EXPLOSIVE POWER AND ITS RELATIONSHIP TO THE PERFORMANCE OF SOME BASIC SKILLS FOR HANDBALL GOALKEEPERS IN IRAQ

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ABSTRACT

The study aimed to identify the level of explosive force and its relationship to the performance of some basic skills of handball goalkeepers, and the researchers used the descriptive approach in order to suit the nature of the research and the research sample was (6) youth goalkeepers, where the researcher found that there are moral relationships between all the tests The two researchers recommended an emphasis on linking explosive strength exercises with the basic skills of handball goalkeepers.

Keywords: Explosive Power, Basic Skills, Goalkeeper, Handball.

I. DEFINITION OF THE RESEARCH:

1.1 INTRODUCTION TO THE RESEARCH AND ITS IMPORTANCE:

Our contemporary world has witnessed a real revolution in the field of sports recorded by the achievements and tournaments witnessed by the stadiums and halls of the world until the countries compete to organize international tournaments and prepare their athletes and allocate a lot of money for this field, as this field represents the most segment of societies in order to achieve its goals that transcend it.

Researches and studies have played a fundamental role in the development of the sports movement through the studies that many researchers have done, including studies on sports training and athletic achievement, and in recent times the work that occupies the coaches and all those who work in the sports field is the studies that contribute to the field of sports training and achievement.

And handball is among these fields that have attracted many researchers in the field of psychology and sports training, as the two researchers observed through their follow-up of this game in Iraq, especially goalkeepers, who need this study, since one of the researchers is the Iraqi handball team players.

Explosive strength is among the basic physical requirements in the game of handball, which is due to the performance of the skills of handball goalkeepers to achieve the goals of the performance of those skills, especially those that require maximum intensity or close to the maximum in their performance.

The importance of research has emerged in the study of the new reality of these requirements by modern practical methods and in light of these studies, tests of explosive force were developed for the research sample and to identify the relationship between it and some basic skills of goalkeepers with hand reel.

1.2 RESEARCH PROBLEM:

By following the researchers and their direct contact with goalkeepers in handball in Iraq and the surrounding region, the fact that one of them was the goalkeeper of the Olympic team noticed that there is a clear weakness in the performance of some skills of handball goalkeepers with the required explosive force as a weakness in countering the corrections during matches, as the response performance is distinguished Corrections in modern handball with speed, strength and reaction in various forms and situations for the guards, and this weakness of...
Iraqi goalkeepers in the explosive power of the handball game is an obstacle to the effective performance of countering the corrections in terms of speed, strength and reaction, and from here the research problem crystallized.

1.3 RESEARCH OBJECTIVES:

1. Knowing the explosive power level of handball goalkeepers
2. Knowing the performance of some basic skills for handball goalkeepers.
3. Learn about the relationship between explosive force and the performance of some basic skills for handball goalkeepers.

1.4 RESEARCH HYPOTHESIS:

1. There is a statistically significant relationship between the performance of basic skills and explosive power for goalkeepers with handball.

1.5 RESEARCH FIELDS:

1. The human field: (6) youth goalkeepers.
2. Spatial field: the hall of the National Center for Sports Talent.

II. RESEARCH METHODOLOGY AND FIELD PROCEDURES:

2.1 RESEARCH METHODOLOGY:

The nature of the problem to be examined is what determines the nature of the approach used, as the researchers used the descriptive approach to suit the nature of the problem.

“And because it allows direct and accurate observation, it is more sufficient in reaching knowledge” (5: 432).

2.2 RESEARCH SAMPLE:

The two researchers selected their research sample from the original community of youth goalkeepers in Iraq, who numbered (22) goalkeepers distributed in the provincial centers, and (6) goalkeepers were chosen, including (2) for the reconnaissance experiment.

2.3 DEVICES AND TOOLS USED IN THE RESEARCH:

1. hp laptop.
2. Two (2) timing hours.
3. Arab and foreign sources
4. Tests used
5. A tape measures.
6. A form for recording the results of the tests used.
7. Cones training with legal handballs.

