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# STUDY CONCERNING THE 3 POINTS SHOTS REALIZED BY THE TOP 4 RANKED TEAMS AT THE MEN OLYMPIC BASKETBALL TOURNAMENT, BEIJING 2008

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### Summary

**Purpose.** The author aims to analyze the long-distance shots attempted by players of the top 4 ranked teams in the Olympic basketball tournament. Beijing, 2008.

**Methods.** The records of the 3 points shots were taken from the site of the International Federation of Amateur Basketball - FIBA. The study of the related literature provided information about the concerns, the news and the results concerning the long-distance shots. The data was processed by statistical-mathematical method.

**Results.** We presented and we analyzed the total number of 3 points attepmts, number of succesful shots, the percentage of succes, the contribution of the 3 points shots to the total results, the number of 3 points shots per quarters, the general performance of the team and the individual performance of the players.

**Conclusions.** There is a concern of specialists to study various aspects about the long-distance shots.

Although the teams have paid special attention to the 3 points shots as a way to get an advantage over the opposing team, they represent only 39.32% of the filed goals atteptmts and 30.02% of the successful field goals.

The distribution of the individual attempts and of the success percentage is normal.

Even if each team has had at least one player with a lot of 3 point shots and a high percentage of success, we can not get to the conclusion that there is a trend in specializing only a few players for this kind of shot.

Keywords: basketball, three points shot, the Olympic tournament, men

#### Introduction

After the introduction of the 3 points shot in the rules of basketball, this game has suffered several changes that lead to the increasing of the offensive system area, a better valuation of the players with a good precision at medium and long-distance shots, a change of strategy for the defensive players who were forced to extend the area where they have to guard the attacking players and also the game became more spectacular (G. Schmidt & A. Clausmayer, 1995).

In order to know the modern basketball with all the components and in order to identify the trends in the evolution of the game the researcher will need to have good skills in synthesizing, analyzing and making use of the information. But this is not enough. The researcher will also need objective and relevant data (T. Predescu & G. Ghiţescu, 2001). In order to have an appropriate evaluation we will need to have data that is objectively and numerical collected, relevant and meets the quality criteria (D. Colibaba-Evulet & I. Bota, 1998). The important international competitions, especially the Olympic Games, are occasions for objective evaluations of the game as whole or specific aspects of basketball. It is important to have studies made after each competition because this is the main instrument that helps us to know more about individual and team performances. (T. Predescu & C. Negulescu, 1998; Ş. Maroti, 2008; G. Schmidt, P. Kollath & D. Sommer, 1991)

## Purpose

This paper aims to study the best 4 teams at the men Olympic tournament and to analyze the frequency of the 3 points shots, their efficiency, the contribution of 3 points shots to the total points of the team and the repartition of these shots among the players of each team.

# Subject and Method

In this paper we have used data from the recording of the games from the Olympic basketball tournament Beijing 2008. These records have been taken from the official bulletin of FIBA.

We analyzed the 3 points shots (304 attempts) of the members (48 players) of the first

four ranked teams (USA, Spain, Lithuania and Argentina) in the quarter-finals, in the semifinals, in the final for bronze medals and in the final.

The variables that were considered are the total number of 3 points attempts, the number of successful 3 points shots, the success percentage of the 3 points attempts. We also analyzed the individual results of the players, the number of attempts and the number of successful attempts in a certain period.

We used scientific documentation in order to gather information about the news and the opinions expressed in the specific literature about the 3 points shots. We also studied other previous researches on this subject.

We used the statistical-mathematical method for the data processing. For the analysis we calculated the basic statistical indicators.

#### **Results and interpretation**

The analysis is showing us that 3 of the 4 teams have attempted a comparable number of 3 points shots: USA 88 attempts, Lithuania 85 attempts and Argentina 78 attempts. The Spanish

team has a much smaller number of 3 points shots -53 attempts. This leads us to believe that, excluding Spain, the leading teams in the tournament have considered the distance shots as an important part in their game tactics and they considers these shots as a way to gain an advantage in front of their opponents.

We also analyzed the difference between the highest number of attempts and the lowest number of attempts that each team had in a game. We found out that USA had a difference of 3 attempts between the game with the most 3 points shots and the one with the lowest number of 3 points shots. The performance of the Spanish team was also uniform with a difference of only 4 attempts. Argentina, with a difference of 8 attempts, had bigger oscillations from game to game.

The general success percentage of the 3 points attempts is 37,82%. USA, with 39,77%, and Argentina, with 39,74%, are above average. Lithuania, with 36,47%, and Spania, with 33,96% are under the average (Table 1).

Table 1 Three points attempts, number of successful shots and the percentage of success

3 points shots	Team	Total			
	USA	Spain	Argentina	Lithuania	Total
Attempts	88	53	78	85	304
Successful	35	18	31	31	115
%	39,77	33,96	39,74	36,47	37,82

We compared the success percentage of the 3 points shots of the top ranking teams at the Olympic tournaments at Atlanta 1996, Sydney 2000 and Beijing 2008. We realized that the differences are not very big: 39,03% in 1996, 37,53% in 2000 and 37,87% in 2008. Realizing the importance of the 3 points shots both the offensive players and the defensive players are very well prepared and this is why now there is a balance between offence and defense.

