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Physical-motor intelligence and its relationship to some offensive skills in basketball

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ABSTRACT

Physical-motor intelligence is one of the important variables that determine the activity and ability of the student in the correct motor performance, so any person practicing sports activity is supposed to have a level of intelligence commensurate with the goal behind this to reach a degree of achievement. Since students differ in the degree to which they possess the level of physical-motor intelligence, this leads to the emergence of disparities in achieving the required performance, especially in the learning stage. The problem of research lies in answering the following question Is there a relationship between motor physical intelligence and some students' basketball offensive skills? The research aimed to identify the level of physical-motor intelligence and its relationship to some offensive skills in basketball for students. The researcher concluded that there is a strong correlation between physical motor intelligence and some offensive skills in basketball for secondary school students.

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Chapter One: Introduction

1.1 Introduction to the research and its importance

The world is going through a stage of technical and scientific development and prosperity, which has led to extensive changes in the nature of contemporary life in all respects, which have been the cause of the emergence of many problems that need to be solved and more scientific research experiments. Intelligence is one of the qualities granted by God Almighty to man in order to act with reason and wisdom, and intelligence is one of the most important abilities that an athlete needs in various sports competitions, whether collective or individual, it means the possibility of the individual to use his natural senses to move his body effectively in different circumstances.

The term physical-motor intelligence was used in Howard Gardner's theory of multiple intelligences in his book "Frames of the Mind" in 1983, and it refers to intelligence associated with controlling physical movements and using the body to solve problems. Gardner tried to add pluralism to the idea of IQ testing unlike traditional tests that cannot fully assess intelligence (Gardner & Mona, 2016).. Adabi (2021) believes that the use of multiple intelligences in curricula and courses will bring about a development that keeps pace with modern learning fields and strategies in line with current capabilities.

Accordingly, the theory of multiple intelligences is one of the most important contemporary educational theories because it provides a new example in the field of educational and educational practices. This intelligence includes multiple skills such as coordination, dexterity, balance, flexibility, strength, and speed. Athletes, actors, artists, and sculptors are the people who possess this intelligence. This type of intelligence reflects the ability to use the body or hands to express feelings or thoughts (Kocak, 2019, 148).

Physical-motor intelligence is the ability to use the body or part of it to solve a problem or manufacture something or perform a productive process and do some work and express ideas and sensations through movements and that learners who enjoy this type of intelligence excel in physical activities and have great tendencies to move and touch things and the ability to practice sports, dance arts and acting and the owners of this intelligence have superior physical - motor abilities (Hassan and Falih, 2013, 231-232) The researcher believes that motor physical intelligence represents the individual's ability to harmonize the movement of the body accurately and effectively, which is an essential element in the performance of many sports, including basketball. The performance of students' offensive skills is linked to motor physical intelligence, such as balance, eye-hand coordination, and the ability to jump and move quickly and accurately, which may contribute to improved performance. The game of basketball is one of the teams and interesting games for a large number of sports lovers in the world, which has received and continues to receive great attention, and this is what made specialists always seek to develop the game by raising the levels and in all aspects required by the game,

the public demand for its practice has increased as a result of its speed, suspense and excitement (Majeed, 2023a, 117).

The importance of research is evident in knowing the relationship of physical-motor intelligence with some offensive basketball skills for students, our belief in the researcher in the importance of knowing the player's intelligence pattern and psychological preparation next to skill preparation, which contributes to preparing a generation loving the game of basketball, as movement and play are the way the player gets to know the world around him. Play is a necessary activity for the body and therefore for the mind, as the mind does not grow except with the growth of the body.

Hence the problem of research to answer the following question: **Is there a relationship between motor physical intelligence and some offensive skills in basketball for secondary school students**?

