132	28.03%
Block	15	68		3.00	Block	10	63	2.00
Reception			64.67%		Reception			65.12%

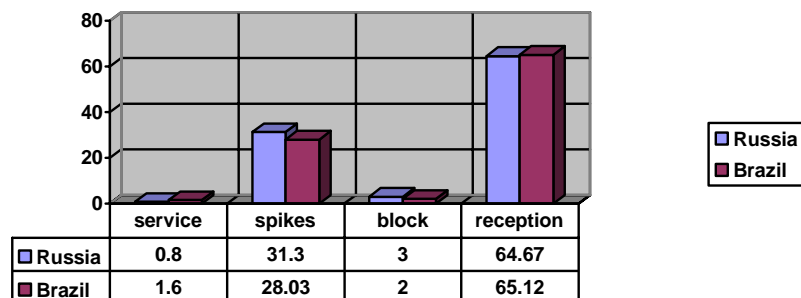


Chart no.2 Graphical representations of scores obtained by the two finalists

From figure 2 it can be seen that the Russian team is superior in terms of spikes with a percentage of 3.27% with Brazilian team and to block arithmetic average is of 3 to only 2 in the Brazilian team. Brazilians have superiority in service with Percentages and arithmetic average of the top three players in each action team.

a difference of 0.8 and in pickups phases of 0.45%.

The following table will show the percentages and the arithmetic mean of the actions of service attack and blockage of the first three ranked players in each team.

Table 4

	Players	Russia			Brazil			
		Total	%	-x	Players	Total	%	-x
Service	T. S.	24		0.60	Dos. S.	22		0.80
	M. D.	15		0.20	SL	19		0.60
	K. T.	3		0.00	S.	16		0.20
Attack	M. D.	49	44.90		S.	46	32.61	
	M. M.	33	33.33		ME	30	46.67	
	T. S.	29	17.24		Dos. S	12	0	
Blockage	A. N.	14		0.80	S	8		0.60
	V. A.	14		0.80	Dos. S	21		0.60
	G. S.	5		0.60	ME	8		0.40

From Table 4 it can be seen that the arithmetic mean of the achievements in terms of service the Russian team players are under the Brazilians. One of the top three finishers in the Russian team failed no direct point of service.

The spikes are noted that the Russian players are clearly superior to those Brazilians.

This time one of the top three finishers in the Brazilian team of 12 actions of attacks failed to make any point, the percentage is zero.

The blockage as in the case of the attack, the Russian team players are clearly superior to those of the Brazilian team.

The arithmetic mean of successful actions as can be seen from Table. The Russian players are superior to the Brazilians.

The most effective Brazilian players ranked in the weakest of the Russian camp. Superiority in attack and blockage of Russian players contributed the team winning the game.

## Conclusions

Concluding the study that was done we can say that the hypothesis has not been fully verified.

Russian team has two players that during the game against Brazil have played on several positions, respectively M. D. in the beginning playing as main spikes, and then passing on the second position.

The same thing happened with the player M. M.

So in the Russian team there are two polyvalent players while in the Brazilian team the players are specialized only on certain positions and technical elements.

In the direct game between the two finalists this versatility of a few players in the Russian team helped to win the game, they are the ones who disorganized the

Brazilian game by their nonspecific appearance in different areas.

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