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Some physical and motor abilities and their relationship to the accuracy of the performance of the front and rear driven kick in the badminton for the students of the Faculty of Physical Education and Sports Sciences / Al- Mustansiriyah University

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Abstract ---*Studies that are concerned with mathematical numbers for various games are one of the studies that take into account the measurement of the physical characteristics of each game in order to be able to provide the trainer and the player with information about these characteristics and to indicate their importance and role in the specificity of this game and the extent of its relationship to the style of play and the application of its basic skills. The game of badminton is one of the Olympic-approved individual games, in which its practice requires the performance of special skills and accurate technical performance, and the physical side has a prominent and important role in many matches, especially when the level is close between the players in terms of planning and skill, and the researchers have noted through their practice of these The game and their observations of the game and the university tournament and the participation of the college teams in it and informing them about the research, they noticed there is a weakness in the accuracy of the front and backstroke among the members of the research sample, which may be due to a weakness in the physical characteristics of this game. Therefore, the researchers decided to study the relationship between these characteristics and the skill of the strike The foreground and the background for the purpose of identifying weaknesses and raising the players to the required level and their goal is clear, and the researchers assumed that there is a statistically significant correlation between some physical and motor abilities and the accuracy of performing some basic skills in badminton among students of the Elected College of Physical Education / Al- Mustansiriyah University, and he chose The two researchers, the research sample consisting of (8) students from the team of the College of Physical Education team The University / Al-Mustansiriyah University, where the two researchers provided the physical and motor capabilities and physical and skill tests appropriate for the study and presented them to the experts and were identified by them, and the two researchers also processed their research using appropriate statistical means. The two researchers also presented, analyzed and discussed the results they obtained from the research tests and reached There is a moral correlation between some physical abilities and the accuracy of performing the front and back blow with the badminton, and the two researchers also recommended the necessity to emphasize the interest in training programs and tests developed for the players must be correct and appropriate to the capabilities of the players and add to them benefit.*

Type of Paper--- *Review*
Keywords: *physical and motor, Physical Education, Al- Mustansiriyah University*

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Definition of the Research:

Introduction to its importance and research:

Scientific development and progress have contributed to raising the level of achievement for all sports, and that tests and measurements have an important place in the sports field as they are the scientific method for the evaluation process as well as being the real and accurate indicator that reflects for us the player's abilities and attributes. High physical and mobility. The game of badminton is like other games in terms of its reliance on the main comprehensive requirements of sports such as skill, physical, kinetic, mental and psychological numbers, and the game of badminton is distinguished from other games as it requires the player to perform quickly and continuously due to the small area of the playing field, which gives the physical abilities Mobility is of great importance and a necessary requirement in order to accomplish the motor and skill duties well during matches. The sport of badminton or badminton is an old game, known since 1870, it was played by British army officers in India, then after that it became widespread all over the world. And international competitions and championships were organized in which women and men participate. Badminton appeared for the first time in the Munich Olympics in 1972, but it was a show sport (in which medals are not awarded), but after two decades, specifically in the 1992 Barcelona Olympics, badminton competitions were officially adopted. As the development in the sports field included this game from all aspects and requirements that characterize badminton until it reached what it is now.

Research Problem:

Knowing the player's abilities appropriate for practicing sports requires identifying the determinants that contribute to the player's access to higher levels, and since one of the researchers is a professor in racket games, a badminton player and a college team coach. The weakness of the students of the College of Physical Education / Al-Mustansiriyah University for the college team players and worked hard to know the special requirements that must be met in the game of badminton in order to be able to reach the required level and achieve achievement, so the researchers found that there is a need to study the physical and kinetic capabilities of the college's players in badminton. And the accuracy of performance for the skill of the front and back paid kick, since the physical factor in this sport is the factor affecting success and excellence, from here comes the research problem that called the researchers to stand on it.

Research Objective:

Study of some physical and movement capabilities and their relationship to the accuracy of performance of the skill concerned with research among students of the Physical Soil College / Al-Mustansiriyah University for the college team players.

Research assignment:

There is a statistically significant correlation between some physical and motor abilities and the accuracy of performing some basic skills in badminton among students of the Elected College of Physical Education / Al-Mustansiriyahh University.