1-2 Research Objective: To identify the level of physical-motor intelligence and its relationship to some offensive skills in basketball for students**.**
1-3 Research hypotheses: There is a correlation between the level of physical-motor intelligence with some offensive basketball skills of students**.**
1.4 Research Areas:
1.4.1 Human field: - Students of Al-Mamoun High School for Boys
1.4.2 For the temporal domain: - The research was conducted for the period from 11/8/2024 to 9/9/2024.
1.4.3 Spatial Area: - Open Basketball Court / Khalis Sports Club**.**

2- Research Procedures:
2.1 Research Methodology: The researcher used the descriptive approach in the style of correlation relations to suit the nature of the problem.
2-2 Research sample: The research community was selected for the 105 students of the fourth stage at Al-Mamoun Secondary School for Boys for the academic year 2024/2025, with 4 divisions. The sample was selected by lottery (Division B), which numbered 27. Students with a percentage of 25.7%.
2-3 Means of collecting information: physical-motor intelligence scale form, Arabic sources, the Internet, foreign sources, observation and experimentation.
2-4- Tools and devices used: adhesive tape, 5 basketballs, 6 signs, stopwatch, whistle, medical scale and chalk.
2.5 Field research procedures: The researcher used the physical-motor intelligence scale (Appendix 1) as well as tests of some offensive skills in basketball.
2.5.1 Physical - motor intelligence scale: For the purpose of testing the physical-motor intelligence scale and its application to the research sample, the researcher used the scale (Mohammed, 2011: 258) for physical intelligence - motor Appendix (1) codified, which contains (19) phrase, as the designer of this scale applied it to

secondary school students of Baghdad province according to a four-gradient key as follows:
- Always apply to (4) degrees.
- Apply to a lot (3) degrees
- Apply to a little (2) degrees.
- Never apply to one (1) degree.

This measure includes four dimensions:
1- Flexibility appears in every cognitive activity characterized by the use of his body in distinct and very skilled ways.
2- Originality: It appears in every cognitive activity characterized by the use of his hands brilliantly when working for things.
3- Reliability: It appears in every cognitive activity characterized by the use of parts of his body with balance, speed.
4- Perseverance: It appears in every cognitive activity characterized by active continuity in the performance of his body.

On this basis, the highest score that the laboratory can obtain in the scale of psychomotor intelligence is (76) and the lowest score (19).

2.5.2 Description of the tests Skills under research:

2.5.2.1 Thoracic handling test: (Abdel Dayem and Hassanein: 171-169.1984)

Test name: ball handling and receiving test towards the wall from a distance of 2.70 m.

Purpose of the test: Measurement of the speed of handling and receiving the ball (direct bra).

Necessary tools: smooth wall, measuring strips - 2 legal basketball - electronic stopwatch - chalk - whistle to give the start and end signal.

Procedures:

Draw a line on the smooth wall and at a distance of (90) cm from the surface of the earth.

Draw the starting line parallel to the wall on the ground and at a distance of (2.70) m from it.

Performance Description:

The student stands just behind the starting line and holds the ball.

Giving the start signal to the student to quickly handle the ball (chest handling) towards the smooth wall and receive it after it bounces**.**

The student continues to repeat this performance (10) consecutive handlings.

The student does not cross the start line during performance.

Calculation of grades: Calculates and records the time it takes for the student to take the test from the moment the ball touches the wall in the first successful handling until the ball touches the wall until the successful tenth handling.

2.5.2.2 Test of Tabtaba by changing direction (Majeed, 1989, p. 338).

Test name: Tabtaba by changing direction between (6) signs for a distance of (13.50) m back and forth.

Purpose of the test: Measuring the speed of the drum by changing direction.

Necessary tools: electronic stopwatch, basketball (2) legal, (6) signs, adhesive tape length (1.50) m as the starting line, whistle to give the start signal.

Procedures:
The dimensions of the six signs of the starting line are drawn as follows:
Put an adhesive tape of length (1.50) m and then two points are identified at its ends, let it be (a, b).
The distance between the first sign is determined at the starting line (1.50) m.
The distance between the signs (first, second - second, third - third, fourth - fourth and fifth - fifth and sixth is determined by a distance of (2.40) m.
The signs are fixed on the ground in a straight line and perpendicular to the starting line

Performance Description:
The student stands with the ball in high start standby mode behind the starting line at point A.
Giving the start signal to the student He runs and pats by changing direction between the signs and continues until he crosses the starting line with the ball at point (B).
Grading: Calculates the time it takes from the moment it gives the start signal to the finish line at point B.

