

THE EFFECT OF HARMONIC EXERCISES ON FEMALE STUDENTS' DEVELOPMENT OF MOTOR SKILLS AND PERFORMANCE ACCURACY OF SOME OFFENSIVE BASKETBALL SKILLS

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Abstract

The purpose of the study is to provide harmonic exercises for the female students that will have known effects on the growth of motor skills, certain offensive skills, and the development of motor skills. The researcher employed the experimental technique in a single group. The study was carried out on a randomly chosen sample of junior students at the College of Physical Education and Sports Sciences for Girls using the (numbers) method, with a total of (16) students and a percentage of 22.62%. In addition to the primary experiment, which lasted (8) weeks, the exploratory experiment, pre-tests, and post-tests were carried out at various stages. The study was conducted on November 28, 2022, using statistical techniques. The researcher reached the conclusion that harmonic exercises have an impact on the development of motor abilities, as well as the emergence of differences between pre- and post-tests of the variables in accordance with the specificity of motor ability-skill and the purpose of the tests in terms of time and degree.

Keywords: Sports psychology. Sports exercise. Harmonic exercises. Motor abilities. Offensive skills. Basketball.

Introduction

Basketball is one of the sports that is played by a lot of people and is widely watched and practiced because of how well its players execute the game's physical, motor, and skill requirements. This makes basketball a beautiful and fascinating sport (Haitham, 2018). Physical and skill abilities are connected by motor skills (Al-Tarfi, 2013). It is essential for the development of gaming skills, particularly among female students (Hassani, 1999). For them to be able to move in such a way that they can precisely execute basketball moves, Given the following, the research's significance rests in the game's specificity first and what the students' needs are for their motor skills in the practical sessions (Alwan, 2022). Also empowering them when used to influence the accuracy of skills, whether offensive or defensive, and this is done, of course, through exercises that promise the development of these capabilities. This is what the researcher employed in the current study in order to provide a solid foundation for the students in the practical teachings, which contributes to the impact of the performance accuracy of offensive skills research similar to physical abilities (Alwan, 2021).

Motor skills are crucial and effective in many sports, including basketball (Muayad & Faiza, 1999). And because the researcher is a professor, she found that the lessons are devoid or lack of harmonic exercises that work to enhance motor abilities through her questioning and continual observation of many practical lessons in basketball and the operations are different. From our perspective, its role is no less important than physical talents, and the lack of one will have a bad impact on the accuracy of the performance of basketball skills, since

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they both contribute in that. As a result of this objective insight, the researcher posed the following questions about the problem:

1. Are activities involving consent taught to female pupils in basketball practical lessons?
2. Do you give adequate time in your practical sessions for activities that are harmonic and tailored to basketball-specific skills?
3. Does the presence of these mellow workouts promote the growth of motor skills, which in turn influences the adept performance?

Research Methodology

This study intends to create harmonic tasks for students in the third level. Additionally, you should be aware of how harmony exercises can help female students improve their basketball motor skills as well as some offensive skills by improving the precision of their performances.

Third-year students made up the sample in the human field. The temporal field covered the time from November 28, 2021, to January 18, 2022. The outdoor arena of the college for women studying physical education and sports sciences serves as the spatial field. The experimental strategy, which is the true test of the cause-and-effect linkages, and the one-group method were employed to ensure that the researcher achieved what she aimed to in solving the problem (5/217).

The Sample

The research community is represented by students from the third stage of the College of Physical Education and Sports Sciences for Girls, a total of (84) eighty-four individuals. By the random method (numbers), (4) four female students were selected with odd and even numbers without specifying, and thus the sample became composed of (16) sixteen female students, where the sample members were selected to serve and achieve the hypothesis or goals, (A: 148) and by percentage amounted to 22.64%.

The hypothesis

H1: The development of female students' motor skills in basketball is impacted by harmonic exercises.

H2: For female students, accuracy of several offensive basketball skills can be improved by harmonic exercises.