Research areas:

- The human field: Students of the College of Physical Education / Al-Mustansiriyah University (the college elect).
- Time range: 1/18/2019 to 2/30/2019.
- Spatial domain: the internal hall of the College of Physical Education / Al-Mustansiriyah University.

Topic Two: Research Methodology and Field Procedures:

Research Methodology:

Determining the correct scientific method to be followed to solve the problem depends on the nature of the problem being discussed, so the researcher chose the descriptive approach in the survey method for its suitability to the nature of the problem.

Research Community

The research sample was chosen from the students of the College of Physical Education / Al-Mustansiriyah University (the college's team players) who represent the college's (8) students of similar age and physical characteristics and represent 100% of the total community. By (2) players, the reconnaissance experiment sample was combined with the experiment sample.

Means, tools and devices used:

Research tools:

- Arabic sources.
- Observation and personal interviews.
- Questionnaire.
- Tests and measurements.

used devices and tools:

- stopwatch .
- whistle (1).
- A tape measure and tape.
- (10) feather bats, and (2) set feathers.
- shafts.
- (Acer) calculator.
- Camera.

field research procedures:

Determining the most important physical and motor abilities of badminton players:

The two researchers reviewed the sources, research and studies and conducted personal interviews with experts and specialists in order to determine the most important physical-motor abilities of the badminton players. Therefore, the researcher identified these capabilities in a questionnaire form as shown in Appendix (1), which was distributed to specialists and experts in testing and measurement In the field of sports whose names are shown in Appendix (2), where the researchers relied on the results of the questionnaire and excluded the physical and mobility abilities that obtained a percentage (70%) and as shown in Table (1).

Table (1) : shows the percentage of physical and motor abilities according to the opinions of specialists

T	Physical and motor abilities	percentage
1	The power of two men's speed	%90
2	with speed arms The power of the	%85
3	Motor response	%100
4	Endurance	%65
5	Agility	%95
6	Flexibility	%70
7	Compatibility	%65
8	Precision	%90

Determining physical, motor and skill tests:

Through the researchers reviewing the Arab and foreign sources and references, the physical, movement and skill tests were selected through a questionnaire distributed to experts and specialists, which includes the types of special tests for each ability. Table (2).

Table (2) : shows the percentage of the tests nominated by experts

T	Capacity	the exams	percentage
1	The power of speed for	each foot of Three Hgelat maximum Msav .1	%85

	the feet	broad jump from stability The -2	%60
2	The power of the two arms is speed	Leaning in front of me, bending and extending the arms -1 for 10 seconds	%95
		Bend and extend the arms from the hanging position on the bar for 10 seconds -2	%65
3	Motor response	Move against the signal -1	%60
		Nelson test for motor response -2	%90
4	Agility	Bounce jogging (4 * 10) between two lines -1	%50
		Shuttle running for both sexes -2	%85
5	Accuracy of skill performance	The front push hit test -1	%90

Research Tests:

Test name: The partridge test for the maximum distance (10) s (Qais Naji, Bastwais Ahmed, 1987, p. 346).
The aim of the test: to measure the force characteristic of the velocity of the two men.
Tools used: stopwatch, whistle, tape measure, registration form.
Test procedure: The laboratory stands behind a specific mark on the ground and after hearing the beep, performs the partridge in a straight line defined as quickly as possible and allows the tester to continue the partridge when it occurs.
Recording: The distance traveled by the laboratory is recorded during a period of (10) seconds, and the laboratory is given only one attempt.

Test name: the front reference to measure the force characteristic of the velocity of the arms. (Hassanein, Muhammad Subhi, 1996, p. 21).
The aim of the test: to measure the velocity characteristic of the muscles in the arms.
Tools used: flat area (space), stopwatch, whistle to signal start.
Performance specifications: The laboratory takes the front support position on the ground so that it is in an upright position and does not have a bow down or up, and after giving the start signal, the tester bends the arms to touch the chest with the ground and then returns with its full extension and the laboratory continues to repeat this performance to the maximum number of times for a period of (10) seconds.
the conditions:

- The laboratory took the correct position (oblique prone).
- The tester must touch the ground with its chest every time it bends the arms and then fully extends them.
- Speed in performance.
- Continuing and not stopping during the performance when the start signal is given and until the end signal is given.
- Each laboratory has only one attempt.
- The number recorded by each laboratory shall be announced to the next laboratory to ensure the competition factor.

