SPECIAL EXERCISES USING THE (VERTIMAX) DEVICE AND THEIR IMPACT ON THE EFFECTIVENESS OF SKILL PERFORMANCE ACCORDING TO THE DATA OF THE INTERNATIONAL STATISTICAL PROGRAM (LIVE STATE) FOR BASKETBALL PLAYERS

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ABSTRACT

The study aimed to identify the effect of the proposed special exercises using the fixed vertical jumping device (Vertimax) in developing muscular strength endurance among the research sample members. The experimental method was used, and the research community represented the players of Al-Khatiya Sports Club, the youth category under the age of (18) and who were registered with the Central Basketball Federation statements for the season (2020-2021), and their number is (21). The researchers reached the following conclusions. The adoption of the proposed special exercises using the (Vertimax) device contributed to the development of the effectiveness of the skill performance of the experimental group members as a result of improving their physical abilities through the readings of the program (live state). One of the most important recommendations is to adopt the proposed special exercises using the (Vertimax) device as an aid in developing the effectiveness of performance in basketball.

Keywords: exercises, vertimax, skill performance, live state ISP, basketball

I. INTRODUCTION

Basketball is one of the team sports that requires its practitioners to have special physical abilities, which is one of the most important basic pillars on which the player relies to reach the best performance of the various offensive and defensive skills, so the player cannot master the basic skills if he lacks these abilities, as there are. There is a clear harmony between his physical abilities and the level of skillful performance, so these abilities are the effective contribution to the development of performance in order to achieve distinct positive results. Training as well as choosing exercises that have a special effect and an effective contribution to achieving the main goal of improving performance and achievement. It is appropriate in its impact and the nature of the kinetic paths of basketball in order to achieve the best results Which we had to shed light on these means and that philosophy (mixing) and highlighting their importance in this research. Hence the importance of the research was manifested by preparing special exercises using the device (Vertimax) as an auxiliary training method, which we find among the appropriate means for basketball training exercises, which carry in its folds The possibility of developing the effectiveness of skill performance and its reflection on achievement, in a manner consistent with the nature of skill performance during training.

research problem: is that the level of some local teams has declined as a result of the monotony in the implementation of training doses, and this is likely that most of the players have become aware and familiar with the routine of the exercises, which is the result of their exposure to an effect that continues at one pace, which makes them aware of the size of the training rhythm, and to avoid that obstacle they must be placed in front of Renewed challenges and motivating them with unusual stimuli, and in order to improve the training programs for basketball, we must try all the new methods and methods of training and modern techniques discovered here and there, including, but not limited to, the use of the fixed vertical jumping device (vertimax). Research on the monotony of the implementation of training doses and their lack of dependence on the use of modern technologies in codifying their training programs, which have brought our teams to this level, so the researchers
considered studying the topic (special exercises using the device (Vertimax) and their impact on the effectiveness of the skill performance of young basketball players) to be the problem of the research.

Research goal

1- The number of special exercises proposed using the vertical fixed jumping device (vertimax).

2- Identifying the effect of the proposed special exercises using the fixed vertical jumping device (vertimax) in developing the effectiveness of the skill performance of the research sample members.

Force search:

1- The proposed special exercises using the fixed vertical jumping device (vertimax) affect the effectiveness of the skill performance of the research sample members.

Research fields

The human field: Al-Khatira Sports Club players, youth category (under 18 years old).

Time range: for the period from 12/13/2020 to 3/04/2021

Spatial domain: Al-Mansour indoor gymnasium / Sports and School Activities Department / Baghdad, Al Shaab indoor gymnasium / Baghdad.

2- Research methodology and field procedures:

2-1 Research Methodology: According to the nature of the research problem, the researchers used the experimental method to suit the nature of the problem.

2-2 Research community and sample:

The two researchers determined the research sample by the intentional method, which is Al-Khatiya Sports Club, the youth category under the age of (18 years), which numbered (12) players. Then the sample was divided randomly into two control and experimental groups. Only the trainer's training program was applied to them, while the second (experimental) group also included (6 players) the proposed special exercises were applied to them using the (vertimax) device by adopting the trainer's training program. The researchers proceeded to conduct homogeneity in the following elements for the members of the research sample, which may affect the results of the research (height - weight - training age) as well as parity in the muscular strength endurance tests of the arms and legs to neutralize them, which would affect the results and it has been proven that the two samples are homogeneous and equivalent.

2-3 Tools, devices and means used in the research:

- Arab and foreign references and sources.

- American-made Vertimax device, number 1.

- Medical balls of different weights.

- A device for measuring weight and height (Korean).

