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The effect of plyometric exercises in the development of vertical jumping and some types of shooting by jumping from different distances with basketball for students

Prof. Dr. Nada Mohammed Ameen[1]

Abstract---*Correction in the game of basketball is one of the most important offensive skills and the final result of all skills, and its goal is to score the largest number of points in the opposing team's basket from anywhere and a distance on the field and this requires two leg muscles that are distinguished by the strength of jumping. As for the importance of the research, it lies in the fact that the plyometric exercises enable the muscle to reach its maximum length in a short time, the moment of jumping to the top, which leads to the development of the vertical jump and then the correction on As for the research problem, it is that there is a weakness in the strength of the vertical jump for students during practical lessons When the correction is made from different distances, which confirms the lack and lack of concentration of the material parameters by passing the plyometric. The research aims to prepare playground exercises for students, then identify their impact on the development of vertical jump, in addition to knowing their effect on developing some types of correction by jumping from different distances on the field. The researcher used the experimental method and the method of two equal experimental and control groups, and it was conducted on a random sample of the fourth stage in the method of (lottery) with a number of (16) sixteen students at a rate of 13.33%, then conducting the exploratory experiment and the previous and residual tests of the research variables, for example on the combined experiment that lasted (8) Eight weeks, at a rate of two lessons per week, the research continued (03/11/2019 until 01/15/2020), in addition to the appropriate statistical methods. The researcher concluded that the effect of the Buliometric exercises in the vertical jump as well as in the development of some types of correction by jumping from different distances in addition to the emergence of the superiority of the experimental group and the control group in the research variables in the subsequent tests - dimensions. Free throw circuit, where the signal was not significant. The researcher recommends using the exercises that have been prepared and implemented in order to stabilize their dimensional and skillful effect, in addition to serious interest and focus on blindness exercises and diversifying them with practical lessons, by allocating sufficient time to them.*

Type of Paper--- *Review*

Key words: *running, vertical jumping, pitcher jumping, basketball.*

The first Door:

Research introduction and its importance:

Correction in the game of basketball is one of the most important offensive skills and the final result of all skills, targeting more standard points in the opposing team from any area in the basket on the field, and corrective jumping, which is one of the difficult and required types of performance. It is performed from anywhere and any distance on the field, and its importance lies in making the student throw the basket while he is in the air, and this requires two strong muscles from his legs and they jump to the top, which makes it difficult. To hinder the opponent or hinder the correction,

1 College of Physical Education and Sports Sciences for Women / University of Baghdad
Email: nada@copew.uobaghdad.edu.iq

in the shortest possible time, which leads to the development of the jumping force, the vertical height by achieving a better moment and thus the jumping improving the skill performance (correction) by moving away from the opponent's hand first and giving a clear vision to the student while jumping to aim at the basket while playing in the lessons the operation.

Research problem:

Plyometric exercises are considered a factor that works to develop all the skills of the basketball game and correct any of its different types, as it means that it can be implemented and achieved the degree of training with great results in performance (15:24) and the fact that the researcher participating in the game gave them a lecture at a college Physical Education and Sports Sciences / Al-Mustansiriya University Noticed weakness in the vertical jumping force of students during practical lessons when making correction and from different distances, and this indicates from the point of view of the teaching side and what it requires of lack of interest and lack of emphasis by course instructors on plyometric exercises in practical lessons, despite That it gives the student an increase in height at the moment of jumping during skilled performance of the types of correction.

Research objectives:

- Prepare exercises for students, Alaymi.
- Learn about the effect of plymouth training in the development of vertical jumping for students.
- Understanding the effect of plyometric exercises in developing some types of voweling by jumping from different distances with basketball for students.

Hypothesis search:

- Playground exercises have an effect on the development of vertical jumping for students.
- There is an effect of plyometric exercises in developing some types of shooting by jumping from different distances with basketball for students.

Research areas:

- The human field :a sample of fourth-grade students / College of Physical Education and Sports Sciences / Al-Mustansiriya University.
- Field Temporal : Length of 2019/ 11 / 3 until 2020 / 1 / 15
- Spatial domain :The College's outdoor basketball court.

The second chapter:

Research methodology and field procedures:

Research methodology:

The researcher used the experimental approach and the equivalent experimental samples method, which was distinguished from others by its ability to control and control the various factors that could affect the studied behavior (148: 1)

Research and community sample:

The students of the research community for the fourth stage in the College of Physical Education and Sports Sciences / Al-Mustansiriya University for the academic year 2019-2020 were selected by (5) five people studying and after excluding section (A) for students, the research community consists of 120 students divided into (4) four Individuals and the Ashwa Vision method (lottery), section (c)experimental and dividing) b) were chosen to be a control and this group became the sample (16) sixteen by 13.33%, then the researcher conducted the equivalence of the sample to verify the random differences in the research variables, which proved to be equal she. Shown in Table (1)

Table No. (1) Shows the equivalence of the experimental and control groups in the research variables

Indication	Values T Calculated	Control group		Experimental group		Variables	No
		P	s	P	s		

