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***The effect of skill exercises according to the training method on motor compatibility and the skills of overwhelming transmission and handling from above in volleyball for female students***

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***ABSTRACT***

The progress in the sports level came as a result of the progress of the training process and upgrading the level of methods and devices and the preparation of coaches technically and practically, and keep pace with different situations, and one of the important training methods is to pay attention to the exercises for biomechanical variables, and the goal of the research is to identify the values of the strength moments of some of the working muscles of the two legs, and to identify the impact of jumping exercises for the two legs to develop the strength moments of some of the muscles of the legs and the accuracy of the skill of overwhelming beating young people and the researcher used the experimental approach to design the group One with a pre- and post-test and applied the experiment to the experimental group, which consisted of (10) players of young players from the Specialized School of Sports Talent, and conducted pre-tests, and post, and the researcher reached the need to build and prepare training programs to reach the required level of performance through the development of strength moments for some muscles of the legs Because of its positive role in developing muscle strength, and the accuracy of the skill of overwhelming beating

**The importance of the study** lies in the use of the training method, which gives opportunities to a large number of students in learning, and this method was designed and developed to increase the movement of students and provide sufficient time to practice the activity, and this method gives freedom to students during learning and transfers part of the school's work to students**, as the main research problem was the**  presence of weakness in the harmonic abilities and basic skills of volleyball for preparatory school requests, so the researcher decided to delve into this problem and identify the causes as well as try Develop appropriate solutions in order to raise the level of learning these skills, either the objectives of the study in the preparation of skill exercises according to the training method **and identify their impact** on motor compatibility **and learning** and skills of overwhelming transmission and handling (from the top) volleyball. **Research methodology and sample** The researcher used the experimental approach to suit the nature of the problem to be solved, the research sample consisted of fourth grade literary students (preparatory / Ghaida Kambash) and their number (65) student, **based on what resulted from the results of the research The researcher reached the following conclusions** that the skill exercises in the training method that were applied to the experimental group had a positive role in the motor compatibility and basic skills of students at this age stage, as this improvement appeared in Performance as a result of the correct repetition of exercises and according to the scientific method. Also, the training method is the most time-consuming in the physical education lesson.

**1 - 1 Introduction and importance of research: -**

Sports have made great progress in sports, whether team or individual, as the progress in sports games and events was not born of chance, but came with perseverance and hard work through the deep absorption of what is contained in the foundations and rules of sports science in order to raise the level of the learner and trainee, and this is through research and permanent access to everything that is modern to add modern information by following modern scientific means and methods to reach the learner to an advanced level of performance.

Despite the diversity and expansion of teaching methods, we can not choose one of them and describe it as the ideal and applicable method in achieving learning and for different stages, but each method has its characteristics that suit the educational environment and the ages of learners and their gender and the equipment and sports tools available, and then the teacher to choose the most appropriate method with his capabilities and possibilities available in the intended age group, and that the training method is one of the most important methods in education lessons Sports, as the training method gives opportunities to a large number of students in learning, and this method was designed and developed to increase the movement of students and provide sufficient time to practice the activity and train it, and this method requires more repetitions at work as well as requires more feedback, which gives freedom to the student during learning and transfers part of the teacher's work to the students, This method can be used in learning most sports events.

Among the games and events that have attracted the attention of workers in several areas, including teaching methods, is the game of volleyball, as it is one of the games with high kinetic and skill requirements that need integrated preparation so that the student can bear the burdens she faces while learning skills, as well as characterized by many situations and situations, multiple and changing, so it requires the student to have great harmonic abilities to enable her to move to take the right place with a very high skill that allows her to control the ball. and control it .

Harmonic abilities are very important in various sports activities, as the student who has a high level of harmonic abilities enables her to achieve an advanced level of skill performance. Because the harmonic abilities are directly related to the student's skill performance and differ from each other in their dynamic direction and do not appear as individual abilities, but are always linked to each other in order to serve in their content the installation of the total movement in a consistent manner, and that the availability of a good level of harmonic abilities for the student leads to reducing the time required to learn and acquire motor skills, and thus motor skills are performed economically in the energy exerted.