2.4 TESTS USED IN THE RESEARCH:

1. Explosive force tests

First test: the broad jump from stability test (7: 103)
The aim of the test: to measure the explosive force of the two men.

Tools: a suitable place to bounce / tape measure / colored signs / whistle.

Performance description: The laboratory stands behind the starting line, the feet are far apart and parallel, and when the signal is given (whistle), the laboratory performs the weight of the arms backward with the knees bent, tilted slightly forward, and then does the jump forward with maximum force and not as far away as possible from it by extending the knees and pushing the feet with the arms swinging forward.

Recording: The distance of the jump is measured from the starting line to the footprints on a landing.

The laboratory is given three attempts, and the best of them are calculated for him.

The second test: throwing a medicine ball of weight (2 kg) with the favorite hand (1:33)

The aim of the test: to measure the explosive force of the preferred muscles of the arm.

Tools: 2 kg medicine ball / condition of measurement / 30 meters unobstructed throwing range / whistle.

Performance description: The laboratory stands behind the throwing line and when the whistle signal is given, the laboratory throws the medical ball using the distinctive arm as far as possible. Each laboratory has two attempts to record the best of them.

Scoring: The player records the distance from the throwing line and to the place where the ball fell in meters and its parts.

The skill tests (2: 89-93)

1- Test name: blocking from the right corner of the goal with arms to the upper corner of the goal.

Objective of the test: to measure the skill of blocking from the right corner of the goal with arms to the upper corner of the goal.

Tools: Eight handballs for the applicants, two markers to determine the scoring area, and two (2) cameras.

Test specifications:
The goalkeeper stands two feet from the column and takes the standby position for this area, and two players stand outside an area (6 m) on the right side, at a distance of (2 m) from the outside line of the goal and in the hands of each soccer player, and when they are given the signal to start and shoot at the goal from the area specified in the signs Player after player, four balls are given to each player under the guidance of the tester in shooting in two places (the upper and lower corner) as in Figure 1, provided that the goalkeeper does not know the direction of the balls and confirms here that the performance is from movement and jumping when scoring and the correction area is determined by The coach or the person conducting the test and confirms that the player does not cross the line of the goal area or touch it while shooting, and warns the goalkeeper to block all the areas specified in this test so that the measurement is objective and also the goalkeeper does not know what angle is measured.

Score calculation:
Three scores are recorded for the number of balls that the goalkeeper can block with the arms to the upper right corner out of a total of four balls that were tackled in this area only, and two degrees for the balls that he tried or prevented the player by shooting in the specified area but did not tackle them, as if they were in the column or the crossbar and one degree for the balls The one who was blocked and entered the goal in the form for the skill tests Appendix No. (9), in the event of a player's mistake by directing his ball to the designated area, another throw is added to the number of throws specified for the goalkeeper, and the total score for each skill is (12) degrees.

Test name: blocking from the right corner of the goal with the arm and leg of the lower corner of the goal.
Objective of the test: to measure the skill of blocking from the right corner of the goal by arm and leg to the lower corner of the goal.

Tools: Eight handballs for the applicants, two markers to determine the scoring area, and two (2) cameras.

Figure No. (1) measuring the blocking skill from the right corner of the goal with the arms to the upper corner of the goal

Test specifications:
The goalkeeper stands two feet from the column and takes the standby position for this area, and two players stand outside an area (6 m) on the right side, at a distance of (2 m) from the outside line of the goal and in the hands of each soccer player, and when they are given the signal to start entering and shooting at the goal from the area specified in the signs Player after player, each player is given four balls under the guidance of the tester in shooting in two places (the upper and lower corner) as in figure (2), provided that the goalkeeper does not know the direction of the balls and confirms here that the performance is from movement and jumping when scoring and the correction area is determined by The coach or the person conducting the test and confirms that the player does not cross the line of the goal area or touch it during the correction, and warns the goalkeeper to block all the areas specified in this test so that the measurement is objective and also the goalkeeper does not know what the angle is measured.