The research steps

Preparing a set of harmonic exercises, choosing the experimental sample, which will be made up of students in the third academic year 2021-2022, and finding harmonious basketball plays (Mohammed et al., 2021). The auxiliary work team (Hassan et al., 2019), all personnel requirements for the training unit (Al-Mayyah, 2021), the exploratory experiment (Mohammed, 2018), the pre-test for the sample (Al-Selmi et al., 2019), the application of the exercises (that were prepared at the beginning of the main section), the post-tests (that were conducted), and the use of statistical methods (that were conducted) (Mohammed & Kzar, 2021).

Tests used in the research

Test with numbered circles: The objective is to determine how well the two legs and the eyes work together (182:5)

Test of throwing and receiving a ball: testing compatibility of the eyes and hands (184:5)

Test for dynamic balance: This test measures dynamic balance (422:9).

Hand-held Accuracy Test on Overlapping Rectangles (208:5): the test's objective is to assess arm accuracy.

Test for shoulder-long handling: the test's objective is to assess how accurate the shoulder long handling test is (10:75).

The plump test involves (6) back-and-forth signs while changing direction: by changing direction, the test's objective is to determine how plump someone is (63:1)

Test of under-basket shooting: the test's objective is to evaluate under-the-basket shooting (8:388).

An example of the exercises used in the research is shown in Table 1 (Table 1).

Exploratory experience: The exploratory experiment was carried out by the work team on Tuesday, or 11/16/2021, on a sample of (8) eight female students

Table 1: A sample of the exercises used in the research.

No.	The total time of the exercise	Intensity	The size Repetitions	Rest between repetitions	Rest between groups by seconds	Total exercise time
1	Standing next to the runway, telling the student to step into it with their right leg, then their left leg, and then return with the same motion while lifting and lowering their arms	50%	2*20 sec/2	30 second	45 sec	270 sec
2	Standing straight while bending and extending the knees in half while rotating the arms in broad arcs in front of the body		3*15/sec	30 second	45 sec	300 sec
3	Standing with the knees slightly bent and the arms carrying two tennis balls, throw the two balls at the whistle while continuing to hold them.		3*10 sec For each leg	20 second	-----	360 sec
4	Standing with the knees slightly bent and holding two tennis balls in the arms, throw the two balls at the whistle while holding them constantly.		3*30 sec/2	30 second	45 sec	390 sec
5	Long sitting while holding a tennis ball, and when ordered, throw the ball against the wall, then receive it with the other arm, and vice versa, continuously		3*30 sec	30 second	-----	180 sec 1500 sec 30 minutes

Table 2: Shows the arithmetic means and standard deviations, the mean of the differences and standard deviations, the computed and tabulated t-value, and the significance in the pre- and post-tests of the sample for motor skills and some offensive skills that were studied.

Variables	Measuring unit	Pre-Test		Dimensional test		Q	Pq	Calculated T value	Error percentage	Sig.
		S	P±	S	P±					
Eyes and legs compatibility	second	11.57	1.82	8.93	0.99	2.64	0.96	10.978	0.000	Sig.
Eye and arm compatibility	degree	6.00	1.41	8.69	1.40	2.69	0.95	11.36	0.000	Sig.
dynamic balance	second	6.16	0.91	5.03	0.36	1.13	0.52	8.60	0.000	Sig.
Accuracy	degree	6.81	1.11	9.68	1.01	2.88	1.02	11.22	0.000	Sig.
Long handling from shoulder level	degree	13.44	2.16	16.75	1.13	3.31	1.99	6.66	0.000	Sig.
Plump change direction	second	11.28	1.50	9.53	1.32	1.75	0.72	9.68	0.000	Sig.
Shooting from the bottom of the basket	degree	7.31	1.62	10.44	1.75	3.16	0.96	13.06	0.000	Sig.

selected from the four divisions using the same random method (numbers), and under the researcher's supervision. When the researcher was present during the primary experiment, the research and its instruments were able to benefit as much as possible (45:9).

