THE EFFECT OF REBOUNDING STRENGTH EXERCISES IN DEVELOPING THE PEAK ABILITY AND SHOOTING SKILL OF ADVANCED FOOTBALL PLAYERS

Mohammed Ali Majeed Zayer*
College of Arts, University of Baghdad, Iraq

Abstract
The purpose of this paper is to preparing rebound strength exercises to develop the peak of ability and some basic skills for advanced football players, and identifying the effect of rebounding force exercises in developing the researched variables on the research sample. The researcher used the experimental method for its suitability to the research problem in the manner of equivalent groups (control and experimental) with pre- and post-test. The research community was determined from the players of sports clubs in Baghdad who participated in the reserve league for the season (2022/2023), which numbered (27) clubs, and then the research sample was deliberately chosen, represented by the (20) reserve players of Al-Zawraa Sports Club, who were divided randomly by The lottery was divided into two groups (control and experimental), each group consisted of (10) players, and the sample percentage was (3.7%) of the research community. The researcher made equivalence for the two research groups (control and experimental). One of the most important results reached by the researcher is that: The rebounding exercises had a positive effect in developing the top of the ability (explosive power and power characterized by speed), which led to the development of the scoring skill in the research sample, rebounding exercises used in the research were influential in achieving speed in performance through the decrease in time in the skill of scoring, as well as working to achieve the required accuracy with this skill by observing the results that appeared, development that appeared in the results of the experimental group is greater than the results of the control group, and this is evidence of the effectiveness of the rebounding exercises used on the research sample this achieves the goal of the research. One of the most important recommendations recommended by the researchers is that: necessity of relying on rebounding exercises when training players to develop muscular strength, especially (explosive power and power characterized by speed), necessity of adopting jumping of all kinds when rebounding exercises, and benefiting from the exercises prepared in this research in the training curricula of sports clubs and youth center.

Keywords: Exercises, Sports. Football players

Introduction
Sports competition between countries for the purpose of obtaining advanced positions has become a standard for the mathematically developed towns, as it reflects the extent of their progress and is a front for countries in international forums, as this is not by chance, but through the effort exerted by those in charge of the sport as well as the players, as well as following the scientific methods of sports training. The standardized person who wants to raise the capabilities and capabilities of the players and reach the best individual and collective achievements. Football is one of the team games that is characterized by a great place among sports fans in all parts of the globe. The game of football is one of the activities that require its players to possess high physical capabilities, and muscular strength is one of the most important capabilities of football players because of its important role in raising the level of players’ physical efficiency because it is a competitive football game that has a long time and depends on a lot of movement. It also needs a lot of contacts because it is a manly game, so the player is required to have the good muscle strength to be able to overcome the opponent in different playing situations, and it requires the players to physically excel over the competitor, which requires continuous training to raise their physical abilities and work to integrate them with basic skills. Mufti Ibrahim refers to muscular strength as “the special muscular strength of the muscles that work mainly in the specialized sports of the individual and that qualifies the muscles mainly in the kinetic performance of the practiced sport.” (Ibrahim, 1991).

The rebounding exercises are one of the important training methods in developing the physical abilities of the players, as well as having an impact on the performance of some basic skills because they consist of eccentric contractions followed by quick and direct central muscular contractions. She has a lot of basic football skills. This is what was pointed out by Ali Hassan, "Rebound strength exercises are used today to increase the explosive power, or characteristic of speed, speed of force, or rapid force of muscular contractions, like books and various training sources call them, and we often aim from rebounding strength exercises to increase and improve the strength of jumping in all its forms." (Abu Jamous, 2011).

The coaches seek to develop the skill side of the players, because the game of football is a game of skills, which the players must master in order to apply it during the match, where the goal of it is to outperform the player over the competitor and take precedence over it, since the player who has the high ability to perform the skill has a higher ability to outperform the competitor. Therefore, coaches work to develop the skillful performance of players in order to reach the highest levels. This is what (Youssef Lazem Kammash, 1999) agrees with: “Basic skills in football constitute an important aspect of the daily training unit, based on the principle that basic skills are the basis of the football game, since without them the player cannot carry out the tactical duties assigned to him. He can be a good player if he absorbs the basic skills and masters them in the required manner. Thus, the most important duties of training is to work to bring the players to the highest level of training status.” (Kammash, 1999).