Not moral	0.42	1.16	5.75	0.70	6.25	Vertical jump	1
Not moral	0.97	0.88	7.75	0.64	8.12	Shooting from under the basket	2
Not moral	1.54	1.06	9.62	1.19	10.50	Shooting from in front of the basket and behind the free throw circle	3
Not moral	0.43	1.24	10.12	1.06	10.37	Peaceful aiming	4

At a level of significance (0.05) and a degree of freedom (14 = 2-16) and a tabular degree(2.14)

Methods for gathering information:

- Arab and foreign sources
- Choices and metrics
- Assistive Work Team*
- Basketball court , balls basket , chair number ,(2) sirens , tape measure , wall smooth , piece heralds , stopwatch number , (2) wooden boxes, steeplechase different heights, ladder drills.
- Exploratory experience

Field research procedures:

The researcher carried out the field procedures, and they were done

- Determine the method of training research ,which is represented by plyometric.
- A set of exercises for the Blue Turks were prepared.
- The physical test , which measures the vertical jump identification.(46 : 8)
- Final sightseeing tests were selected from various distances and were outstanding
- Choosing the University of Louisiana to shoot from outside the free throw circuit. (418 : 10)
- Selection for peaceful aiming.(67 : 3)
- Shooting by jumping from under the basket.(98 : 12)
- Conducting the pilot experiment.
- Doing pre-tests.
- Conducting the main experiment) applying stomach exercises)
- Conducting post-tests.
- Use appropriate statistical methods.

An exploratory experience:

The exploratory experiment was carried out on Sunday (11/3/2019) by the assistant work team and under the supervision of the researcher. It is "a preliminary experimental study that the researcher conducts on a small sample before conducting the research with the aim of testing research methods and tools".

(11:45)Where it was conducted on (5) students of Division (E) and was taken randomly, in order to identify the objectives of the exploratory experiment and make use of it as much as possible in terms of what the researcher wants to know for the purpose of preparation in the main experiment.

Preliminary exams:

The experimental and control research sample was selected by the assistant work team on Monday and Wednesday (11-13 / 11/2019), so that one day was allocated for the experimental group and another for the control group, and the researcher requested. To equip and install everything that can be installed so that it will be available in subsequent tests in terms of time, place, tools and teamwork.

- The main experiment (application of plyometric exercises)
- Here are some key notes to try

- The aim of the experiment is to develop vertical jumping power.
- Knowing the impact of development on shooting by jumping from different distances with basketball.
- The exercise continued for (8) weeks.
- Total number of training units = (16) units.
- The number of training units per week = (2) two units.
- Training days are Mondays and Wednesdays.
- The time allocated for exercises ranges between (20 minutes - 25 minutes)
- Intensity used (60% - 80%)
- Exercises starting from (11/18/2019 to 1/8/2020)

Dimensional tests:

The dimensional tests were conducted after completing the exercises specified by the researcher, on Monday and Wednesday (1/13/2020), and the same procedures were followed as in the preliminary tests.

Means statistic (151/91: 9) (19: 7)

- percentage
- Arithmetic mean
- standard deviation
- law (t-test) for the corresponding samples
- law (t-test) for asymmetric samples

Chapter III

- Presentation, analysis and discussion of the results
- Presentation of the results of vertical jumping and some types of correction from different distances. Pre-test basketball, post-trial group, observation and analysis

Table (2)

indication	Values t Calculated	P. P	P	Dimensional tests		Pre-tests		measuring unit	Variables
				±p	s	±p	s		
moral	3.86	1.28	1.75	0.92	8.00	0.70	6.25	cm	Vertical jump
moral	4.00	1.41	2.00	1.55	10.12	0.64	8.12	Degree	Shooting from under the basket
moral	6.35	0.83	1.87	1.30	12.37	1.19	10.50	Degree	Shooting from in front of the basket and from behind the free throw circle
moral	9.74	0.81	2.87	0.70	13.25	1.06	10.37	Degree	Peaceful aiming

Clarifies the variables, unit of measurement and arithmetic circuits, deviations of teams and societies, and the value of deviations ((calculated for the pre and post tests of the experimental group
At a level of (0.05) and the degree of freedom (8 - 1 = 7) and the tabular degree (2.36)

Table No. (2) Shows the research variables, the experimental group, the tribal tests and the dimensions, while the vertical jump was the arithmetic mean of the tribe (6.25) and the standard deviation (0.70), either in the post tests it reached (8.00) and the standard deviation (0.92). The media teams reached 1.75 degrees Fahrenheit with a deviation of 1.28. As for the calculated t value, it reached (3.86). As for the correction from the bottom of the basket, the pre-arithmetic mean reached (8.12) with a standard deviation (0.64), while it reached (10.12) with a deviation (1.55). It was (2.00) and skewed (1.41). As for the calculated t value, it reached (4.00). As for the correction in front of the basket and behind the free throw circle, the average before the arithmetic was (10.50) with a deviation (1.19), while it reached (12.37) and with a deviation (1.30). The media teams were (1.87), Sui (0.80), and the value of t calculated (6.35). As for the peaceful correction, the tribe's arithmetic mean was (10. 37) and normal (1.6). In the post, it reached. To (13.25) and Sway (0.70) were the difference of the arguments (2.87) and Sway (0. 81) and the calculated t value (9.74) when comparing all the calculated values of the variables appears to be greater than the value of T. Scheduled reaching (2.36), this indicates that there is a difference between the two tests, and there is an impact on the development of what the Puliometrics set for it.