Recording: One set is counted for each time the laboratory bends and extends the arms in the correct way, and the number of times the arms bend and extend is performed for a period of (10 seconds).
Nelson's motor response test (Muhammad Nasreddin, 1998, pp. 123-124)

Test objective: to measure the motor response.
Test specifications: The test area is planned with three lines, the distance between each line and the other a distance (40.6 m) and the length of a single line is one meter.

Method of performance: The tester stands at the end of the middle, facing the arbitrator who stands at the other end of the line. The tester adopts the readiness position, with the center line between the feet, with his body bent forward so that it is in the ready position for the beginning. The arbitrator holds the stopwatch with one hand and raises it to the top, then quickly moves his arm either to the right or left at the same time to start the clock. The tester responds to the hand signal and tries to run as fast as possible in the specified direction to reach the side line that is away from the center line (4,6 m).

- When the tester cuts the line on the right side, the judge will stop the clock.
- If the laboratory starts running in the wrong direction, then the referee continues to run the clock until the tester changes its correct direction and reaches the side line.

Recording method: The laboratory gives (10) consecutive attempts between each attempt and the other, a rest of (20) seconds, with five random attempts. The attempts on each side are randomly selected.
The final score of the laboratory is calculated from the total of ten side trials.

$$Test\ score\ =\ \frac{group\ of\ ten\ attempts}{10} \qquad Eq(1)$$

Test name: Shuttle running for both sexes (Raysan Majeed, 1989, p.91).
The purpose of the test: to measure agility and velocity of directional change.
The necessary tools: - a stopwatch, two parallel lines, a flat and flat running road with a length of 10 meters between the two parallel lines, provided that there is enough space behind each of them, and a semicircle is drawn at each line from the beginning and the finish line so that the radius of each is 50 cubic centimeters. Of wood, table, recorder, timer.
Performance specifications: When the call is heard, take your place, the laboratory stands with the front foot placed behind the starting line, and after taking the standby position, it gives the start command. Inside the semicircle drawn at the finish line, then it runs repeatedly towards the opposite line in order to pick up the other cube and return it to the finish line and place it inside the semicircle without throwing.

Test Instructions: - Each individual is given two attempts that count the least in time. The ground should be flat and not slip the tester.
Recording: The time is calculated to the nearest decimal fraction of a second from the start until the second cube is placed inside the half-circle drawn at the starting line.

Test Name: Forward paid kick (Wissam Salah, 2013, p. 43).
The purpose of the test: To measure the accuracy and time of the front drive stroke.
Tools used: feather bats, feathers, auxiliary to sending feathers, playground layout with the test design. A fast camera set at a speed of 120 images per second.

Performance description: After the test is explained to the testers, each laboratory is given (5) trial attempts, after which the player stands on the position (X) and strikes a forehand strike and strikes the shuttlecock sent to him from the opposite court to the right side of the player (the right player) and vice versa to cross the shuttlecock from Above the grid, try to drop it into the higher grade area listed from (1,2,3,4,5).

The player performs (5) attempts and the best (3) attempts are calculated for him, and the score is given according to where the shuttlecock fell, the shuttlecock that falls on a line between two areas gives the highest score, the upper limit of points is (15) degrees divided by the total time of performance.

