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# ANALYSIS OF MEN'S AND WOMEN'S BASKETBALL FAST-BREAKS

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KEY WORDS: basketball, offence, fast break..

ABSTRACT: In the present study, the way basketball fast breaks are executed was analysed, while determining how the best results are obtained and studying the differences between the men's and women's game. Utilizing observational methodology, a total of 294 fast breaks were analysed from 30 games played at the 2008 Olympic Games in Beijing. Eighteen of the games were high-level men's games and 12 were high-level women's games. Statistically significant differences were observed between the men's and the women's game in the following aspects with regard to fast breaks: (1) duration, (2) completion area, and (3) shot opposition. For men, some dependence relationships were found between the fast break result and the following variables: duration, completion area, and opposition to its completion. For women, the results revealed a weak association between the fast break result and the opposition to its completion.

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## Introduction

The fast break (FB) is the phase of the game where the team that possesses the ball tries to *“take it to the basket as quickly and as safely as possible, with the goal of getting numerical equality or advantage over the defending team or obtaining a good shot option with a high success rate before the defence recovers and gets organized”* (FEB, 2008, p. 2). The FB can help to create and take advantage of opportunities for scoring with relative ease, but they can also cause haste or turnovers. The way FB are developed and the clearness of the players’ ideas when executing them could influence the final result. In this study, basketball fast breaks were analysed with the aim of: knowing how they are executed in the men’s

and women’s categories at the highest level, determining what options get the best results, and analysing the possible differences between the men’s and women’s game.

## Method

In order to analyse FB, observational methodology (Anguera, 1983) was used. Data were registered by means of a systematic and natural observation of the recordings of 30 games from the 2008 Beijing Olympic Games. A sample of 18 men’s games and 12 women’s games was studied, consisting of a total of 294 fast breaks. Data analysis was done using the program SPSS v. 11.5 by means of a descriptive and correlational analysis of the variables.

| MEAN          |              | DURATION*                                    |  | M 3.89 s W 4.42 s                                   |                                   | # PASSES                          |                             | M 1.03 W 1.22       |  | # PLAYERS |  | M 1.95 W 2.13 |  |
|---------------|--------------|--|--|---|-----------------------------------|-----------------------------------|-----------------------------|---------------------|--|-----------|--|---------------|--|
| FB INITIATION | ACTION       | Field goal<br>M 4.5%<br>W 4.4%               | Free-throw<br>M 1.5%<br>W 1.1%           | Throw-in<br>M 1.0%<br>W 2.2%                        | Def rebound<br>M 32.2%<br>W 33.0% | F-T rebound<br>M 1.0%             | Steal<br>M 59.4%<br>W 59.3% | Jump ball<br>M 0.5% |  |           |  |               |  |
|               | PLAYER       | Guard M 32.2%<br>W 28.9%                     | Forward M 41.1%<br>W 40.0%               | Center M 26.7%<br>W 31.1%                           |                                   |                                   |                             |                     |  |           |  |               |  |
|               | AREA         | Lane<br>M 33.5%<br>W 38.0%                   | Baseline – FT line<br>M 20.0%<br>W 15.2% | FT line – half-court line<br>M 31.5%<br>W 30.4%     | Frontcourt<br>M 8.0%<br>W 8.7%    | Out of bounds<br>M 7.0%<br>W 7.6% |                             |                     |  |           |  |               |  |
| ADVANCE MODE  |              | Dribble M 57.0%<br>W 50.0%                   |  | Pass M 43.0%<br>W 50.0%                             |                                   |                                   |                             |                     |  |           |  |               |  |
| ADVANCE AREA  |              | Centre M 33.7%<br>W 29.5%                    |  | Sidelines M 66.3%<br>W 70.5%                        |                                   |                                   |                             |                     |  |           |  |               |  |
| FB COMPLETION | BREAK        | Primary M 89.6%<br>W 88.0%                   |  | Secondary M 10.4%<br>W 12.0%                        |                                   |                                   |                             |                     |  |           |  |               |  |
|               | PLAYER       | Guard M 19.3%<br>F 16.7%                     | Forward M 58.9%<br>F 55.6%               | Center M 21.8%<br>F 27.8%                           |                                   |                                   |                             |                     |  |           |  |               |  |
|               | TYPE         | Dribble and completion<br>M 57.4%<br>F 51.1% |  | Pass reception and completion<br>M 37.1%<br>F 44.6% |                                   | Turnover<br>M 5.4%<br>F 4.3%      |                             |                     |  |           |  |               |  |
|               | AREA *       | Lane M 88.1%<br>F 76.1%                      |  | Intermediate F 14.1%                                |                                   | Intermediate F 14.1%              |                             |                     |  |           |  |               |  |
|               | OPPOSITION * | None M 49.0%<br>F 33.7%                      |  | Some M 51.0%<br>F 66.3%                             |                                   |                                   |                             |                     |  |           |  |               |  |
|               | RESULT       | Unsuccessful M 27.7%<br>F 33.7%              |  | Successful M 72.3%<br>F 66.3%                       |                                   |                                   |                             |                     |  |           |  |               |  |