Presentation of the results of vertical jumping and some types of correction from different distances Tribal basketball tests and group dimensions by control and analysis

Table (3) displays the variables, unit of measurement and arithmetic circuits, deviations of teams and societies, and the value of deviations ((calculated for the previous and post tests of the control group)

indication	Values t Calculated	P. P	P	Dimensional tests		Pre-tests		measuring unit	Variables
				±p	s	±p	s		
moral	2.64	1.06	1.00	1.16	6.75	1.16	5.75	cm	Vertical jump
moral	2.49	0.99	0.87	1.18	8.62	0.88	7.75	Degree	Shooting from under the basket
Not moral	2.15	1.38	1.25	0.64	10.87	1.06	9.62	Degree	Shooting from in front of the basket and from behind the free throw circle
moral	2.98	1.30	1.37	1.06	11.50	1.24	10.15	Degree	Peaceful aiming

At a level of significance (0.05), a degree of freedom (1-8 = 7) and a tabular score (2.36), Table (3) shows the research variables for the control group in the pre and post tests. Table (2) displays all its variables according to Table No. (1) For the experimental group. .

Presentation of the results of vertical jumping and some types of correction from different distances with the basketball for post-dimensional tests of the experimental and control group and their analysis.

Table (4)Clarifies the variables, unit of measurement and arithmetic circuits, deviations of difference and societies, and the value of deviations ((calculated for dimensional tests - dimensions for the experimental and control group)

indication	Values t Calculated	Control group		The experimental group		measuring unit	Variables
		±p	s	±p	s		

moral	2.37	1.16	6.75	0.92	8.00	cm	Vertical jump
moral	2.17	1.18	8.62	1.55	10.12	Degree	Shooting from under the basket
moral	2.92	0.64	10.87	1.30	12.37	Degree	Shooting from in front of the basket and from behind the free throw circle
moral	3.68	1.06	11.50	0.70	13.25	Degree	Peaceful aiming

At the level (0.05), the degree of freedom (16 - 2 = 14) and a tabular score (2.14). Table (4) shows the values of calculating the circles and the deviations of the t values calculated for the experimental group and the control group in the post tests - the dimensions indicate in all the research variables and when compared to the value of t Table (2.14) indicates that there are statistically significant differences in favor of the experimental group.

Discuss the results:

Through Tables (2) and (3), your experimental group shows a statistical difference between the subsequent pre-tests as well as the descriptive tests - the dimensions with the control group in all the research variables as you attribute it to the good choice of the bulimetric exercise on which the special muscle groups focus on. It mainly included performance and shooting skill. By jumping and using the method of high jump training, the important intensity in affecting the muscles of the legs, as it included deep jumping exercises, placing stairs on the ground and outdoor courts, in addition to wooden boxes and barriers of different heights commensurate with the ability of students, all of which led and contributed to the increase in strength Muscular tissue. The two men agree that both (140: 6) and...
(225: 2) that plyometric exercises lead to an increase in the strength and reaction of the muscles of the legs in activities that require performance in the vertical jump in addition to the variety of exercises and control of their great intensity and an important role in the development of jumping for students, where the exercises are classified strongly from easy to difficult jump With both feet at least intensely to jump with one leg and more difficult by increasing the jumping distance with focus when performing these exercises and not bending the knee and trunk joint to a large extent because it leads to a loss of energy within the stored muscles and the tendons that “the energy storage time within muscles and ligaments should be short (16:74) (5: 416) for production. Strength in the shortest possible time. The repetitions also included breaks during the application of multimodal exercises, which left a significant impact in restoring muscle healing in proportion to the physical effort expended when performing rapid and immediate jumps. Finally, focusing on landing on combs that touch the ground in a short time and pushing as quickly as possible leads to a "rapid shift from decentralized to centralized work" (31:13) gives greater force production. The vertical jump towards the basket to the highest distance to execute the shot with ease and accuracy, This is what the test results showed for the experimental group, and with regard to the control group, it also achieved important results except for shooting from the front of the basket and behind the free throw circle, as it is not at the level of the control group.

Conclusions and Recommendations:

Conclusions:

- The results showed the effect of playing field exercises in the development of columnar jumping for students
- The results showed the presence of the effect of plyometric exercises in the development of some types of shooting by jumping from different distances

- Superiority trial is group the FBI search results of physical variables and skill in the post tests - dimensionality
- The lack of results showed the evolution of the control group in the voting test B from the front of the basket and from behind the circle where the free - throw appeared insignificant

Recommendations:

- Use of exercises prepared by the researcher dealt with after the proven ability to influence the physical pain and its R -J students
- Emphasis on basketball teachers of serious interest and focus in using and diversifying playground exercises for their effective role in performance.
- The necessity of allocating sufficient time by teachers to exercises the playground left for practical lessons
- Conduct research and studies similar to Oa to other sports stages covered by the school did not search

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