2.5.2.3 Peaceful Aiming Test (Muhammad:58:2014)
Test name : Test of correction of peaceful movement after performing Tabtaba.
Objective of the test: The test aims to measure the accuracy of the peaceful shot after performing the drum.
Devices and tools used: basketball, basketball goal.
How to perform the test : The student performs Tabtaba from the middle of the basketball court towards the goal to perform the peaceful shot.
Test Conditions:
The lab grants 10 attempts.
It is required to perform tabtaba and peaceful law.
Scoring: Each successful attempt at shooting counts as one point and the highest score obtained by the tester is (10 points).

2.6 Statistical Methods: The researcher used the statistical bag. (spss)

Presentation, Analysis and Discussion of Results

Table (1)
Shows sample equivalence for research variables

Torsion coefficient	Broker	Standard deviation	Arithmetic mean	Unit of measurement	Variables
1.21	59	4.19	61.20	degree	Physical-motor intelligence
0.45	14.6	2.06	15.9	second	Chest handling (rebound)

0.14	13	2.31	14.8	second	patting changes direction
0.25	5	2.1	5.5	degree	Peaceful Shot

The torsion coefficient is confined between +- 3 and this indicates the moderate distribution of the research sample

Table (2)

Shows the arithmetic mean, standard deviation and calculated and tabular values (t) between the physical-motor intelligence and the offensive skills of basketball for students

Significance level	Error rate	Calculated value (t)	on	Going to	Statistical Treatments Variables
Physical-motor intelligence 61.20					
Moral	0.02	0.89	2.06	15.9	Thoracic Handling
Moral	0.02	0.88	2.31	14.8	patting changes direction
Moral	0.03	0.82	2.1	5.5	Peaceful Shot

It is clear from the above table that there is a positive correlation between physical intelligence - motor and some offensive skills in basketball and the researcher attributes the reason for this to the nature of the game of basketball is a game of decisions and requires a high level of thinking and tactical intelligence, as it enables players to make decisions in changing situations, the player who has good mental abilities can act and perform the appropriate and proper tactical performance of the situations facing him on the court. "Basketball game plans require many methods and the means that oblige the player to use his intelligence and thinking in defense and attack plans and in all his actions on the field").Majeed, 2023b, 5)

An intelligent athlete is able to quickly act in changing gaming situations, and this is called field kinetic intelligence, and this is used to refer to practical intelligence in sports activity (Mahjoub: 2001: 38).

In addition, the more the player can employ physical movements in the appropriate way to play, the more he succeeds in performing the required skills with a high degree of accuracy and speed (Marwan et al.: 2021: 83)

Conclusions and recommendations

4.1 Conclusions:

After presenting the tables, analyzing and discussing them, and in light of the results obtained by the researcher, the following conclusions were reached:

1. There is a strong correlation between physical motor intelligence and some offensive basketball skills for students.

4.2 Recommendations: The researcher recommends giving physical motor intelligence great importance in the lesson through speed, fitness, coordination, body movement control and interaction with changing situations, for example, to move from attack to defense and vice versa Conducting research on other types of intelligences and their relationship to other skills. As well as conducting research on the relationship of motor physical intelligence and different play centers**.**

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Appendices (1)

Not applicable to me at all	Applies to me a little	It always applies to me	It applies to me a lot	Paragraphs	t
				I can focus my thoughts and pay attention to all the movements of my colleagues.	1
				My skills performance is better when I'm in front of my teammates	2
				Excel in performing physical movements and skills that require attention	3
				I can maintain my body balance while performing some skills	4
				I get to my thoughts when I'm practicing one of my skills.	5
				I can accomplish delicate works with my hands, such as decorative pottery	6
				When I tell stories, I'm kinetic.	7
				I can change my kinetic directions quickly and accurately	8
				I use all or part of my body movements to imitate some of my colleagues efficiently.	9

				I can express my opinion using body movements and facial expressions.	10
				I have a skill in using signals and hand movements accurately	11
				I learn quickly when I get a machine instead of listening to someone teach me.	12
				Show new high innovation movements	13
				I can easily acquire a new sports game	14
				Excel in performing physical movements and skills that require attention	15
				The best thoughts come to my mind while performing physical movements	16
				I use all or part of my body movements to imitate some of my colleagues efficiently.	17
				I can change my kinetic directions quickly and accurately	18
				When I tell stories, I'm kinetic.	19