As the basic skills play a major role in the ability of students to control and control the ball in the required situations and directions, it has become necessary for the student not to delay the movement of the ball because it must be in constant motion and she must think about the movement that follows it when it reaches it, whatever the speed and location of the ball, and through these features that characterize volleyball, students must use both hands while performing the skill of handling from the top This is because it is one of the basic and main requirements in the game.

Hence the importance of research in working on the use of skill exercises in the training style in motor compatibility, which was developed on the foundations of scientific studied in order to learn some skills volleyball because the study of these methods, including the training method, is one of the important topics that educators must take care of and from this point of view the researcher put these exercises in the hope that they will contribute to learning the skills of students and achieving the desired goals.

**1 - 2 research problem: -**

In order to raise the level of handball, it is necessary to properly and well plan educational programs based on scientific foundations in accordance with modern teaching methods, and that skill learning needs high intellectual performance to install the skill and mastery to accomplish volleyball skills because of what distinguishes these skills from the speed of performance and the difficulty of learning and their close association with harmonic abilities, as the main research problem was the existence of a weakness in motor compatibility and basic skills in volleyball for the requests of the preparatory stage (Kazem et al., 2016: (174), so the researcher decided to delve into this problem and identify the causes as well as try to develop appropriate solutions in order to raise the level of learning these basic abilities and skills in volleyball.

**1 - 3 Research Objectives: -**

* Preparing skill exercises according to the training method in motor compatibility and learning and skills of overwhelming transmission and handling (from the top) volleyball.
* Identify the impact of skill exercises according to the training method in motor coordination and learning and skills of overwhelming transmission and handling (from above) volleyball

**1 - 4 hypothetically research: -**

* **The existence of statistically significant differences between the results of the pre- and post-tests** and for the experimental and control groups in motor compatibility and learning and skills of overwhelming transmission and handling (from the top) volleyball
* **The existence of statistically significant differences between the results of the post-tests** between the experimental and control groups in motor compatibility and learning and skills of overwhelming transmission and handling (from the top) volleyball

**1 – 5 Research Areas: -**

**1 - 5 - 1 human field: -** Students of the fourth grade of middle school (Kambash Preparatory for girls).

**1 - 5 - 2 Time Range: -** For the period from (5/11/2023) until (11/1/2024).

**1 – 5 – 3 Spatial area: -** Preparatory yard Kambash for girls.

**2 - 1 Research Methodology: -**

The nature of the problem and the objectives of the research are what determine the appropriate research method, so the researcher used the experimental method with two equivalent groups (experimental and control) with pre- and post-test.

**2 - 2 Research sample: -**

The research sample was chosen in a deliberate way from the fourth grade of middle school students (preparatory Kambash for girls) and the number (55 students) division only one, and the researcher divided into two groups (experimental and the number of 25 and the officer of 25) has been excluded students failing and the number of 2 and the players of the school team and the number of 3 students.

1. **– 3 Means, devices and tools used in research: -**

* Means of collecting information (Arab and foreign sources and references, testing and measurement, data dump lists, statistical means, scientific observation)
* The tools used in the research (volleyball court, Chinese-made volleyballs (10), Canadian-made FOX whistle , pens (5), plastic signs (20), length tape and adhesive tape, illustrative film pictures).
* Devices used in the search (digital camera type ( NEKON ) number (2), laptop type ( DELL ) number (1), electronic stopwatch type ( KISLO ) number (2).

**2 - 4 tests used in the research: -**

**2 - 4 - 1 motor compatibility test (Hassanein, 1999, 426): -**

**Test Name** : Numbered Circuit Test

**Objective of the test**: to measure the compatibility of the legs and eyes.

**Tools used**: stopwatch, drawing (8) circles on the ground diameter of each circle (60 cm) whistle.

**Conducting the test**: The laboratory stands in circle No. (1) and when hearing the signal, the laboratory jumps with both feet together to circle No. (2) and successively to circle No. (8) and this is done at full speed.