Score calculation:
Three scores are recorded for the number of balls that the goalkeeper can block with the arm and leg for the lower right corner out of a total of four balls that were tackled in this area only, and two degrees for the balls that he tried or prevented the player by shooting in the specified area, but did not tackle them as if they were in the column or the crossbar and one degree For the balls that he blocked and entered the goal in the form for the skill tests Appendix (9), in the event of a player's mistake by directing his ball to the designated area, another throw is added to the number of throws specified for the goalkeeper, and the total score for each skill is (12) degrees.
Figure No. (2) measuring the blocking skill from the right corner of the goal by arm and leg to the lower right corner of the goal

3- Name of test: blocking from the left corner of the goal with both arms for the upper corner of the goal.

Objective of the test: to measure the skill of blocking from the left corner of the goal with arms to the upper corner of the goal.

Tools: Eight handballs for the applicants, two markers to determine the scoring area, and two (2) cameras.

Test specifications:
The goalkeeper stands two feet from the column and takes the standby position for this area, and two players stand outside an area (6 m) on the left side, at a distance of (2 m) from the outside line of the goal and in the hands of each soccer player, and when given the signal to start entering and shooting at the goal from the area specified in the signs Player after player, four balls are given to each player under the guidance of the tester in shooting in two places (the upper and lower corners) as in figure (3), provided that the goalkeeper does not know the direction of the balls and confirms here that the performance is from movement and jumping when scoring and the correction area is determined by The coach or the person conducting the test and confirms that the player does not cross the line of the goal area or touch it during the correction, and warns the goalkeeper to block all the areas specified in this test so that the measurement is objective and also the goalkeeper does not know what the angle is measured.

Score calculation:
Three scores are recorded for the number of balls that the goalkeeper can block with the arms to the upper left corner out of a total of four balls that were tackled in this area only, and two degrees for the balls that he tried or prevented the player by shooting in the specified area but did not tackle them as if they were in the column or the crossbar and one degree for the balls The one who was blocked and entered the goal in the form for the skill tests Appendix No. (9), in the event of a player's mistake by directing his ball to the designated area, another throw is added to the number of throws specified for the goalkeeper, and the total score for each skill is (12) degrees.
4- Name of test: blocking from the left corner of the goal with the arm and leg of the lower corner of the goal.

Objective of the test: to measure the skill of blocking from the left corner of the goal by arm and leg to the lower corner of the goal.

Tools: Eight handballs for the applicants, two markers to determine the scoring area, and two (2) cameras.

Test specifications:
The goalkeeper stands two feet from the column and takes the standby position for this area, and two players stand outside an area (6 m) on the left side, at a distance of (2 m) from the outside line of the goal and in the hands of each football player, and when they are given the signal to start entering and shooting at the goal from the area specified in the signs Player after player, each player is given four balls under the guidance of the tester in shooting in two places (the upper and lower corner) as in Figure 4, provided that the goalkeeper does not know the direction of the balls and confirms here that the performance is from movement and jumping when scoring and the correction area is determined by The coach or the person conducting the test and confirms that the player does not cross the line of the goal area or touch it while shooting, and warns the goalkeeper to block all the areas specified in this test so that the measurement is objective and the goalkeeper does not know what angle is measured.

Score calculation:
Three scores are recorded for the number of balls that the goalkeeper can block with the arm and leg for the lower left corner out of a total of four balls that were tackled in this area only, and two degrees for the balls that the player tried or prevented by shooting in the specified area but did not tackle them, as if they were in the column or the crossbar and one degree For the balls that he blocked and entered the goal in the form for the skill tests Appendix No. (9), in the event of a player's mistake by directing his ball to the specified area, another throw is added to the number of throws specified for the goalkeeper, and the total score for each skill is (12) degrees.
2.5 Scientific Transactions Of The Tests (Validity, Objective Evidence)

Validity of the test: In extracting the validity of the test, the two researchers relied on apparent validity, as they are standardized and used tests by more than one researcher and are frequently used by many sources specialized in the field of the game.

