

The Effect Of Special Exercises To Develop Agility And Learn The Short Serve Skill In Badminton For Female Students Of The College Of Physical Education And Sports Sciences

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Abstract

The purpose of this paper is to preparing special exercises to develop agility and learn the skill of the short serve of badminton for third-year students, and identify the effect of special exercises to develop agility and learn the skill of the short serve of badminton for third-year students. The two researchers used the experimental method, the most appropriate method for solving the scientific research problem. The research community is represented by the students of the third stage in the College of Physical Education and Sports Sciences / Mustansiriyah University for the academic year (2021/2022), and the research sample was chosen by the intentional method, and their number was (20) students who represent the community at a rate of (100%). (Experimental and control) with (10) students for each group in a random manner, and (3) female students were selected for the exploratory experiment with a percentage of (15%) for the exploratory experiment. One of the most important results reached by the researcher is that: The development of the level of agility between the pre and post-tests, especially in (the zigzag running test between the two poles), and the development of the short serve skill level between the pre and post-tests, especially in the short serve test. One of the most important recommendations recommended by the researchers is: Emphasizing the diversity of exercises for basic skills that are similar to the requirements of physical readings, and emphasis on developing some special physical abilities because they have an impact on developing some basic skills for badminton.

Introduction:

Sports games have witnessed a great development if this development includes all games as a result of benefiting from scientific research and studies in finding and inventing modern scientific methods and aids in order to develop the individual athlete's condition and reach the best levels in the type of activity practiced. In various fields of sports and individual games and this was not a result of Coincidentally, it came as a result of proper planning based on clear scientific foundations in education and training, and teachers and coaches became interested in the numbers of players or students, physically, mentally and kinesthetically, and taught them the basics

of performing skills and their accurate and rapid responses for the purpose of their future contribution to improving the level of technical performance and achieving the best results. It is one of the sports that broadcasts between its competitors the spirit of competition and recreation, because it is played in different places and from different age groups, as it is practiced by children, youth, the elderly and for both sexes. The basic skills in the game of badminton are one of the most important factors that affect the learning process, as it is the means that aims to be reached through skill preparation to develop the game and kinetic abilities and a positive change in skillful behavior through continuous learning and retention of skills.

The education process requires proceeding on the right basis in teaching skills and developing kinetic abilities, including (agility), and this requires a great effort to work and harness many of the requirements of correct construction in teaching skills and developing kinetic abilities. It needs modern exercises for education that make the process of developing kinetic abilities relevant. A special character, as educational exercises have a special addition to the learner and attract him towards performance and repetition, and this is in the interest of acquiring the skill well, and that educational exercises contribute to developing kinetic abilities, simplifying the education process, realizing skills and helping the learner to perform those skills without difficulty in performing it. Verification and pursuit of its goals required recognizing the impact of some of the various kinetic and skill exercises that work on developing agility to facilitate the learning process of serve's short skill in the flying badminton game since the skill is extremely difficult for early students and its learning needs to correctly master the kinetic paths.

Research problem:

Exercises have become an integral part of the educational process for all sports, including badminton, which is a basic subject within the curriculum with its basic skills in all faculties of physical education and sports sciences. Therefore, it has become necessary to think about how to develop agility to teach the basic skill of badminton, especially the short serve. And through the two researchers practicing the game and following it up, I noticed that there is little use of special exercises. Are there exercises suitable for learning the short serve skill of badminton when performing the appropriate exercises that are performed according to the correct and optimal path and in line with the exercises used and the type of skill learned during the practical lessons, to become suitable to the required level in the future.

Research objective:

- Preparing special exercises to develop agility and learn the skill of the short

serve of badminton for third-year students.

- Identify the effect of special exercises to develop agility and learn the skill of the short serve of badminton for third-year students.

Research hypotheses:

- There are statistically significant differences between the pre, post-tests for the experimental, and control groups in developing (agility) and learning the skill of short serve for badminton.
- There are statistically significant differences between the post-tests of the experimental and control groups in developing (agility) and learning the skill of short serve for badminton.

Research fields:

- Human field: the third stage students of the College of Physical Education and Sports Sciences / Mustansiriyah University, the academic year (2021/2022).
- Time field: (17/11/2021) to (10/6/2022)
- Spatial field: the indoor hall / College of Physical Education and Sports Sciences / Al-Mustansiriyah University.