**Registration** : The laboratory is recorded for the time it takes to travel through the numbered circuits.

**2 – 4 – 2 test transmitter (crusher) from above (Abdul Majeed, 2001, 294): -**

**Purpose of the test:** Measuring the accuracy of the transmission skill from above

**Tools used**: legal volleyball court, goal-scoring tape, tape measure, 10 volleyballs.

**Performance specifications:** The tester performs the transmission directing the ball towards the areas (A, B, C, D) from a standing position and face towards the arena.

**Registration conditions:** 4 points for each attempt within Area A. 3 points for each attempt within Area B. Two points for each attempt within Area C. One point for each attempt within Area D. Zero when the ball falls outside these areas. When the ball falls on a line shared by two regions, the score of the highest area is calculated. The attempt is canceled if the tester commits a legal error.

**2 – 4 – 3 Handling test from above (Salloum, 2004, 190): -**

**Purpose of the test:**  Measuring the tester's ability to quickly pass the ball

**Tools used:** smooth wall, volleyball, stopwatch.

**Performance specifications:** The tester stands behind the line that is away from the wall by (180) cm (the passing line), provided that the ball holds the hands in front of the face and then passes towards the wall and the top of the line drawn on it to bounce the ball to reach it again behind the passing line to follow the pass from the top with the fingers of the hands, the tester continues to perform this work for half a minute (30) seconds.

**Test Conditions:**

1. Passing in all periods of performance is carried out from behind the scroll line.
2. The scroll should be above the line drawn on the wall.
3. The calculation of time starts from the first pass and for a period of (30) seconds.
4. At the beginning of the test, you must hold the ball with your hands in front of the face and then perform the pass with the fingers.
5. If the ball goes off the wall, or touches the wall below the line drawn on the wall, and bounces in such a way that the tester continues to pass in front of the passing line in all these cases, the tester must hold the ball and repeat the beginning of the same agreed test method.
6. The skill of passing from above must be used without other types of passes.
7. The tester shall stop performing immediately after the announcement of the judgment at the end of the prescribed period of (30) seconds.

**Registration: The** number of times the ball touches the wall during (30) seconds prescribed for the test is calculated, and any attempt that violates the aforementioned conditions is not counted. The final score of the laboratory is the number of correct attempts within (30) seconds multiplied by × (3). It should be noted that the balls passed at the beginning of the test or the next pass for each stop are not counted as a result of an error made by the tester.

**2 - 5 Application of the main experience: -**

**2 – 5 – 1 Pre-test: -**

The pre-tests for the research sample were conducted on Sunday (5/11/2023) and on the yard of Ghaida Kambash Preparatory School, and the researcher has fixed the conditions and the method of conducting the tests and the assistant work team in order to achieve the same conditions as much as possible when conducting post-tests.

**2 - 5 - 2 Application of the main experience: -**

The main experiment of the research sample was worked on Tuesday (7/11/2023) and completed on Tuesday (9/1/2024) on the sample members and by one educational unit per week, and the number of training units reached (10) units, and the time of each training unit took (45) minutes divided into three sections: (preliminary 15 d, main 25 d, final 5 d), and the researcher's work was limited to the first part of the main section of the training unit, which is His time (25 min).

**2 - 5 - 3 skill exercises according to the training method: -**

It is the second method in a series of teaching methods in physical education and some call it the method of practice, and this method is considered the beginning of giving students a role for the participation of the school in making lesson decisions, as at this stage all decisions related to the stage of applying the lesson are given to the student while the decisions of preparing and evaluating the lesson remain from the role of the school itself, in this method the student remains responsible for implementing any decision entrusted to her by the school, and the school has to Only by observing the students in the application stage without issuing orders to them.

The training method depends on the use of a special card provided to each student to learn how to perform basic skills in an easy and sound way, as well as the technical aspects of the skill and called (events card), which is a paper[written](https://cte.univ-setif2.dz/moodle/mod/folder/view.php?id=4508)by the school with all the explanations about the lesson and tasks and how to apply them.

**2 - 5 - 4 Post-test: -**

The researcher conducted the post-tests after completing the educational units, amounting to (10) educational units on Thursday, corresponding to (11/1/2024), taking into account all circumstances, conditions and procedures for pre-tests

**2 - 6 Statistical means: -**

The researcher used the appropriate statistical means to process the resulting data through pre- and post-tests through the (SPSS) system.