\*Statistically significant differences, p<.05

Table 1. Results of the variables: Comparison of men’s (M) and women’s (W) data

|                              |          |                                      |                                       |   |                                      |  |                              |                       |  |
|------------------------------|----------|--------------------------------------|---------------------------------------|---|--------------------------------------|--|------------------------------|-----------------------|--|
| <b>AVERAGE DURATION (s)</b>  |          | <b>M</b>                             | S 3.70 UN 4.38                        |   |                                      |  | <b>W</b>                     | S 4.30 UN 4.68        |  |
| <b>AVERAGE # PASSES</b>      |          | <b>M</b>                             | S 1.01 UN 1.05                        |   |                                      |  | <b>W</b>                     | S 1.23 UN 1.20        |  |
| <b>AVERAGE # PLAYERS</b>     |          | <b>M</b>                             | S 1.95 UN 1.96                        |   |                                      |  | <b>W</b>                     | S 2.12 UN 2.17        |  |
| <b>INITIATING ACTION</b>     | <b>M</b> | Field goal<br>S 77.8%<br>UN 22.2% *  | Free-throw<br>S 33.3%<br>UN 66.7% *   | Throw-in<br>S 100% *                        | Def rebound<br>S 61.5%<br>UN 38.5%   | FT rebound<br>S 50%<br>UN 50% *        | Steal<br>S 78.3%<br>UN 21.7% | Jump ball<br>S 100% * |  |
|                              | <b>W</b> | S 75%<br>UN 25% *                    | UN 100% *                             | UN 100% *                                   | S 70%<br>UN 30%                      | UN 50% *                               | S 66.7%<br>UN 33.3%          |                       |  |
| <b>INITIATING PLAYER</b>     | <b>M</b> | S 69.2% UN 30.8%                     |                                       | S 72.3% UN 27.7%                            |                                      | S 75.9% UN 24.1%                       |                              |                       |  |
|                              | <b>W</b> | Guard                                | S 76.9% UN 23.1%                      | Forward                                     | S 55.6% UN 44.4%                     | Centre                                 | S 67.9% UN 32.1%             |                       |  |
| <b>INITIATING AREA</b>       | <b>M</b> | Lane<br>E 70.1%<br>NE 29.9%          | Baseline – FT line<br>S 85%<br>UN 15% | FT line – half-court<br>S 63.5%<br>UN 36.5% | Frontcourt<br>S 81.3%<br>UN 18.8% *  | Out of bounds<br>S 71.4%<br>UN 28.6% * |                              |                       |  |
|                              | <b>W</b> | E 65.7%<br>NE 34.3%                  | S 71.4%<br>UN 28.6%                   | S 64.3%<br>UN 35.7%                         | S 87.5%<br>UN 12.5% *                | S 42.9%<br>UN 57.1% *                  |                              |                       |  |
| <b>MODE OF ADVANCE</b>       | <b>M</b> | Dribble                              |                                       |   | Pass                                 |  | S 76.6% UN 23.4%             |                       |  |
|                              | <b>W</b> | S 65.7% UN 34.3%<br>S 61.9% UN 38.1% |                                       |   | S 76.6% UN 23.4%<br>S 66.7% UN 33.3% |  |                              |                       |  |
| <b>ADVANCE AREA</b>          | <b>M</b> | Centre                               |                                       | Sidelines                                   |                                      | S 66.9% UN 33.1%                       |                              |                       |  |
|                              | <b>W</b> | S 78.3% UN 21.7%<br>S 60.9% UN 39.1% |                                       | S 66.9% UN 33.1%<br>S 63.6% UN 36.4%        |                                      |  |                              |                       |  |
| <b>COMPLETION BREAK</b>      | <b>M</b> | Primary                              |                                       |   | Secondary                            |  | S 76.2% UN 23.8%             |                       |  |
|                              | <b>W</b> | S 71.8% UN 28.2%<br>S 76.2% UN 23.8% |                                       |   | S 76.2% UN 23.8%<br>S 72.7% UN 27.3% |  |                              |                       |  |
| <b>COMPLETION PLAYER</b>     | <b>M</b> | Guard                                |                                       | Forward                                     |                                      | Center                                 |                              |                       |  |
|                              | <b>W</b> | S 64.1% UN 35.9%<br>S 60% UN 40%     | S 71.4% UN 28.6%<br>S 64% UN 36%      |   | S 81.8% UN 18.2%<br>S 72% UN 28%     |  |                              |                       |  |
| <b>COMPLETION TYPE</b>       | <b>M</b> | Dribble and completion               |                                       |   | Pass reception and completion        |  | Turnover                     |                       |  |
|                              | <b>W</b> | S 68.1% UN 31.9%<br>S 78.4% UN 21.6% |                                       |   | S 73.3% UN 26.7%<br>S 70.7% UN 29.3% |  | UN 100% *<br>UN 100% *       |                       |  |
| <b>COMPLETION AREA</b>       | <b>M</b> | Lane                                 | Intermediate                          |   | Outside 3-                           |  | S 29.2% UN 70.8%             |                       |  |
|                              | <b>W</b> | S 78.1% UN 21.9%<br>S 67.1% UN 32.9% | S 69.2% UN 30.8%                      |   | point line                           |  | S 55.6% UN 44.4% *           |                       |  |
| <b>COMPLETION OPPOSITION</b> | <b>M</b> | Without                              |                                       |   | With                                 |  | S 64.1% UN 35.9%             |                       |  |
|                              | <b>W</b> | S 80.8% UN 19.2%<br>S 90.3% UN 9.7%  |                                       |   | S 64.1% UN 35.9%<br>S 54.1% UN 45.9% |  |                              |                       |  |