Stability of the test: The researchers used the re-test method to find the reliability coefficient, as the tests were applied to the participants in the exploratory experiment, and the test was repeated after (5) days and with the same conditions, and the results were as in Table No. (1).

Objectivity of the test: The researchers sought help from referees for the purpose of giving a real evaluation of the tests. Through the application of (Pearson )’s law, it became clear that all the tests were of high objectivity as shown in Table (1).

Table No. (1): A table showing the stability and objectivity parameters of the tests applied to the research sample

<table>
<thead>
<tr>
<th>T</th>
<th>the tests</th>
<th>Persistence</th>
<th>Objectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The explosive power of the arms</td>
<td>0.86</td>
<td>0.91</td>
</tr>
<tr>
<td>2</td>
<td>The explosive power of the two men</td>
<td>0.86</td>
<td>0.94</td>
</tr>
<tr>
<td>3</td>
<td>Blocking from the right corner of the goal with arms to the upper corner of the goal</td>
<td>0.90</td>
<td>0.89</td>
</tr>
<tr>
<td>4</td>
<td>Blocking from the right corner of the goal by arm and leg to the lower corner of the goal</td>
<td>0.87</td>
<td>0.85</td>
</tr>
<tr>
<td>5</td>
<td>Blocking from the left corner of the goal with arms to the upper corner of the goal</td>
<td>0.92</td>
<td>0.97</td>
</tr>
<tr>
<td>6</td>
<td>Blocking from the left corner of the goal by arm and leg to the lower corner of the goal</td>
<td>0.91</td>
<td>0.93</td>
</tr>
</tbody>
</table>

2.6 EXPLORATORY EXPERIENCE:

With the aim of controlling the prepared tests and making them in their sound heart, using the correct scientific contexts, the researcher conducted his exploratory study, which is "a preliminary experimental study that the researcher conducts on a small sample before conducting his research with the aim of choosing research methods and tools" (6:78).

The two researchers conducted the experiment on (2) goalkeepers from the sample on Tuesday 2/2/2021, and the experiment aimed at.
1- Knowing the efficiency of the devices and tools used in the research.
2- Knowing the suitability of the tests for the individuals of the research sample.
3- The period of time that the tests take during their implementation.
4- Knowing the efficiency of the auxiliary work team.
5- Knowing and identifying the most important negatives that accompany the experiment, in order to avoid them when conducting the main experiment.

2.7 STATISTICAL METHODS:
The two researchers used the following statistical methods in the ready-made program (spss) for the statistical portfolio for social sciences.

Laws: -
1- The arithmetic mean.
2- Standard deviation.
3- Simple correlation coefficient (Pearson).

3. PRESENTATION, ANALYSIS AND DISCUSSION OF THE RESULTS.

3.1 PRESENTATION AND ANALYSIS OF RESULTS.
Through the two researchers' use of statistical methods of the correlation between the skill of repelling and the explosive force, the following results appeared to us as in Table (2)

<table>
<thead>
<tr>
<th>T</th>
<th>the exams</th>
<th>Arithmetic mean</th>
<th>standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The explosive power of the arms</td>
<td>5.34</td>
<td>0.23</td>
</tr>
<tr>
<td>2</td>
<td>The explosive power of the two men</td>
<td>2.22</td>
<td>0.17</td>
</tr>
<tr>
<td>3</td>
<td>Blocking from the right corner of the goal with arms to the upper corner of the goal</td>
<td>7.45</td>
<td>0.40</td>
</tr>
<tr>
<td>4</td>
<td>Blocking from the right corner of the goal by arm and leg to the lower corner of the goal</td>
<td>8.32</td>
<td>0.65</td>
</tr>
<tr>
<td>5</td>
<td>Blocking from the left corner of the goal with arms to the upper corner of the goal</td>
<td>8.65</td>
<td>0.67</td>
</tr>
<tr>
<td>6</td>
<td>Blocking from the left corner of the goal by arm and leg to the lower corner of the goal</td>
<td>7.89</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Table No. (3): A table representing the correlation coefficient between basic skills and explosive force tests for the arms and legs
### Skill tests