**3 - Presentation and discussion of the results: -**

**3 - 1 Presentation and analysis of the results of the kinetic compatibility test and the skill of overwhelming transmission and handling (from the top) volleyball in the pre- and post-tests.**

**Table (1) shows the values of the arithmetic means, standard deviations, calculated and tabular value (T), and the significance of the differences between the pre- and post-tests of the experimental group in the research variables**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **t** | **Variables** | **Unit of measurement** | **Pre-test** | | **Post-Test** | | **Q-F** | **p f** | **Calculated** | **Error rate** | **Significance of differences** |
| **Going to-** | **on** | **Going to-** | **on** |
| **1** | **Motor compatibility** | **second** | **10.39** | **2.37** | **6.27** | **2.45** | **4.12** | **2.66** | **7.74** | **0.000** | **Moral** |
| **2** | **Overwhelming transmitter from above** | **degree** | **16.01** | **2.12** | **26.87** | **2.12** | **10.86** | **2.87** | **18.91** | **0.000** | **Moral** |
| **3** | **Swipe from top** | **degree** | **15.47** | **2.16** | **24.46** | **2.91** | **8.99** | **3.64** | **12.34** | **0.000** | **Moral** |

**Table (2) shows the values of the arithmetic means, standard deviations, the value of the arithmetic means of the differences, deviations of differences from their arithmetic mean, the calculated and tabular value of (T), and the significance of the differences between the pre- and post-tests of the control group in the research variables**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **t** | **Variables** | **Unit of measurement** | **Pre-test** | | **Post-Test** | | **Q-F** | **p f** | **Calculated** | **Error rate** | **Significance of differences** |
| **Going to-** | **on** | **Going to-** | **on** |
| **1** | **Motor compatibility** | **second** | **10.41** | **2.68** | **8.79** | **2.37** | **1.62** | **2.88** | **2.81** | **0.003** | **Moral** |
| **2** | **Overwhelming transmitter from above** | **degree** | **15.95** | **2.46** | **19.06** | **2.36** | **3.11** | **2.61** | **5.95** | **0.000** | **Moral** |
| **3** | **Swipe from top** | **degree** | **15.26** | **2.18** | **18.47** | **2.16** | **3.21** | **2.72** | **5.90** | **0.000** | **Moral** |

**3 - 2 Presentation of the results of the test of creative thinking and the skills of transmission and handling from the top in the post-tests between the experimental and control groups and discussed.**

**Table (3)**

**Shows the arithmetic media, standard deviations, calculated value ( t ), error rate and significance level for the post-tests of the experimental and control groups in the research variables**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **t** | **Variables** | **Unit of measurement** | **Experimental** | | **Adjuster** | | **Calculated** | **Error rate** | **Significance of differences** |
| **Going to-** | **on** | **Going to-** | **on** |
| **1** | **Motor compatibility** | **second** | **6.27** | **2.45** | **8.79** | **2.37** | **3.36** | **0.000** | **Moral** |
| **2** | **Overwhelming transmitter from above** | **degree** | **26.87** | **2.12** | **19.06** | **2.36** | **12.07** | **0.000** | **Moral** |
| **3** | **Swipe from top** | **degree** | **24.46** | **2.91** | **18.47** | **2.16** | **8.10** | **0.000** | **Moral** |

**3 - 3 Discuss the results of the tests of the research variables for the experimental and control groups .**

Table (1) shows that the values of the arithmetic media of the pre-test of the experimental group in motor compatibility and the skills of overwhelming transmission and handling from the top of the volleyball is completely different from the post-test, as it was found that the value of (t) calculated in the research variables is **(4.74, 18.91, 12.34)**  respectively, and since the value of the error ratio of the research variables as a whole is smaller than the level of significance (0.05), this means that there are significant differences between the pre- and post-tests and in favor of the post-test.

Table (2) shows that the values of the arithmetic media of the pre-test of the control group in motor compatibility and the skills of overwhelming transmission and handling from the top of the volleyball is completely different from the post-test, as it was found that the value of ( t ) calculated in the research variables is **(2.81, 5.95, 5.90)** respectively, and since the value of the error ratio of the research variables as a whole is smaller than the level of significance ( 0.05 ), this means that there are significant differences between the pre- and post-tests and in favor of the post-test.

