



STUDY CONCERNING THE EFFECTIVENESS OF HANDBALL GOALKEEPER AT THE 7 M THROWS

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Abstract

This study aim is to identify the factors which influence the effectiveness of the goalkeeper at the 7 m throws. The study is based on the analysis of recordings made at 74 official games of the National Men's Handball League - Edition 2012-2013. These recordings were made either by direct participation in official games or by watching games' DVD. The variables recorded were: goalkeeper position at the throw, throwing technique used by the thrower, the target area and the goalkeeper status (component of the home team or the guest team). Among the study's conclusion we noted that the effectiveness of the goalkeepers at saving penalty throws is lower when the throws are bounced than at direct throws and goalkeepers have a higher efficiency in the 7 m throws when playing as guest than when they are playing as host team. Comparing the average effectiveness of the Romanian goalkeepers at 7m throws (17.21%) with the average effectiveness of the goalkeepers from the teams placed in the first six places at the World Cup 2013 - Spain (32.3%) we observe a difference of 15.09 percentage points.

The recommendations we made have practical effects both for goalkeepers on effective saving and for field players in scoring training.

Keywords: *effectiveness, 7 m, goalkeeper, handball.*

JEL classification: *I10, I19, I29*

1. Introduction

In the game of handball the goalkeeper is considered the last defender and the first attack player of a team, so it is said that many times, the goalkeeper is half the team.

„The 7 m throw is a special moment of the game when the two opponents (goalkeeper and thrower) are face to face, in a static situation without any intervention from the other players.” (Hantău, 2009)

In this case it appears that the shooter has an advantage against the goalkeeper, being more likely to defeat the goalkeeper and to score a goal, because the goalkeeper has to react to the action of the shooter.

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Performance appraisal of each player is a very important task, whose solution leads to a better programming and planning of the training process (Hantău, 2011).

Based on these results it can be identified the goalkeeper sensitive areas. Forward, on this objective data it can be design and delivered an effectively training plan.

2. Methods

The purpose of this research is to identify the factors that influence the effectiveness of a goalkeeper at the 7m throws.

The research methods used in this study are: observation method, statistical and mathematical method and graphical results display. We believe that this study, it is a complex and longitudinal observation, based on direct observation and observation with video equipment. The registrations method it is a complementary method which consists in observation and scoring information obtained from the observation of the investigated phenomenon. The data obtained are put in tables and graphs. (Niculescu, 2002)

3. Content

The whole study is based on 74 official games recordings of the Romanian National Men's Handball League - Edition 2012-2013. These recordings were made either by direct participation in official games or by watching games' DVD.

The variables recorded were: goalkeeper position at the throw, throwing technique used by the thrower, the target area and the goalkeeper status (component of the home team or the guest team).

The target areas are eight, being numbered according to the goalkeeper position:

- Area 1 - top right corner;
- Area 2 - up between the arms;
- Area 3 - top left corner;
- Area 4 - between shoulder and right hip;
- Area 5 - between shoulder and left hip;
- Area 6 - lower right corner;
- Area 7 - down between legs keeper;
- Area 8 - lower left corner.

4. Results

Studying the record sheets made at 74 games we found a number of 530 throws from 7m.



In table no. 1 are reported the technique of throwing, no. goals, the defended throws, the post throws, the out throws, all the throws and goalkeepers effectiveness.

Table 1 The goalkeeper's effectiveness by the throwing technique

| Throwing technique | Goal | Defended | Post | Out | Total | Effectiveness |
|--------------------|------|----------|------|-----|-------|---------------|
| Direct | 264 | 73 | 18 | 11 | 366 | 19,9% |
| Bounced | 127 | 10 | 9 | 7 | 153 | 6,53% |
| Lob | 8 | - | 3 | - | 11 | 0% |

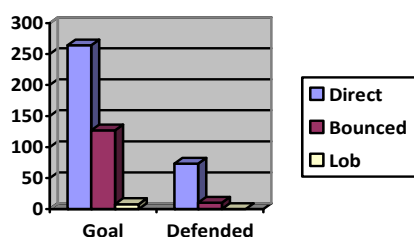


Chart 1

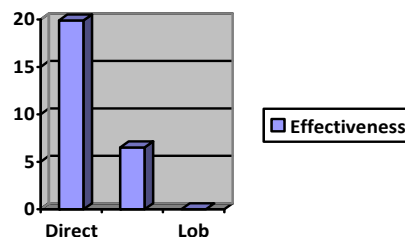


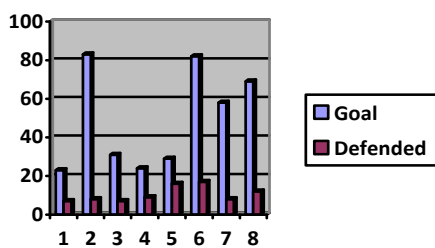
Chart 2

Chart 1 and 2 – No. of throws by the throw technique; the goalkeeper effectiveness by the throw technique.