Pre-tests: The researcher worked to prepare, provide, and install everything the research needs in order to be available in the tests Dimensional, which is related to time, place, tools, as well as the work team. The assistant work team conducted the pre-tests on Sunday, Tuesday, and corresponding to (11-23/11/2021), so that one day was devoted to harmonic tests and another to offensive skill tests in basketball.

The main experiment (execution of harmonic exercises): Develop your harmonic skills, acquiring some offensive basketball skills. Two units of the exercises were performed each week on Sunday and Tuesday. Eight weeks made up the entire number of units for the exercises. The exercises' permitted times ranged from (25-30 minutes). Exercises were performed from November 28, 2021, to January 18, 2022, with an intensity range of 50% to 70% at the start of the main part.

Dimensional tests: The post-tests were carried out by the assistant work team on Sunday and Tuesday, which correspond to January 23-25, 2022, in the presence of the researcher. Every pre-test was adhered to as closely as feasible.

Results: Presentation, analysis and discussion of results

Displaying the arithmetic mean and its deviations, the difference between the means and their deviations, the estimated t-value, the error percentage, the significance, and the pre- and post-tests of the investigated tests and their analysis (Table 2).

The search variables for the experimental group are shown in Table 2, with the arithmetic mean of agreement between the eyes and the legs being 11.57 with a standard deviation of 1.82, and the arithmetic mean of the post-test being 8.93 with a standard deviation of 0.99 with a mean difference of 2.64 and a deviation of 0.96, while the calculated t-value was 10.98. Due to the

harmonic exercises created by the researcher, a comparison of the calculated values reveals that they are indicative under a degree of freedom of 15, which suggests that there are statistical differences between the two tests and in favor of the dimensional. This presentation then moves on to the remaining motor variables and some offensive basketball skills.

Results and Discussions

From Table 2, the experimental group and the research variables that it addressed, which are represented by motor skills and some offensive basketball skills, as it was discovered that there is a development in all these variables and this can be seen through the team between the pre and post choices in favor of the remote. The researcher directs them to the planned set of exercises. Through the use of intensity, volume, and adequate rest for each exercise, it is intended to be used and utilized in the training units within the time allocated for it in accordance with the students' abilities. In addition to the variety of these activities for motor skill development. As a result, varied and appropriate training leads to the development of the athlete's ability (158:7), as was the case for repetitions and continuation of them with the repetition of some exercises, as they worked to strengthen and stabilize the response to performance based on the number of body parts involved in Performance. (171:4). This increased students' discrimination abilities, and they saw movement by moving away from excessive movements that have nothing to do with performance, as a result of students' ability to maintain body balance through a sense of place and dimensions using sight, as it is one of the important factors in maintaining motor balance, as the balance of the body is achieved. It moves from one point to another kinetically, causing constant friction with the surface on which it is positioned (128:6). These exercises resulted in the development of motor abilities, which was represented in the improvement of the accuracy of the performance of some offensive skills by shortening the time, increasing the number of repetitions, and improving the grades, as shown in Table 2. According to Maysan, who emphasizes that coordinated motor performance between the body's parts and the skill is necessary for good performance (2:166), the availability of motor abilities that contribute to this in line with the specificity of the game and its skills is

required, and this shows that there is a relationship between abilities as motor elements and between skills in basketball (11:124).

The conclusions

1. The outcomes demonstrated that harmonic exercises had an effect on the students' motor skills development.
2. Through the influence of exercises, the motor abilities helped female students develop certain offensive basketball skills.
3. The development of study variables diverging in some way (motor abilities, some offensive skills).
4. The appearance of differences in the variables between the pre- and post-tests that are consistent with the specificity of motor skills and the test's objectives in terms of (time / sec, degree).

Recommendations

1. Emphasizing how basketball instructors could profit from the harmonic exercises employed in the study.
2. Insisting that after they have demonstrated their value in growth, harmonic exercises should receive the same level of serious consideration and effort from basketball instructors as physical skills.
3. During the practical sessions, enough time must be set enough to provide coordinated drills that are appropriate for the uniqueness of each game skill.
4. The requirement to perform comparable study on additional skills—individual or collective—that the researcher did not address

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