Research methodology and field procedures:

Research Methodology:

The problem, objectives and nature of the research are what determine the appropriate research methodology for it, as seen (Al-Kazemi. 2012) "a procedure for controlling the influencing factors surrounding the experiment, except for one factor, which is the independent variable for the purpose of measuring its effect on the dependent variable." The two researchers used the experimental method, the most appropriate method for solving the scientific research problem. Also sees (Rahman and Dayem. 1999) "The experimental method is the closest research method to solving problems by the scientific method to reach the discovery of the truth."

Community and sample research:

The research community is represented by the students of the third stage in the College of Physical Education and Sports Sciences / Mustansiriyah University for the academic year (2021/2022), and the research sample was chosen by the intentional method, and their number was (20) students who represent the community at a rate of (100%). Experimental and control) with (10) students for each group in a random manner, and (3) female students were selected for the exploratory experiment with a percentage of (15%) for the exploratory experiment.

Devices, tools and means of collecting information:

Information collection methods used:

In order to solve the research problem, it is necessary to use tools that fit the problem, as these tools contribute to obtaining accurate data to achieve the goals of the research.

- Arab and foreign references and sources.
- Tests and measurements.
- Personal interviews.
- Assistant work team.
- A registration form for stabilizing test scores.
- The international information network (Internet).

Search devices and tools:

It is known by (Mahgoub. 1985) "And we mean by it the way in which the researcher can solve her problem, whatever those tools, data, samples, devices, etc.", as shown (Al-Shawk. 2000) "requires from the researcher Choosing the most appropriate tools that correspond to the nature of her research in order to achieve her hypotheses, because the nature of the hypotheses determines the tools used in that research among these tools are:

- No laptop type (fujitsu), number (1).
- Two (2) cameras.
- Legal court (for badminton).
- Stop Watch.
- Talbot badminton rackets (13).
- Badminton collection box.

- Tube-Yonex feathers (25).
- A grid of one (1) column (grid holder).
- Adhesive tape

Field research procedures:

Identifying the basic kinetic abilities and skills used in the research:

The researcher reviewed a number of scientific sources and references, and in agreement between the two researchers, the kinetic ability (agility) and the basic skills of badminton (the short server) were determined.

Experimental experiments:

First exploratory experiment:

The exploratory experiment was conducted on (3) students from the third stage, the research sample, at a rate of (15%) and its purpose is to obtain results and information to benefit from during the main experiment. The pre- skill and physical tests were applied to the research sample on Tuesday (1/2 /2022) on the badminton court in the College of Physical Education and Sports Sciences / Mustansiriyah University, where the tools for the tests were prepared according to the test performance specifications for the research sample and its purpose:

- The safety of the aids used in the educational units
- Knowing the time required to perform the tests
- Identify the appropriate measurements and diameters for the auxiliary devices
- To identify the extent to which the research sample understands the tests
- Finding the best way to conduct the research

Second exploratory experiment:

The second exploratory experiment was conducted on (3) female students from the research sample on (Wednesday) and coincidentally (2/2/2022) on the badminton court at Al-Mustansiriya University / College of Physical Education and Sports Sciences, and the purpose of it is to reach the final stages to install the specifications and measurements of tests for agility and serve short.

Tests used in the research for the basic skills of badminton:

After defining the research tests and conducting the foundations for the tests, the tests became ready for application to the individuals of the research sample as follows.

The first test: the short serve accuracy test (Jassem. 2014).

- Purpose of the test: to measure the accuracy of the short serve.
- Test equipment: Airplane blades, badminton rackets, streaking pitch, data recording form.
- Description of the test: Each zone is measured as follows: a zone (5 radii of 55.8 cm) from the center, (4 degrees of 96.5 cm), (2 degrees of 117 cm), (1 degree of the rest of the area).
- Test evaluation: After the test is explained, the students are given an appropriate time to warm up, and then each student is given (5) trial attempts. The sent student stands in the serve place and is given (12) attempts so that the shuttlecock passes between the net and the rope that is higher than the net (51cm) trying to drop the shuttlecock in the area with the highest score and the best (10) attempts are counted for her.
- Scoring: The score is given according to the fall of the shuttlecock. The feather that falls on a line between the two areas is given the highest score and serve, which passes between the rope and the net and does not fall on one of the areas, is given zero and the server that hits the rope is repeated (50) degrees.