One of the basic skills in football is the skill of scoring, which is the highest skill among the skills, which distinguishes the team that is good at scoring from the one whose level is lower, and also distinguishes between the players within the same team for the player who masters the skill of scoring, it is the end of teamwork and is what the team aspires to. During the match, for this reason, one of the coach's priorities is to give importance during the training units to the skill of scoring for the purpose of continuous, integrated and accurate training on it and achieving development for them. This is what (Mounir Gerges and et al) indicated, "The main goal of each skill is to hit the target, so the skill of scoring is one of the important and basic skills in football, and all skills and plans become useless unless they culminate at the end of shooting." (Mounir Gerges and et al, 1998).

Hence, the importance of research on how advanced football players develop according to scientific foundations, through the adoption of rebound strength exercises in developing the peak ability and some basic skills of advanced football players, the researcher believes that these prepared exercises will contribute to the development of the research sample.

Research Problem
Physical abilities are an important factor in the game of football, so coaches always seek to develop the capabilities of their players, as it is a necessary and basic indicator of the game of football, as it has a direct impact on the physical and skill match during the players’ efforts, as well as working to develop the scoring skill because of its great importance in a football game. Through the researcher's experience as a player, coach, and academic in the field of football, as well as following up on some league matches and training...
units, the researcher identified the problem of the research in the presence of a significant number of players who do not have high physical abilities during matches, who have physical or skill performance and also when competing with the competitor. This negatively affects the player's performance as well as the team's performance as a collective system, as they cannot outperform competitors. One of the reasons for this decline may be the omission or lack of interest on the part of some coaches to develop physical abilities during training units that must be built according to codified scientific foundations. Note that abilities are one of the important things in the success of the players and the team by outperforming the competitor as well as building skills on them, and the researcher also noted neglect by some coaches by adopting rebounding force exercises in developing the overlapping training between physical exercises and field skill, and this is what the researcher diagnosed to be a negative reflection on the players' performance. It was also observed that there was a weakness in the players in the skill of long-scoring in terms of (strength, speed and accuracy), and this shows that there is a lack of muscular ability of the lower extremities, which led to a low level of strength and accuracy of scoring among the players, so it was necessary to address this problem because scoring is the goal of the team. And the game because it is the one who determines the winning team. This prompted the researcher to find a solution to this problem by adopting rebounding force exercises that develop the weakness of the players at the peak of ability, as well as the strength, speed and accuracy of the long-scoring skill by following scientific methods in training.

Research objective
- Preparing rebound force exercises to develop the peak of ability and some basic skills for advanced football players;
- Recognizing the effect of rebounding force exercises in developing the researched variables on the research sample.

Research Hypotheses
- There are statistically significant differences between the results of the pre and post-tests for the control and experimental groups in favor of the post-test.
- There are statistically significant differences between the results of the post-tests for the control and experimental groups in favor of the experimental group.

Research Methodology and Field Procedures

Research Methodology
The researcher used the experimental method for its suitability to the nature of the research problem in the manner of equivalent groups (control and experimental) with pre- and post-test.

Community and Sample Research
The research community was determined from the players of sports clubs in Baghdad who participated in the reserve league for the season (2022/2023), which numbered (27) clubs, and then the research sample was deliberately chosen, represented by the (20) reserve players of Al-Zawraa Sports Club, who were divided randomly by The lottery was divided into two groups (control and experimental), each group consisted of (10) players, and the sample percentage was (3.7%) of the research community. The researcher made equivalence for the two research groups (control and experimental) as shown in the table 1 (Table 1).

The information for the research was collected through Arab and foreign sources, testing and measurement, observation and experimentation, data analysis, and video camera, a stopwatch, a whistle, signposts, footballs, a tape measure, tapes, a football field, boxes of different sizes, and obstacles of different sizes.

Tests Used in the Research
First test
- Name of the test: long jump test from stability. (Salloum, 2004)
- Objective of the test: To measure the explosive power of the legs in the forward jump.
- Tools used: A suitable place for jumping, with a width of (1.5) m, and a length of (3.5) m. It should be level, a tape measure, and colored pieces of chalk.
- Description of the test: The tester stands behind the starting line and his feet are slightly apart and parallel so that the instep of the feet touches the starting line from the outside as shown in the figure 1 (Figure 1).