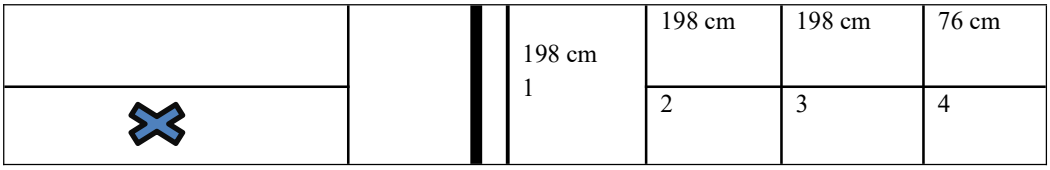

Figure (1) : Test of the front push hit

Exploratory Experience:

One of the scientific contexts used in scientific research is conducting exploratory experiments in order to identify obstacles to work and to know the problems that may occur in the main experiment. The two researchers conducted an exploratory experiment on the sample of the pilot experiment, which numbered (2) players on 18-20 / 1/2019 for a period of three days, in order to:

- Knowing the suitability of the sample candidate tests.
- Ensuring the validity and adequacy of the tools used and the appropriate place to conduct the tests.
- Knowing the time taken to perform each test and the time taken to perform all tests.
- Establish the sequence of testing procedures appropriately.
- Preparing the appropriate data registration form.
- Training of the assistant work team.
- The results of the pilot experiment resulted in:

- Determine suitable places to apply tests.
- Finding the best arrangement for conducting the tests.
- Improve the players 'response to most tests.
- Prepare the registration form appropriately.
- Ensuring the efficiency of the assisting work team and their understanding of the nature of the tests and their application.

Key Experience:

After the safety of the procedures was confirmed through the results of the exploratory experiment, the two researchers applied the physical-kinetic tests on the sample of the main experiment, which numbered (8) players, who were students of the College of Physical Education / Al-Mustansiriyah University (the college team) for the period from 01/25/2019 until 30/2/2019 in the internal hall of the College of Physical Education / Al-Mustansiriyah University.

Statistical methods:

1- Percentage 2- The arithmetic mean 3- Standard Deviation 4- Pearson correlation coefficient

Presentation, analysis and discussion of the results:

Presentation of the results of arithmetic means, standard deviations, and the value of the simple correlation coefficient for tests and research variables and their analysis:

Table (3) : It shows the arithmetic mean, standard deviations, and the value of the simple correlation coefficient for tests of physical and kinetic abilities, and the accuracy of the performance of the front and back thrust of the feather.

Variables	Arithmetic mean	standard deviation	Skill used	Arithmetic mean	standard deviation	Correlation coefficient value		Statistical significance
						Calculated	Tabular	
The power of two men's speed	12,05	0,42	Accuracy of the front and rear kick	32,47	2,13	0.622	0,707	Immoral
The power of the two arms is speed	8,76	0,62				0,823		moral
Motor response	2,9	0,67				0,791		moral
Agility	13,34	1,08				0,883		moral

Table (3) shows that the mean value of the arithmetic mean of the characteristic strength test of the velocity of the two men is (12.05) and a standard deviation (0.42). As for the value of the arithmetic mean for the accuracy of the front and rear driven hit (32.47) and a standard deviation (2.13), the value of the coefficient is (2.13). The computed simple correlation (0.622) which is less than the value of the tabular correlation coefficient (0,707) under the level of significance (0.05) and the degree of freedom (6) and this indicates that there is a non-significant correlation between the force characteristic of the velocity of the two men and the accuracy of the performance of the front and back push hit of students College of Physical Education for the College / University team players Al-Mustansiriyah. Table (3) also showed the value of the arithmetic mean of the characteristic strength test with the velocity of the arms (8.76) and a standard deviation (0.62). As for the value of the arithmetic mean for the accuracy of the front and back driven hit (32.47) and a standard deviation (2.13), the coefficient value The simple correlation computed (0.823) which is greater than the value of the tabular correlation coefficient (0,707) under the level of significance (0.05) and the degree of freedom (6) and this indicates that there is a significant correlation between the force characteristic of the speed of the arms and the accuracy of the performance of the front and rear driven hit among college students Physical education for college / university team players, Al-Mustansiriyah University. Table (3) also showed the value of the arithmetic mean of the motor response test (2,9) and a standard deviation (0,67). As for the value of the arithmetic mean for the accuracy of the front and back driven