- Japanese-made electronic stopwatch.

- Basketballs.

- Multiple heights.

2-4 Tribal tests:
The two researchers conducted the tribal match between the control and experimental research groups on Tuesday, 15/12/2020 at ten in the morning at the closed Olympic Hall of the People, for the purpose of obtaining the tribal readings of the effectiveness of the players’ performance by analyzing the match statistically through the international statistical analysis program (live state) by the Statistics Committee of the Iraqi Central Basketball Association.

2-5 Field Procedures:
The researchers prepared special exercises using the Vertimax device in the special preparation stage, as they continued to be applied within the trainer’s curriculum for a period of (10) weeks and by (30) training units, where the first training unit was applied on Sunday 20/12/2020 and the last training unit was on Thursday 28/2/2021 at a rate of (3) training units per week on Sundays, Tuesdays and Thursdays. The researchers calculated the partial intensity of the special exercises by using the maximum repetition of each exercise x the required intensity /100, and the intensity of the training units was controlled by raising the volume and fixing the volume. Rest periods or raising the volume and decreasing rest periods. The researchers used the method of low and high intensity interval training.

2-7 Post-tests:
The two researchers conducted the post-match on Sunday 7/3/2021 at 10 am in the closed Olympic Hall of the People, for the purpose of obtaining post-readings of the players’ performance effectiveness by analyzing the match statistically through the international statistical analysis program (live state) by the Statistics Committee in Iraqi Central Basketball Association.

2-6 Statistical means: The researchers used the statistical package (SPSS) version (23).

3- Presentation and discussion of the results:

3-1- Presenting the results of the effectiveness of skill performance:

3-1-1 Presentation and analysis of the results of the effectiveness of the pre and post skill performance of the control group:

Table (1) shows the arithmetic means, standard deviations, the calculated (T) value and the level of significance of the control group for the pre and post skill performance effectiveness.

<table>
<thead>
<tr>
<th>Statistical processors</th>
<th>Variables</th>
<th>tribal</th>
<th>dimensional</th>
<th>Values (T(calculated)</th>
<th>sig</th>
<th>The significance of the differences</th>
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<tbody>
<tr>
<td></td>
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<td>s</td>
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<tr>
<td>2 point</td>
<td></td>
<td>2.833</td>
<td>0.752</td>
<td>2.166</td>
<td>1.169</td>
<td>2</td>
</tr>
<tr>
<td>3 point</td>
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<td>0.333</td>
<td>0.516</td>
<td>0.166</td>
<td>0.408</td>
<td>1</td>
</tr>
<tr>
<td>Free throws</td>
<td></td>
<td>1.166</td>
<td>1.169</td>
<td>2</td>
<td>1.264</td>
<td>2.712</td>
</tr>
<tr>
<td>Assist</td>
<td></td>
<td>2.166</td>
<td>1.602</td>
<td>3.333</td>
<td>1.366</td>
<td>2.907</td>
</tr>
<tr>
<td>Steel</td>
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<td>0.833</td>
<td>1.329</td>
<td>1.833</td>
<td>1.169</td>
<td>2.739</td>
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<tr>
<td>Points</td>
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<td>7.833</td>
<td>1.329</td>
<td>6.833</td>
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<td>0.968</td>
</tr>
</tbody>
</table>

3-1-2 Presentation and analysis of the results of the effectiveness of the pre and post skill performance of the experimental group:

Table (12) shows the arithmetic means, standard deviations, the calculated (T) value and the level of significance of the experimental group for the effectiveness of pre and post skill performance.