Second test
- Name of the test: jumping test on one leg for a distance of (30) m. (Mahmoud. 2009)
- Objective of the test: To measure Power Characteristic of speed of leg muscles.
- Tools used: tape measure, stopwatch, monitor watching the players, a striped square with a start line and an end line.
- Description of the test: The player stands touching the starting line with the jump leg and the free leg back. When the start signal is heard, the player jumps on one leg to the end of the line for a distance of (30) m as shown in the figure 2 (Figure 2).
- Recording: The time taken for the player to travel a distance of (30) m is calculated for the player. Two attempts are given to each player and the best attempt is scored.

Third test
- Name of the test: Test shooting the ball for longest possible distance from the stability. (Ali, 2008)
- The objective of the test: To measure the force of shooting the ball (by the distance that the player achieves by shooting the stability ball on the ground for the longest possible distance).
- Tools used: Football pitch, soccer balls, tape measure, whistle, burke, tape, flags attached to the sides of the test area.

Table 1: Shows the equivalence of the two groups in the research variables.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Measuring unit</th>
<th>Control Mean</th>
<th>Control standard deviation</th>
<th>Experimental Mean</th>
<th>Experimental standard deviation</th>
<th>T value calculated</th>
<th>Level Sig</th>
<th>Type Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explosive power</td>
<td>Cm</td>
<td>2.204</td>
<td>0.04351</td>
<td>2.207</td>
<td>0.04191</td>
<td>0.157</td>
<td>0.877</td>
<td>Non sig</td>
</tr>
<tr>
<td>2</td>
<td>Power Characteristic of speed</td>
<td>Sec</td>
<td>7.5946</td>
<td>0.00222</td>
<td>7.5948</td>
<td>0.0023</td>
<td>0.198</td>
<td>0.845</td>
<td>Non sig</td>
</tr>
<tr>
<td>3</td>
<td>Shooting the ball for longest possible distance</td>
<td>Cm</td>
<td>46.985</td>
<td>1.17024</td>
<td>47.065</td>
<td>1.19188</td>
<td>0.151</td>
<td>0.881</td>
<td>Non sig</td>
</tr>
<tr>
<td>4</td>
<td>Time and accuracy of shooting</td>
<td>Degree/ sec</td>
<td>0.3889</td>
<td>0.0351</td>
<td>0.3723</td>
<td>0.04565</td>
<td>-912.</td>
<td>0.374</td>
<td>Non sig</td>
</tr>
</tbody>
</table>

Significant when the significance value ≤ 0.05 under degree of freedom of 18
Fourth test

- Name of the test: Test shooting at a divided target. (Modify). (Al-Khashab, 1999)
- Objective of the divided target.
- Tools used: a soccer field, soccer balls, a tape to mark the shooting areas for the test, a tape measure, a whistle, a stopwatch, a video camera.

- Description of the test: (5) balls are placed on the penalty area line, where the player shoots in the areas marked in the test and according to their importance and difficulty, and in sequence, kicks the ball one after the other, provided that the test is performed from the running position, starting with the first ball and ending with the fifth ball. The attempt is not valid if none of the four targets is hit on each side as shown in the figure 4 (Figure 4).

- Recording: The number of injuries that enter the four squares specified on each side of the goal, which measure (80 cm²), and by any foot of the feet, so that the scores for each of the balls are calculated as follows: (4) degrees when scoring in the field of No. (4). (3) Scores when scoring in the field No. (3). (2) Scores when scoring in the field No. (2). (1) Scores when scoring in the field No. (1). Description in the remaining areas of the goal or outside the goal, the player is given one attempt. Note: When the ball hits the bar that marks the squares, the highest score will be awarded to the player.

Exploratory Experiment

In order to give a clear and accurate picture of the vocabulary of the tests used, the researcher deliberately conducted a reconnaissance experiment for the tests that he intends to use in the research, together with his assistant work team, on the reserve players of the Air Force Club, who are from the research community, but outside the research sample of (15) players, on Saturday, February 12, 2022, where the experiment aimed to find out the suitability of the tests to the sample, and what problems are likely to occur and work to overcome them and to know the time taken for the tests.

After that, the researcher conducted another reconnaissance experiment on the same sample, the Air Force Club auxiliary team, on Monday, February 21, 2022. This time was specific to the exercises prepared by the researcher, with the aim of identifying the validity of the exercises to be trained on and their suitability for the sample, as well as identifying the required load components and the possibility of an assistant work team.