Agility test (Badr. 2019):

- Purpose of the test: To measure agility.
- Test equipment: small (8) poles, a wide colored bar to mark the start and finish line, stopwatch
- Description of the test: The signposts are placed on one line so that the distance between one sign and another is (75) cm, the distance

between the first sign and the starting line (1) m and the last sign and the finish line (1) m. The tester stands on the starting line and runs when he hears the start signal towards the signposts. In the form of a slip between the poles to the finish line and then back in the same way to the starting line, and give each test three attempts.

- Scoring: Calculates the time of the best attempt out of the three attempts.

Pre-tests:

Pre-tests were conducted on the research sample before starting to apply the vocabulary of exercises and preparing the tools for the tests and the assistant work team in order to conduct the skill tests and kinetic ability (agility) for the research on 22/2/2022 on the badminton court in the College of Physical Education and Sports Sciences / Mustansiriyah University At eight o'clock in the morning.

Main experience with the aids used in the research:

The two researchers prepared an educational program consisting of (8) educational units that include exercises related to the ability and skill involved in the research, using the badminton aids through their reliance on the scientific sources in the badminton game and what is consistent with the educational methods adopted by the two researchers to teach the research sample , Noting the following points in the process of putting exercises:

- The exercises used should be appropriate to the level of the sample.
- There should be a gradation in the level of difficulty of the exercises used in the units.
- That the exercises used achieve their purpose.

As the application of exercises by educational means began on (Tuesday) corresponding to (1/3/2022) and the researcher followed up with the professor of the subject on the application of exercises on the experimental research

sample only and their application, and with the help of the assistant work team, the exercises were applied as part of the educational unit, which is the main section, i.e. what Equivalent to (60) minutes, at a rate of one unit per week, and the unit starts at eight in the morning. The educational unit was completed by (7) exercises during the educational unit, out of the total exercises used during the duration of the experiment distributed among the educational units, and the researcher took into account the gradual application of the exercises from Easy to difficult with a gradual increase in the difficulty of performance.

Intermediate tests:

During the duration of the main experiment, the researcher tested a sample for the purpose of:

- To identify the extent of learning of the sample during the duration of the main experiment.
- To identify whether the exercises play their role and contribute to the education of the players and improving their level.
- To identify the level reached by the learners during the period of the main experiment.
- To identify the progress and level of the research sample and to draw a learning curve.

Post-tests:

The two researchers conducted the post-tests on the research sample at (8 am) on Tuesday (26/4/2022), as he followed the same method that was used in the pre- tests, taking into consideration the spatial and temporal conditions, the test methods, the same tools and the auxiliary work team which was conducted in the same pre-tests.

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

Results and discussion:

Presentation, discussion and analysis of the results:

After conducting the pre- and remote tests on the research sample, the two researchers processed the results statistically to reach the goal of the research procedures and to verify the hypotheses formulated therein.

Presentation, discussion and analysis of the results between the pre- and post-tests of the experimental research group for the study variables.

Table (1) shows the arithmetic means, standard deviations, the calculated (t) value, the error rate and the significant significance of the research variables with the basic skills of the group experimental

Variabl es	Measuri ng unit	group s	Arithmet ic mean	Standar d deviati on	arithmet ic mean of differen ce	standard deviation of differenc es	T value calculat ed	Typ e sig
agility	Sec	Pre	10.95	1.32	1.09	1.50	2.29	sig
		Post	9.86	0.40				
short serve accurac y	Degree	Pre	4.70	2.11	2.10	0.87	7.58	sig
		Post	6.80	1.47				

Tabular score (2.26) with a level of significance (0.05) with a degree of freedom n-1

Discussing the results of the physical and skill tests of the experimental group:

According to the statistical results reached by the two researchers, the results were discussed as shown in Table (1) and there is a significant difference with statistical significance between the pre and post-tests and in favor of the post test for the experimental group for the test (agility, short serve accuracy). As the development in the post-tests, the two researchers attribute to the effect of the special exercises prepared by the two researchers, which were implemented by the research sample. Some exercises during the sports learning process contribute to ensuring the correct kinetic performance. As (Qatami. 1998) asserts, "The devices and auxiliary tools make the individual more focused on the skills to be learned and developed, and the tools help to greatly diversify the performance of skills, which works to improve performance to the best." The two researchers attribute the significant differences in the level of skill performance, which appeared in the results of the post-tests for the values of arithmetic circles, to the exercises designed using the tools, in which the researchers took into account the ease, difficulty and suitability of the sample members and worked on the

principle of gradual performance of the exercises from easy to difficult, as the designed exercises were identical to the skill and ability used. Which was performed within a known time and repetition, as all the exercises were identical to the skills investigated led to the development of skillful performance. The two researchers believe that the use of special exercises by the experimental group in the main part of the educational unit had a clear impact on developing the level of performance of the skills under study. It included the main part of the exercises for the tools prepared by the two researchers, which were in a new way, banished the boredom that prevails on the students as a result of using the traditional and accustomed exercises, and this was confirmed by (Al-Kazemi. 2002) "The use of various organizational and applied exercises in different educational conditions. It helped the player in controlling and controlling performance requirements, choosing appropriate and skill-like exercises, and increasing repetitive attempts, which are among the basic requirements.

Presentation, discussion and analysis of the results between the pre and post-tests of the control group:

Table (2) shows the arithmetic means, standard deviations, mean difference, and deviation of the research variables for the group control

Variabl es	Measuri ng unit	group s	Arithmet ic mean	Standar d deviati on	arithmet ic mean of differen ce	standard deviation of differenc es	T value calculat ed	Typ e sig
agility	Sec	Pre	11.23	1.29	0.66	1.02	2.05	Non sig
		Post	10.57	0.78				
short serve accurac y	Degree	Pre	4.00	1.69	0.60	1.17	1.61	Non sig
		Post	4.60	1.57				

Tabular score (2.26) with a level of significance (0.05) with a degree of freedom n-1

Discussing the results of the physical and skill tests of the control group:

According to the statistical results reached by the two researchers, the results shown in Table (2) were discussed and there are

significant statistically significant differences between the pre and post-tests of the experimental group to test (agility ability and short serve accuracy) in badminton, because agility is one of the important elements for the badminton player. The plane and serve is half of the game and a player who is good at serve can score the most points, as well as the rest of the skills. The exercises should be based on diversification in learning and the use of aids during learning to perform serve in particular and other skills in general and that is by escalating the learning requirements by increasing the difficulty of executing strikes from different areas through individual and pair learning, which clearly helped in developing the short serve skill performance of the research sample members and using various exercises to perform the ability and skill of the respondent. The two researchers attribute

to the use of the trainer's exercises by focusing on strengthening the muscles working in the performance of the skill serve, taking into account the gradient and fluctuation in the educational units that require learning with the least effort and the implementation of a certain number in the learning performance repetitions of this ability and skill, as the effective educational curricula are the curricula that lead to achieving To adjust the skill's performance in the correct manner with the adaptation of the organs and organs of the athlete's body to the pressures of efforts through the number of repetitions that the student performs gradually on their bodies.

Presentation, discussion the results of the physical and post skills tests between the control and experimental groups:

Variables	Measuring unit	Groups	Arithmetic mean	Standard deviation	T value calculated	Type sig
Agility	Sec	Control	10.57	0.78	2.05	Sig
		Experimental	9.86	0.40		
Short serve accuracy	Degree	Control	4.60	1.57	1.61	Sig
		Experimental	6.80	1.47		

Tabular score (2.10) with a significance level (0.05) with a degree of freedom n-2

Discussion the results of the physical and dimensional skills tests between the control and experimental groups:

Through the results of Table (3), the significant differences between the results of the post-tests between the two groups of research, the control and the experimental tests (agility ability and short serve) were shown. The study through performing repetitions of these skills and abilities and the exercises were at different times and the purpose of it was to further develop the performance accuracy of the skill and ability under study. To perform that skill and ability accurately and with high concentration. The performance of this skill and ability under study requires a high concentration of the player, so he had to perform many repetitions for the purpose of reaching the high sense of playing the

ball without hesitation or fear, because any mistake in the performance of the skill will lead to the loss of the point directly because this skill is considered One of the most important offensive skills. The exercises were graded from easy to difficult in terms of performance and repetitions. And the exercises performed by the players were focused on the right and left sides of the court to develop the skill and ability of the students because the good player has to move inside the court to perform with accuracy and high concentration, and he must not reveal to the opposing player weak points and make the competing player under pressure and get the point. And the exercises used that were implemented by the research sample have contributed to developing the accuracy of performing the skill and ability under study because they contain special exercises to develop the