The explosive power of the arms

For the two men

Explosive force

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Sig</th>
<th>Explosive Force of the Arms</th>
<th>Skill Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocking from the right corner of the goal with arms to the upper corner of the goal</td>
<td>0.001</td>
<td>3.85</td>
<td>Blocking from the right corner of the goal</td>
</tr>
<tr>
<td>Blocking from the right corner of the goal by arm and leg to the lower corner of the goal</td>
<td>0.002</td>
<td>2.63</td>
<td>Blocking from the right corner of the goal</td>
</tr>
<tr>
<td>Blocking from the left corner of the goal with arms to the upper corner of the goal</td>
<td>0.002</td>
<td>3.84</td>
<td>Blocking from the left corner of the goal</td>
</tr>
<tr>
<td>Blocking from the left corner of the goal by arm and leg to the lower corner of the goal</td>
<td>0.003</td>
<td>3.71</td>
<td>Blocking from the left corner of the goal</td>
</tr>
</tbody>
</table>

### 3.2 DISCUSSION THE RESULTS.

After performing the statistical operations that were carried out on the data, the results of the statistical operations appeared by using the correlation coefficient (Pearson) in the statistical bag (spss) and the presence of significant correlations between the explosive strength tests and the basic skills tests of goalkeepers with an error probability (0.05), from Table No. (3) It is clear to us that there is a significant relationship between explosive force tests (arms) and basic skill tests, which the researchers attribute to the fact that the large muscles are concentrated in a large proportion in the area of the trunk on which the center of gravity of the body is based on, and that the uses of the arms and trunk to repel these attack balls on the central area of the body are the ones that have been determined. The degree of mastery of these skills has a positive reflection on the skillful performance of blocking movements. This is confirmed by “Abd Ali Nassif and QasimHasan Hussein” (1983), “The most frequently used part gives positive results in performance, which is reflected in the result of skill performance” (4:95).

Also, it appeared to us that there is a significant relationship of the skill tests with the explosive force (of the two men). The researchers attribute that to the goalkeeper in this skill, it is normal to use the arms and legs a lot without using the abdominal muscles, whose use is a little low, as he asserts, "means blocking the next ball at shoulder level. Or higher than the level of the shoulder, which can be performed with one hand or with both hands, and sometimes the upper part of the torso is used, and the two men have the main role in directing these movements "(3: 135). As well as confirms, "blocking the next ball between shoulder and knee level, these throws cause difficulty for the goalkeeper because this height is a limited area to block the arms and legs. Therefore, the basic principle is that the goalkeeper must block the ball with both hands wherever he can reach it. In the case of blocking with the legs, he must ... He protects his hands also "(3: 139).

### 4. CONCLUSIONS AND RECOMMENDATIONS.

#### 4.1 CONCLUSIONS.

1. The two researchers concluded that there is a significant relationship of explosive strength tests (arms) with the basic skills of handball goalkeepers.
2. The researchers concluded that there is a significant relationship of explosive strength tests (feet) with the basic skills of handball goalkeepers.

3. The explosive strength tests and basic skills tests were at a high level of accuracy, where the best results were scored by the goalkeepers with a handball.

4.2 RECOMMENDATIONS.

1. Putting special exercises explosive power for handball goalkeepers.

2. Setting standards for measuring explosive force for handball goalkeepers.

3. Conducting studies on the relationship between explosive force and basic skills performance at the experimental research level.

4. Emphasis on linking explosive strength exercises with the performance of basic skills for handball goalkeepers.

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