Scientific Basis

Test Honesty

The honesty of the test is one of the most important scientific transactions for any test “The extent to which it measures the aptitude or the characteristic that it is designed to measure, that is, it is an estimate to see if the test measures what we want to measure by it.” (Al-Fartousi and Al-Husseini. 2020). The researcher used the self-honesty of the tests, which is measured by calculating the square root of the test reliability coefficient, as shown by the law below (Bahi. 1999):

Self-honesty coefficient = \sqrt{stability coefficient}

Test stability

Stability is one of the important and basic concepts for any test or scale that is intended to be successful. (Youssef Lazem Kammash) defines it as “it gives the same results consistently if it is repeatedly applied to the same group and in the same circumstances.” (Kammash. 2002)

The researcher proceeded to extract the stability coefficient for the tests according to the scientific basis, by applying the test and retest method, on a sample of (15) players from the Air Force Club reserve team and they are outside the main research sample but within the research community, the researcher conducted the first test on Saturday, 12/2/2022, which is the tests of the first exploratory experiment related to the tests, as it was approved.
because no problems appeared, and then the test was re-applied after (7) days on the same sample and under almost the same circumstances on Saturday 19/2/2022. The researcher sought to find the stability of the tests through the simple correlation coefficient (Pearson), as the results showed after being statistically processed that there is a high correlation coefficient for the tests, as shown in the table (2).

**Objectivity of the test**

It is one of the conditions that must be met in a good test, as (Mohammed Nasr El-Din Radwan) defines an objective test as "any test prepared in a way that guarantees the least degree of bias or subjective judgments of the score estimator on the (arbitrator) test. The assessment of the degree is clear and precisely defined, the more objective the degree obtained by the examinee is." (Radwan, 2006).

In addition, because the tests adopted by the researcher in his research were clear and easy to understand, and depended on the degree, time and distance in their measurement, so they are far from bias and self-control of the arbitrator, so they are objective tests (Table 2).

**Pre-test:**

The researcher conducted pre-tests on the two research samples (the control and experimental) and with the help of the assistant work team, on Wednesday, February 23, 2022 at four in the afternoon, in the stadium of Al-Zawra Sports Club / Al-Shaljia. As much as possible for the purpose of providing them when the specified time for training for the experimental group ended, the researcher conducted the post-tests on the two research samples (the control and experimental with the assistant work team on Saturday 23/4/2022 at four in the afternoon and at Al-Zawra Sports Club / Al-Shaljia stadium, and the researcher followed the same conditions Procedures and conditions for tribal examinations.

**Statistical methods:** The search data was processed through the Statistical Package for the Social Sciences (SPSS).

**Results and discussion:** Table 3 shows the arithmetic mean, standard deviation, calculated and true (T) value, significance level, arithmetic mean difference, and deviation of differences in the pre and post-tests of the control group.

Table 3: Shows the stability of the test results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measuring unit</th>
<th>Pre-test Mean</th>
<th>Pre-test standard deviation</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Post-test Mean</th>
<th>Post-test standard deviation</th>
<th>Arithmetic mean of difference</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Objectivity</th>
<th>Correlation</th>
<th>Real sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Explosive power</td>
<td>Cm</td>
<td>2.2040 .04351</td>
<td>.05308</td>
<td>.01400</td>
<td>.02951</td>
<td>.00933</td>
<td>1.500 .168</td>
<td>Non sig</td>
<td>4.819</td>
<td>.001</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Power characteristic of speed</td>
<td>Sec</td>
<td>7.5946 .00222</td>
<td>.02600</td>
<td>.01950</td>
<td>.00395</td>
<td>.00125</td>
<td>15.607 .000</td>
<td>Sig</td>
<td>4.743</td>
<td>.001</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Shooting the ball for longest possible distance</td>
<td>Cm</td>
<td>46.9850 1.17024</td>
<td>1.18370</td>
<td>.05000</td>
<td>.03333</td>
<td>.01054</td>
<td>4.743</td>
<td>.001</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Time and accuracy of shooting</td>
<td>Degree/sec</td>
<td>.3889 .03510</td>
<td>.03529</td>
<td>.00910</td>
<td>.00238</td>
<td>.00075</td>
<td>12.101 .000</td>
<td>Sig</td>
<td>4.743</td>
<td>.001</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant when the significance value ≤ 0.05 under degree of freedom of 14**