An important aspect is the time interval in which the 3 point shots are attempted. On the average, the teams attempted a 3 points shot at every 1`54". A successful 3 points attempt occurs on the average at every 4`59". Considering the time of the attack, we found out that the teams have attempted 3 point shots very early (1 second after possession) and also very late (24 seconds after they got possession). We found out that out of the total number of 304 3 points shots, 62 attempts occurred in the first quarter, 77 attempts in the second quarter, 82 attempts in the third and 77 in the last quarter. The lowest number of 3 points shots was attempted in the first quarter and the highest one in the third quarter. The average number of 3 points shots per quarter was 76. Considering the number of attempts per quarter, only the first quarter is below the average with 68 attempts. The second, third and forth quarter were all above the average with 77, 82 and 77 attempts respectively.

Studying the success ratio per quarter, we found out that the highest percentage of success was in the third quarter, with 41,46% successful attempts, and then first quarter, with 39,7 %, the forth, with 37,66 % and the second one with 32,46 % (table 2)

Team	1st Quarter			2nd Quarter		3rd Quarter			4th Quarter			Total			
	Α	S	%	Α	S	%	Α	S	%	А	S	%	Α	S	%
USA	23	9	39,13	22	8	36,36	23	10	43,47	20	8	40,00	88	35	39,77
Spain	16	7	43,75	9	3	33,33	14	4	28,57	14	4	28,57	53	18	33,96
Argentina	16	7	43,75	22	6	27,27	19	9	47,36	21	9	42,85	78	31	39,74
Lithuania	13	4	30,76	24	8	33,33	26	11	42,30	22	8	36,36	85	31	36,47
Total	68	27	39,7	77	25	32,46	82	34	41,46	77	29	37,66	304	115	37,82

Table 2 The 3 points attempts and the success percentage in each of the quarters

Studying the contribution of each type of shot to the total results, we found out that 20,48% of the points were scored from free throws, 48,37% of the points were scored from 2 points shots and the contribution of 3 points

shots amounted to 31,13% of the points (Figure 1). The percentage of points scored from 3 points shots was quite different for the 4 teams: 20,00% Spain, 31,34% USA, 36,47% Lithuania and 37,5% Argentina.



Figure 1 The percentage of the points scored from free-throws, 2 and 3 points shots

The present situation is the result of the increased efficiency of the defense that lead to reaching a balance between offence and defense. The defense became more aggressive and now we have specific tactics aimed against long-distance shots. This way we have an obvious balance between the field goals scored from close to the basket, semi-distance and long-distance.

The number of 3 points shots represent 39,32% and the 2 point shots are 60,67% of the total filed goal attempts. The number of successful 3 points shots represent 30,02% of the

total field goals and the 2 points shots, closerange and semi-distance shots, contribute with 69,97% to the number of field goals.

All the teams had a much better percentage for 2 points shots compared with the 3 points shots. For USA the 2 points percentage was 25,51% higher than the 3 points percentage, for Spain it was 19,37% higher, for Argentina it was 13,7% higher and for Lithuania 20,23% (Table 3). The conclusion is that the preparation of the players should be improved in order for them to increase their percentage of successful 3 points shots.

Team	Attempts		Field Goals		Success percentage			
	2 points	3 points	2 points	3 points	2 points	3 points		
USA	121	88	79	35	65,28 %	39,77 %		
Spain	135	53	72	18	53,33 %	33,96 %		
Argentina	116	78	62	31	53,44 %	39,74 %		
Lithuania	97	85	55	31	56,70 %	36,47 %		
Total	469	304	268	115	57,14 %	37,82 %		
%	60,67 %	39,32 %	69,97 %	30,02 %				

Table 3 2 points and 3 points attempts, filed goals and the percentage of success.

We found that out of the 48 players that we analyzed, 34 have attempted at least on 3 points shot. Out of them 26 had at least one successful 3 points shot. So 70,83% of the players contributed to the realization of the 304 3 points shots. If we consider the total number of players, then the average is 6,33 attempts per player. If we only consider those who attempted 3 point shots, then the average is 8,94 shots per player.

In analyzing the most efficient players, we only considered those players with at least 3 long-range attempts. The dispersion range is large, covering players with no successful attempt and also one player with 11 successful 3 points shots (Figure 2). Regarding the efficiency, the distribution curve is normal, the majority of players (80%) have between 20% and 50% success ratio. 8% do not have any successful attempt. 3 players have a success ration of over 50% - 55,55%, 62,5% and 66% respectively. The conclusion is that there are big differences between the performances of the players and also that there are some specialized players that have very good results with this kind of shot.



Figure 2 Successful 3 points shots per player (Only players with at least 1 successful shot were considered)

The players with the highest number of points scored from 3 points shots were P. Quinteros (Argentina) 33, K. Bryant (USA) 27, R. Fernandez (Spain) and S. Jasaitis (Lithuania) 24 each.

The players with the highest percentage at 3 point shots were: T. Prince (USA) 66,66 %, P. Quinteros (Argentina) 62,5 % and J. Garbajosa (Spain) 55,5 %.

## Conclusions

The points realized from 3 points shots are representing 42,85% of the total points scored from field goals. So there is a balance between the field goals. This is because the defense is trying to prevent shots from any range: close-range and semi-distance and longdistance.

The average success ratio per team is between 33,96% and 39,77%, this being an average-low percentage.

The distribution of the individual performances is normal; most players have a success percentage between 20% and 50%.

We do not see a specialization of only few players who attempt this kind of shots because 70,84 % of the players have attempted 3 points shots. So the tendency is to train players to be able to shoot effectively in any conditions.

At least one player per team had a success ratio of at least 50% (USA – 4 players, Spain – 3 players, Lithuania and Argentina – 1 each).

Because the defense is more aggressive towards the 3 points shooters, it is harder to find a suitable position from where to shoot. This is why some times the players have to take greater risks when attempting 3 points shots.

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