\*n<10% of the sample of each category (men category: n<21, women category: n<10)

Table 2. Result of FB (S-success, NS-no success) in each category of the studied variables

## Results

Firstly, the results from the descriptive analysis with a comparison of the men's and women's data are presented in Table 1. Significant differences between the men's and women's data for the following variables were found: FB duration ( $p=.002$ ), completion area ( $p=.000$ ), and opposition to the shot's completion ( $p=.010$ ).

Fast break results are analysed more in depth in Table 2, where there is a comparison of the successful and unsuccessful FB from each category of variables. A correlational analysis was done in which the possible association of the study's variables with the result of the FB was studied. For males, some dependence relationships between the result of the FB and the variables of FB duration, FB completion area, and opposition to its completion were found. There is a moderate, negative association between the FB result and duration. Therefore, the longer the FB lasts, the less likely it will be successful. There is also a moderate association between the completion area and the result of the FB, as the proportion of successful FB finished in the lane and the unsuccessful FB completed in the area outside the 3-point line is significantly higher than what is expected under the null hypothesis of independence. The results demonstrate a very weak association between the result of the FB and the opposition to its completion. The rate of shot success without opposition and of unsuccessful shots with opposition is significantly higher than what is expected under the null hypothesis of independence. When analysing the mode utilised for advancing the ball, as well as the area for

this advancement, a success rate that is slightly higher than expected is observed for the advance with a pass as well as going through the centre under the null hypothesis of independence; likewise, a slightly lower than expected success rate for dribbling and going along the sidelines was found under the null hypothesis of independence, but neither of these results are conclusive. However, for women, there was only some statistically significant evidence demonstrating that there is not an independent relationship between the result of the FB and the opposition to its completion, with a weak association and the same result as the men.