Table 4: Shows the arithmetic mean, standard deviation, calculated and true (T) value, significance level, arithmetic mean difference, and deviation of differences in the pre and post-tests of the experimental group.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measuring unit</th>
<th>Pre-test Mean</th>
<th>Pre-test standard deviation</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Post-test Mean</th>
<th>Post-test standard deviation</th>
<th>Arithmetic mean of difference</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Standard deviation of differences</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Objectivity</th>
<th>Correlation</th>
<th>Real sig</th>
<th>Type Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Explosive power</td>
<td>Cm</td>
<td>2.2070 .04191</td>
<td>.01174</td>
<td>.05900</td>
<td>.03872</td>
<td>.01224</td>
<td>4.819</td>
<td>.001</td>
<td>Sig</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Power characteristic of speed</td>
<td>Sec</td>
<td>7.5948 .00230</td>
<td>.02600</td>
<td>.04990</td>
<td>.00378</td>
<td>.00120</td>
<td>41.696</td>
<td>.000</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Shooting the ball for longest possible distance</td>
<td>Cm</td>
<td>47.0650 1.19188</td>
<td>1.9304</td>
<td>.10700</td>
<td>.97274</td>
<td>.30761</td>
<td>3.478</td>
<td>.007</td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Time and accuracy of shooting</td>
<td>Degree/sec</td>
<td>.37230 .085653</td>
<td>.43914</td>
<td>.069200</td>
<td>.044904</td>
<td>.014200</td>
<td>4.873</td>
<td>.001</td>
<td>Sig</td>
<td></td>
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</tbody>
</table>

**Significant when the significance value ≤ 0.05 under degree of freedom of 9**
Rebounding exercises used in the research were influential in achieving the speed and mechanism of movement. (Al-Quraishi. 2016).

These exercises were working on developing the skill side with the physical aspect of the individuals of the research sample, i.e. the researcher deliberately combined the physical exercises (explosive power and speed characteristic power) with the skill and specifically the development of the skill of long-distance scoring accompanied to improve accuracy by placing forms that are required to be corrected, as it was. The researcher aimed to develop both sides because the exercises that develop the physical aspect are beneficial to raising the skill level of the players, and this is what enabled the players to develop their skills. This is what (Muhammad Hassan Allawi) agrees with, “It is the special physical abilities that enable the athlete to perform various motor skills of the various colors of activity.” (Allawi. 1989).

Speed, strength and accuracy were adopted by the researcher in the essence of the exercises that he prepared for the purpose of developing the research sample, as they are among the necessary needs that the football player must master in implementing the skill performance during the matches, and because the football game has become of a character that requires players to possess speed and strength And accuracy when implementing skills during the match, as it helps them to outperform the opponent and succeed in skill performance.

This is what is agreed with (Muwaffaq Asaad Mahmoud), as he indicates that “a football player must be characterized by his performance of basic skills with speed, strength, accuracy and perfect skill performance.” (Mahmoud. 2008).

It should also be noted that the researcher followed the principle of gradation in giving exercises to the sample of the research, as it seemed to be applied from easy to difficult, i.e. making the players jump with both feet and then jump over the obstacles and then move to the boxes. Carrying training and changing its components (intensity - volume - rest) by increasing the number of repetitions and changing the intensity of training as well as giving appropriate rest periods between exercises and also between groups in proportion to the goal of training and with the capabilities of the research sample, and for the purpose of reaching the highest possible level in developing their abilities, because the exercises that develop the physical aspect are beneficial to raising the skill level of the players, and this is what enabled the players to develop their skills. This is what (Youssef Lazem Kammash) indicated to him: "The coach must follow the members quick and clear by noting the results of the tests. This is what is agreed with (Muwaffaq Asaad Mahmoud), as he indicates that “a football player must be characterized by his performance of basic skills with speed, strength, accuracy and perfect skill performance.” (Kammash. 2002).
scoring, as well as working to achieve the required accuracy with this skill by observing the results that appeared.

- Development that appeared in the results of the experimental group is greater than the results of the control group, and this is evidence of the effectiveness of the rebounding exercises used on the research sample. This achieves the goal of the research.

Recommendations

- Necessity of relying on rebounding exercises when training players to develop muscular strength, especially (explosive power and power characterized by speed).
- Necessity of adopting jumping of all kinds when rebounding exercises.
- Benefiting from the exercises prepared in this research in the training curricula of sports clubs and youth center.
- Conducting similar studies on different samples by changing the abilities and skills used in proportion to their abilities.

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