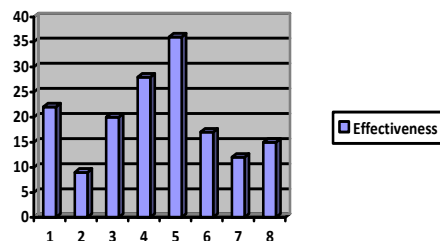
From the 530 of the 7 m throws only 482 were recorded on the goal area. In the table no. 2 have been summarized the target areas, the number of throws (goal or defended) and the goalkeeper effectiveness.

Table 2 The goalkeeper effectiveness by the target area of the throws

| Area | Throws | | Effectiveness |
|------|--------|----------|---------------|
| | Goal | Defended | |
| 1 | 23 | 7 | 22% |
| 2 | 83 | 8 | 9% |
| 3 | 31 | 7 | 20% |
| 4 | 24 | 9 | 28% |
| 5 | 29 | 16 | 36% |
| 6 | 82 | 17 | 17% |
| 7 | 58 | 8 | 12% |
| 8 | 69 | 12 | 15% |



Charts 3



Charts 4

Charts 3 and 4 – The throws (goal or defended) by the target area; the goalkeeper effectiveness by the target area.

Another parameter considered is the status of the team: host team or guest team. In table 3 are highlighted the 7m throws (goal or defended) and the goalkeepers effectiveness depending on the status of the host team or guest team.

Table 3 The goalkeeper’s effectiveness depending on the status of the host team or guest team

| Host team | | | Guest team | | |
|-----------|----------|---------------|------------|----------|---------------|
| Goal | Defended | Effectiveness | Goal | Defended | Effectiveness |
| 209 | 41 | 16.4% | 190 | 42 | 18.1% |

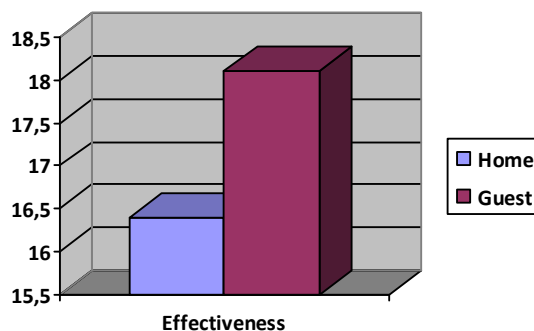


Chart 5 – The goalkeeper’s effectiveness depending on the status of the host or guest team.

The data shows the mean effectiveness for goalkeepers which are playing in the National Men’s Handball League at the 7 m which is 17,21%.



5. Conclusion

Studying the results of the analysis from the record sheets in the 74 official games pursued in the competitive season 2012-2013 of the National Men's Handball League, we can draw the following conclusions:

- the players prefer to execute the 7 m throw by direct throws (69%);
- the goalkeepers effectiveness is lower at the bounced throws than at the direct throws (6.53% vs. 19.9%);
- the bounced and the lob throws are rarely used by players, but they have a higher efficiency;
- the goalkeepers depending on target area have increased effectiveness against throws at half-height (the 4 area -28% and the 5 area -36%);
- the lowest effectiveness by the target area is in the central areas (the 2 area -9%, and the 7 area -12%);
- the goalkeepers from the guest teams have a higher effectiveness than the goalkeepers from the host teams (18.1% vs. 16.4%);
- by averaging the number of the 7 m throws we observed that there are 7 penalties throws to every game; making a comparison with the average of the 7 m throws dictated at the CM in 2013 - Spain (4/game) we find that this action has a great importance in the Romanian championship;
- comparing the average effectiveness of the Romanian goalkeepers at 7m throws (17.21%) with the average effectiveness of the goalkeepers from the teams placed in the first six places at the World Cup 2013 - Spain (32.3%) we observe a difference of 15.09 percentage points.

6. Recommendations

After drawing the conclusions of this study we can make the following recommendations:

- at the individualization training of goalkeepers we have to increase the emphasis on defending the 7m throws;
- increasing the goalkeepers effectiveness at the 7m throw so to approach the goalkeepers parameters from the top teams;
- to stimulate the players to use various technique throws at the penalties.

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