<table>
<thead>
<tr>
<th>Statistical processors</th>
<th>Variables</th>
<th>tribal</th>
<th>dimensional</th>
<th>Values (T(calculated)</th>
<th>sig</th>
<th>The significance of the differences</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>s</td>
<td>±</td>
<td>s</td>
<td>±</td>
<td></td>
</tr>
<tr>
<td>2 point</td>
<td></td>
<td>2.67</td>
<td>1.033</td>
<td>3.67</td>
<td>1.033</td>
<td>3.873</td>
</tr>
</tbody>
</table>
The results of tables (1) (2) (3) regarding the effectiveness of the skill performance of the control and experimental groups showed significant differences and in favor of the experimental group in the post tests. It was distinguished in a distinctive way that the experimental group excelled in developing this ability at a significance level (0.01), while the results were significant for individuals The control group at the level of (0.05) by studying the differences between the pre and post tests. The effectiveness of performance is an accurate scientific method for evaluating the level of technical performance and is considered one of the most important factors of success by monitoring the player’s performance and playing style during its implementation and this is based on accurate objective information represented in Using a modern technology to measure the effectiveness of skill performance electronically through the statistical analysis program (live state) during the match by feeding it with information by a specialized committee, and this is confirmed by (Mahmoud Rabie Al-Bashihi) “The analysis of the skills and plans of the most used playing and their relationship to results is one of the important scientific methods To assess the level of performance of the players during the matches. (Mahmoud, 2005) The researcher attributes this development to the nature of the exercises for using the device (Vertimax), which were similar in design and kinetic form to technical performance, as they undoubtedly contributed to the development of performance because of the congruence between the kinetic action duty in the exercises implemented and the skill performance of basketball Which did not go far in affecting the overall physical condition and skill, and this agrees with what (Abu Al-Ala and Nasr Al-Din) indicated that “training the nervous system and fast muscle fibers cannot be physiological adaptation unless these physiological devices are placed in the form in which they perform the movement itself”. (Abu El-Ala, 2003) and thus led to raising the level of performance of the players and the correct playing positions, which improved the effectiveness of their successful defensive and offensive performance, and this (Hani Ahmed) confirms that “the training programs in which modern tools and equipment are used develop the elements of physical fitness and raise the level of physical preparation and skills.” and my plan.” (Hani, 2011) and the use of various exercises that help develop physical abilities, which was positively reflected on the effectiveness of skill performance, and this was confirmed by (Mohammed Jamal and Nadia Hassan) that “physical preparation works on developing muscles in a coordinated manner, paving the way for gaining Skills, movements, and economy in effort.” (Mohammed, 1999). The researcher also emphasizes the important and essential role of special physical preparation, whose training units were subjected to the use of special exercises with the Vertimax device directed and regulated in terms of (intensity, size and density), which led to the development of muscles The main working factor on which performance depends, which helped to adjust the correct motor paths, as well as increase the speed of

3-1-3 Presentation and analysis of the results of the effectiveness of the dimensional skill performance of the control and experimental groups:

Table (13) shows the arithmetic means, standard deviations, the calculated (T) value, and the level of significance for the two experimental and control groups for the dimensional effectiveness of skill performance.

<table>
<thead>
<tr>
<th>Statistical processors Variables</th>
<th>dimensional officer</th>
<th>dimensional experimental</th>
<th>Values (T(calculated)</th>
<th>sig</th>
<th>The significance of the differences</th>
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<tbody>
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<td>1.033</td>
<td>3</td>
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<td>6.325</td>
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<td>1.472</td>
<td>4.029</td>
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</tr>
<tr>
<td>Steel</td>
<td>0.67</td>
<td>1.211</td>
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<td>1.633</td>
<td>5.809</td>
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<td>Points</td>
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</tbody>
</table>

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performance, reduce its time and get rid of excess movements that contributed to the development of the effectiveness of performance on the basis of the skillful performance of players, such as defensive and offensive pulling and scoring. (Mufti, 2002) This strength and its different types have been developed for the muscle group of the arms and legs and their impact on controlling the ball when possessing it, whether in obtaining the rebound balls or when extracting the balls shared with the competitor, and this is due to the special exercises through the vertical jumping device (Vertimax) used, which It is one of the modern devices that achieve great effectiveness for players and thus increase the efficiency of the neuromuscular system, and this was confirmed by (Lakesha Clinton) in her study, "The Vertimax training device that provides flexible resistance to strength exercises as it works to develop muscle strength and perform vertical jumping." (Lakeysa, 2008) and also confirmed by the (Iosvedo) study, "The different jumping exercises using devices and tools work to develop the efficiency of the nervous muscular system for the purpose of performing fast and strong jumps in opposite directions while reducing the performance time." (Lossifidou, 2005) as well as what was emphasized by (Qasim Hassan Al-Mandalawi) "The elements of physical fitness have an important and influential role in the effectiveness of skill performance." (Qasim, 1979)

II. CONCLUSIONS:

1- The adoption of the proposed special exercises using the (Vertimax) device contributed to the development of the effectiveness of the skill performance of the experimental group members as a result of improving their physical abilities through the readings of the program (live state).

2- The proposed method of special exercises by adopting the (Vertimax) device, which was adopted by the experimental group, achieved superiority over the traditional methods of training, which was followed by the control group in enduring muscular strength.

Recommendations:

1- Adopting the proposed special exercises using the (Vertimax) device as an aid in developing the effectiveness of performance in basketball.

2- Directing coaches and those interested in training operations on the role of analyzing the effectiveness of player performance through the readings of the statistical program (live state) to know the players’ strengths and weaknesses and address them during the teams’ training units.

REFERENCES