## Discussion

The duration of the FB analysed in the present study ranged from 0 to 8 seconds, and this corresponds with the data found in the literature. For example, Madejón (2002) delimits the duration of a FB from 0 to 7 seconds, and Carballo and Dopico (2005) delimit it from 1 to 8 seconds. The average duration of the FB observed in the present study was shorter for men (3.89 seconds), than for women (4.42 seconds) and shorter for the FB that ended successfully than those that were unsuccessful (Table 2). These results demonstrate a shorter FB duration than in other studies. For example, Gómez (2007) showed averages of 4.09 s for men and 5.44 s for women in play-off matches, Cárdenas et al. (1995) obtained an average of 5.15 s for effective FB, and Ortega et al (2007) found an average of 4.7 s for winning teams and 4.8 for losing teams.

As occurred with duration, the number of passes and players involved in each FB was lower for men (1.03 passes and 1.95

players) than for women (1.22 passes and 2.13 players) as well as for successful FB than for unsuccessful FB (Table 2). These results are lower than those found by Cardenas et al. (1995), whose average number of passes per effective FB was 1.43. Gómez (2007) obtained average values of 1.36 and 1.01 passes as well as 2.28 and 1.97 participating players for men's and women's teams, respectively. In comparison with the results from the present study, the values from Gómez's study are higher for the men's category and lower for the women's category.

Regarding the initiations of the FB, it is observed that the action with which nearly 60% of the FB from this study began was the steal, followed by the defensive rebound. Cruz and Tavares (1998) cited the same actions as the first and second most used actions to begin a FB. Cárdenas et al. (1995) and Parra (2008) concurred with these two actions although reversing their order of use. Forwards were the players who most often initiated FB, though for women they were the least effective. For women, the most effective were the guards (76.9% success rate). The most frequent areas for initiating FB were the lane and the area between the extension of the free throw line and the half-court line; however, the most effective ones were the area between the baseline and the free throw line (except for the lane), which resulted in a success rate of 85% for men, and the frontcourt, which resulted in a success rate of 87.5% for women.

In its advance towards the basket, the ball crossed the midcourt on a similar number of occasions while being dribbled as well as while being passed, though for men the use of the dribble is more frequent than the pass. Parra (2008) assesses this

differently and affirms that the "dribble is the means that is most used for executing FB, whether alone or combined with passes".

"It is universally said that, for FB, the ball must go through the centre of the court. This way, both sides are kept as possible outlet options for its final resolution" (Comas, 1991, p. 61). Despite this traditional vision, nowadays some coaches prefer the ball to advance closer to the sidelines. This is the tendency observed in the results, as in nearly 70% of the FB, the ball advanced near a sideline; however, for men, the success rate for FB where the ball went through the centre was better.

When analysing the completion of the FB, it is observed that nearly 90% finished in the primary break. Cárdenas et al. (1995) found an even higher value at 95.74%. Despite presenting such high frequencies, FB that terminated in primary breaks had lower success rates than secondary breaks. Forwards were the players who finished the most FB (more than 55%), although centres were the ones who obtained the best results. A higher percentage of FB finished with a dribble followed by a shot than with a shot directly after the pass reception. The study by Cárdenas et al. (1995) also demonstrates a higher frequency of a shot after a dribble than a shot after the pass reception while stopped; however, it is the lay-up that was most used in completing a FB, although this category was not analyzed and thus cannot be compared to the results of the present study. Regarding the completion area, more than 75% of FB finished in the lane. The area outside the 3-point line was the least used, and it was the one that had the least effectiveness; in fact,

for men, FB completed in this outer area only had a 29.2% success rate. The amount of opposition to the FB completion is directly related to its success, as FB without opposition have high success rates. In fact, without opposition, women had a 90.3% success rate. However, the frequency of this occurrence is quite low (33.7% for women, though for men, it is higher (49% of FB). Both values are higher than the 23.5% of the possessions (not only FB) that finished without opposition in the study by Ribeiro and Sampaio (2001).

The percentage of FB that finished successfully for men was 72.3% and for women it was 66.3%. The efficacy percentage of the FB analysed by Cárdenas et al. (1995) was 63.31%. In the study by Gómez (2007),

this percentage was 65.1% for men and 50.6% for women in play-off matches. In both studies, the results demonstrated efficacy percentages lower than those found in the present study.

In conclusion, due to the high efficacy percentage of FB, its use should be sought, especially after steals and defensive rebounds. The use of the lateral lanes provides many options for FB, but in men's basketball, if possible, it is best to advance through the centre. Although secondary break completions are more effective, there are more possibilities of culminating FB in primary breaks. It is better to seek its completion in the lane and not hesitate when there is a chance to shoot without opposition.

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