**The researcher attributes the reasons for these moral differences** in favor of the post-tests to the construction of the exercises adopted by the training method within the framework of the educational unit and throughout the period of its implementation by the experimental group, with a focus on giving appropriate repetitions and accurately commensurate with the capabilities of students at this stage, and the continuous guidance by the school of the article on the educational unit in motivating students in the implementation of these exercises while working to correct errors by repeating the repetitions originally placed in the unit for implementation By the sample contributed to the positive effects on the level of students, as well as to the skill exercises in the training method used by the researcher, which was developed scientifically and accurately and away from randomness by changing its percentage and types according to the goal of the educational unit and the method of implementing those exercises and their performance and giving appropriate rest times between exercises and between groups of applied exercises, as well as showing an atmosphere of fun and fun during performance, which made the development of the level of individual experimental group fast and effective in balance with The control group in the results of the tests, which is an indicator for the development of research variables significantly, and this is confirmed by (Mohammed, 2014: 143) "The training method is characterized by its effectiveness in developing harmonic motor abilities, physical and skill, and mainly the special elements required by competitive sports activities, such as group games, through training on special duties required by the objectives of the game, which is a good, influential and non-boring educational method due to the large number of changing and differentiated situations, as the work is similar during it in terms of performance and intensity with the nature of the performance in the game in many situations."

This is also confirmed by (Sharaf, 2016: 58) "The training method is one of the most important methods that develop the physical, motor and skill aspects because they are similar to the duties in the conditions of play and combine more than one skill in one exercise, and are also performed during the different stages of preparation as well as their diversity, which helps to increase the elements of desire and suspense when practiced."

This is also confirmed by (Qaddoumi, 2015: 68): "The training method is one of the methods that contribute to the acquisition of the individual important positive motor, physical, skill and psychological characteristics, as the practice of sports activities helps the individual to develop cooperation within the framework of competition and that is an important behavioral skill for success in life."

This is confirmed by (Mohammed, 2017: 32) that "exercises with the training method are of great importance in learning, as they are similar to duties in real play, and shorten the time of the educational unit, as the teacher can give several skills in the exercise itself, and develop the harmonic and mental abilities and basic skills of the student."

Sharaf (2016: 61) points out that "the training method is one of the methods that can help develop the student's harmonic abilities and make him physically and psychologically qualified for the requirements of actual competition, mainly the elements of sports activities such as speed, and this is evident in team games."

The researcher attributes the reasons for these differences between the experimental and control groups to the method adopted in building exercises with the training method and the use of auxiliary tools within the framework of the daily educational unit and throughout the period of implementation of the vocabulary of this curriculum by the experimental group, and this is confirmed by (Hani El-Desouky, 2015) that "skill exercises with auxiliary tools used by the teacher in the learning process within the framework of the educational unit help the student develop his physical and motor ability, as well as it is used to improve the condition skill for them"

**4. Conclusions and recommendations**

**1.4 Conclusions**

1. The skill exercises in the training method that were applied to the experimental group had a positive role in the development of harmonic abilities and basic skills under research among students at this age group, as this improvement in performance appeared as a result of the correct repetition of exercises according to the scientific method.
2. The increased experience of students through practice and repetition helped them in developing their harmonic and skill abilities, because harmonic abilities develop as a result of experience, repetition and practice.
3. The various skill exercises in the training method increase the factor of excitement, suspense and competition and have a great impact on the character of harmony and the spirit of cooperation and perseverance, which led to the ease of the process of developing harmonic abilities and learning the basic skills under research for students.

**2.4 Recommendations:**

1. Using the training method to learn basic skills and other harmonic abilities in volleyball, especially for raw samples.
2. Using the training method more widely in the educational units as a result of its contribution to increasing the participation of students during the educational unit.
3. The need to clarify how to work with modern teaching methods by opening development courses for teachers of physical education and sports sciences.
4. Choose exercises that contain continuous, competitive and exciting movement because they will increase the student's movement during the educational units.
5. The use of the training method in other stages of study and for both sexes and in other games, because of the positive results that appeared when used.

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