skill of the short serve in particular. As for the physical strength that was used under study, the researchers attribute the development and results obtained to the exercises used, which focused on developing the accuracy of the skill and ability used under study through the use of a set of exercises and tools. Explain (Al-Khouli. 2007) As the basic skills, especially offensive ones, which are one of the types of low straight kicks from us, need great accuracy in hitting them on the front and back corners of the court by directing the shuttlecock to areas close to the opponent's presence." The exercises were performed gradually from easy to difficult, and a good player has Serve well enables him to get a direct point or to exchange the shuttlecock with precision and high concentration and in a balanced manner, as the exercises in which the physical ability was used led to the development of control over the amount of force that the player puts in to drop the shuttlecock in the right place., and the special exercises The methods used with the means have contributed to the development of performance because they contain special exercises inside the stadium, as (Hussein and Nassif. 1980) "as the main element in developing kinetic accuracy and controlling good offensive skills is to continue adding some exercises and skills during the process of Sports training contributes to ensuring kinetic mastery." The repetitions that were given in regulated times according to the players' abilities and the type of exercise, and the rest between repetitions is appropriate, as well as taking into account the totals Their number and the comfort between them had a great impact on developing the skill and ability under study.

Conclusions and Recommendations:

Conclusions:

Based on the results of the research and statistical analysis of the data, the following conclusions were reached:

- There are significant statistically significant differences between the two tests, the pre and post-tests, in favor of the post-test for the experimental and

control groups in the test of agility and the short serve skill.

- There are significant statistically significant differences between the experimental and control groups in the post-tests of physical abilities (agility) and basic skills (the skill of short serve) in favor of the experimental group.
- The development of the level of agility between the pre and post-tests, especially in (the zigzag running test between the two poles).
- The development of the short serve skill level between the pre and post-tests, especially in the short serve test.

Recommendations:

- Emphasizing the diversity of exercises for basic skills that are similar to the requirements of physical readings.
- Emphasis on developing some special physical abilities because they have an impact on developing some basic skills for badminton.
- Use exercises to develop basic skills, especially the short serve.
- Emphasis on training special exercises in developing agility and other physical abilities.
- Work on training the basic skills and linking them with the game plans in the match.
- Conducting tests from time to time to find out the extent of development and delay in the progression of the level of skill and physical performance.
- Use of variety and flexibility in the application of these exercises that develop basic skills and physical abilities.
- Conducting similar research and studies on individual games to know the effect of these exercises.

References:

1. Abdullah Abdel Rahman and Mahmoud Abdel Dayem. 1999. An Introduction to Scientific Research Methods in Education and Human Sciences, 2nd Edition, Kuwait, Al-Falah Press for Publishing and Distribution.
2. Amin Anwar Al-Khouli. 2007. Racket games - squash: 1st floor, Cairo, Arab

- Thought House.
3. Dhafer Hashem Al-Kazemi. 2002. The overlapping teaching style and its impact on learning and development through spatial organizational choices for the tennis learning environment: an unpublished doctoral thesis, College of Physical Education, University of Baghdad.
 4. Dhafer Hashem Al-Kazemi. 2012. Practical applications of writing educational and psychological messages and thesis - planning and design, Baghdad, Dar al-Kutub and Documentation.
 5. Ghada Mahmoud Jassem. 2014. Building and standardizing two batteries for a physical, kinetic, and skill test for badminton players for youth in Iraq, PhD thesis, University of Anbar, College of Physical Education.
 6. Muhammad Qasim Badr. 2019. The effect of special exercises to develop some combinatorial abilities and basic skills for tennis players aged (12-14) years, Master's thesis.
 7. Nuri Ibrahim Al-Shawk. 2000. Scientific research lectures for master's students: University of Baghdad, College of Physical Education.
 8. Qasim Hassan Hussein and Abd Ali Nassif. 1980. The Science of Mathematical Training: 1st Edition, Baghdad, Dar Al-Kutub Institution for Printing and Publishing.
 9. Wajih Mahgoub. 1985. Scientific Research Methods and Methods, Mosul, Mosul University Press.
 10. Youssef Qatami. 1998. Psycho Logic of Learning and Classroom Learning: 1st Floor, Amman, Dar Al-Shorouk.