hit (32,47) and a standard deviation (2,13), the value of the simple correlation coefficient The computed (0,791) is greater than the value of the tabular correlation coefficient (0,707) below the significance level (0,05) and the degree of freedom (6) and this indicates that there is a significant correlation between the motor response and the accuracy of the performance of the front and back push of the kick for students of the College of Physical Education for elected players College / Al-Mustansiriyah University. Table (3) also showed the value of the arithmetic mean of the agility test (13.34) and a standard deviation (1.08). As for the value of the arithmetic mean for the accuracy of the front and rear driven hit (32.47) and a standard deviation (2.13), the value of the computed simple correlation coefficient T (0,883), which is greater than the value of the tabular correlation coefficient (0,707) below the level of significance (0.05) and degree of freedom (6). This indicates that there is a significant correlation between agility and the accuracy of the performance of the front and back push of the kick for students of the College of Physical Education for the college team players / Al-Mustansiriyah University Badminton.

Discussion results:

Through the results reached by the two researchers, there is no relationship between the force characteristic of the velocity of the two men and the accuracy of the performance of the front and rear driven blow in the flying feather of the individuals of the sample, "which affects this characteristic on the level of physical and skill performance because this characteristic lies in achieving short and longer moments of time suitable with frequency High in successive and rapid movements, it helps propel force and is directly proportional to performance ”(Brolwn, 2000, p, 343). Therefore, attention must be paid to the characteristic of the force characteristic of speed for the two men because it has a great importance and influence on the level of different skill performance from one individual to another. Through Table (3), it was found that there is a significant correlation between the strength test characteristic of the speed of the arms and the accuracy of the performance of the front and back driven hit. The researchers concluded that the reason for this moral correlation is due to the integration in the physical abilities of students of the college team players with badminton through the effect of the working muscles of the arms that It gave good results in terms of tests that give a good indication of the presence of the distinctive force with speed of the arms that helps in achieving good and correct performance in the skill concerned with research. Therefore, attention and development of these abilities must be greater, as it does not help the players in improving performance and reaching the required level and increase their physical and skill level (Sakov, 1990, p. 78). There was also a significant correlation between the speed of the kinematic response and the accuracy of the performance of the front and rear driven blow in the badminton. The researchers attribute the reason for this correlation to the results obtained by the individual of the sample, which indicates the existence of previous experience of the research sample that led to their rapid response to each case Test and play on the field, appropriate responses are affected by previous information, which made them able to choose the correct positions during the performance of the skill. Because the rapid kinematic response is necessary for the badminton player because of the skills and conditions of the game because it requires speed of movement and awareness of what the opposing player will do, in addition to that the speed of response is an important ability in all games. It is a quick perception and understanding of the motor duty to perform it. It is the ability of the player to respond to the surrounding stimuli that are received by the sensory nerves to the cerebral cortex and then sent to the muscles through the motor nerves and respond to these stimuli as quickly as possible. The speed of the response depends on the reaction time, which is the period The time between the stimulus and the moment of the onset of the response "(1995p 519 peter Riper,). Table (3) also showed that there is a significant correlation between the agility test and the accuracy of the performance of the front and rear driven hit with the badminton, as the researchers attribute the reason for this relationship to the importance of agility in this game and its skills and for the player that requires this characteristic during performance. Therefore, agility tests must be used in the training curricula continuously, due to the important role of this trait, "because the badminton player is characterized by high physical competence because he relies on rapid and close transitional movements on the field through the movements of the two men. Agility is related to the reactions that the player experiences during play. Agility must be emphasized very well (1987 p158, Larry G sharer.

Conclusions and Recommendations:

Conclusions:

- The presence of a significant correlation between the physical capabilities (the force characterized by the velocity of the arms, the speed of the movement response and the agility) and the accuracy of the performance of the front and rear driven blow with the flying shuttlecock.

- The presence of a non-significant correlation between the force of the two men's characteristic speed and the accuracy of the performance of the front and rear driven blow.

Recommendations:

- The physical and motor capabilities of badminton players must be taken care of, as they are important in developing the accuracy of the performance of the front and back driven kick.
- The need to pay attention to skill performance, especially the front and back strike, as it is the basis of badminton skills, by focusing on correct performance and using tests for this skill.
- Paying attention to training programs and tests developed for the players, they must be correct and appropriate to the capabilities of the players and add interest to them.

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