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## Discriminatory classification according to academic self-motivation and skill self as a function to predict the offensive tactical behavior of handball students

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### Abstract

The research aims to identify the nature of the correlation between academic self-motivation and self-skill and offensive tactical behavior in handball for students of the fourth stage, and to identify the discriminatory classification according to academic self-motivation and self-skill as a function to predict the offensive tactical behavior in handball for students of the fourth stage.

And revealing the percentages of the contribution of academic self-motivation and self-skill offensive tactical handball behavior for students of the fourth stage.

The descriptive approach was used in the survey method, correlational relationships and predictive studies, and the research community was determined by the students of the fourth stage, the Faculty of Physical Education and Sports Sciences - University of Babylon, which numbered (160) students for the academic year 2022-2023, and the researcher chose (32) students to represent his research sample, and applied to the research sample the scale of academic self-motivation with its paragraphs of (24) paragraphs, and the skill self-scale with its paragraphs of (22) paragraph, and the test of the offensive tactical handball shelf with its positions of (12) position, and appropriate statistical treatments were used to reach the results and the research came out with a set of conclusions, including the existence of a significant correlation between the skill self and the offensive tactical behavior with handball among students, and the derivation of a predictive equation through which the offensive tactical behavior of handball can be predicted in terms of academic self-motivation and self-skill for students, The research came out with a set of recommendations, including attention to the development of academic self-motivation and self-skill among students through the use of various programs and methods because of its significant impact on academic achievement, the adoption of the predictive equation for the purpose of anticipation of offensive tactical behavior handball for students.

**Keywords:** Discriminatory classification, self-motivation, handball students

### Introduction

#### Definition of the research

#### Introduction to the research and its importance

There is no doubt that the various areas of life have evolved at an amazing speed and this development is due to the tireless efforts made by scientists and researchers, and the sports field is one of these areas covered by development, as researchers have worked hard to reach in all sports to the best levels and from all aspects (physical, skill, tactical and psychological) to achieve great achievements.

The phenomenon of individual differences is a general phenomenon between individuals, it is one of the most prevalent phenomena in practical life, which can be observed on the structural and functional characteristics of individuals, while they differ in their qualities. We note that a section of them excels in a certain characteristic while the other section excels in another attribute. and that the detection of differences between individuals depends on the identification of the phenomenon to be studied, that processes such as classification and judgment on individuals are subject in the general view to the difference between individuals in terms of capabilities, tendencies, desires and trends as well as physical measures, when determining the level of the individual in the phenomenon required Darasix (any extent of superiority or weakness in which) we have identified individual differences (difference in the degree of existence of the trait) in relation to that phenomenon.

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Academic motivation and self-skill is a form of arousal that creates a kind of activity, effectiveness, energy or engine that aims to enable students to choose certain goals and work to achieve them as an internal process that activates and directs the student to maintain his behavior, and motivation for learning is of interest to workers in the educational field, as it aims to create tendencies for students to take meaningful academic activities worth the effort, and the academic benefits and features can be touched. resulting from it, and motivation to learn is described as a general feature and a special case at the same time, and many factors contribute to building motivation to learn, including planning and focusing on goals and metacognitive awareness of what students tend to learn, and notes that motivation to learn requires more than just the desire to learn, it includes strategies for effective study with meaning such as: Summarize, expand on basic ideas, draw diagrams of basic relationships between concepts, etc.

In addition, the tactical behavior is based on the student's physical capabilities, so the student can prefer handling to scoring or camouflage in a certain offensive situation based on the accuracy and strength of this student in scoring, and the weakness of the student's possession of physical qualities and motor skills hinders him from achieving integration in performance.

Here, the importance of the research is evident in the study of the possibility of predicting the offensive tactical behavior in handball through academic self-motivation and self-skill at the fourth welcome to come out with a variable that contributes and influences the tactical behavior, in addition to the discriminatory classification of those variables.

### Research Problem

Classification and selection are important topics in the sports field. It is one of the main pillars and the most important step in the process of sports education and training. Because its goal is to reach the advanced levels and achieve higher achievements, and it is natural to choose the student and direct him towards the game practice, is done according to the necessary and special specifications of that game, each game has its own specifications that distinguish it from other games, but the selection process that can not achieve its usefulness and may be useless in the event that the player is not given the opportunity to practice his specialization within the game.

With the rapid progress of psychology in modern times, sports psychology has become an important place among the branches of this science, as the human being throughout the ages is the starting point, which is the means of modern development in light of the great developments witnessed by the world, and the motivation of the academic self and the skill self has a large, influential and effective role in the emergence and nomination of the principles of sportsmanship among students, which are important things to deal with the situations that the student is going through in his daily life. Due to the incompatibility and continuous variation of sports situations and the continuous changes in university life, which students live in and readiness to accept new experiences and ideas (intellectual openness), planning, organization and guidance for the present and the future, as well as the offensive tactical behavior of handball as it represents the ability to make quick and correct decisions during the match, which would change the results for the better, which urged the researcher to To carry out this study and reveal the most important variables, so the study was required to reveal the effects of academic self-motivation and self-skill in the

offensive tactical behavior of handball for students, which is a modest scientific attempt to serve science and knowledge.

### Research objectives

1. Identify the degree of academic self-motivation, self-skill and offensive tactical behavior in handball for fourth stage students.
2. Identify the nature of the correlation between academic self-motivation, self-skill, and offensive tactical behavior in handball for fourth stage students.
3. Identify the discriminatory classification according to academic self-motivation and skill self as a function to predict the offensive tactical behavior in handball for students of the fourth stage.
4. Disclosure of the contribution of academic self-motivation and self-skill to offensive tactical behavior in handball for fourth stage students.

### Research hypotheses

- There is a significant correlation between academic self-motivation and self-skill with offensive tactical handball behavior for fourth-stage students.
- There is a discriminatory classification according to academic self-motivation and self-skill as a function to predict the level of offensive tactical behavior in handball for students of the fourth stage.
- For the motivation of academic self and self-skill ratios of moral contribution to the offensive tactical behavior of handball for students of the fourth stage.

### Research Areas

**Human field:** students of the fourth stage, Faculty of Physical Education and Sports Sciences - University of Babylon for the academic year 2022-2023.

**Time field:** for the period from (2/1/2023) to (5/3/2023)

**Spatial field:** classrooms and practical in the Faculty of Physical Education and Sports Sciences - University of Babylon.

### Research Methodology and Field Procedures

#### Research Methodology

The researcher used the descriptive approach in the style of survey studies and correlational relationships.

#### Community and research sample

The research community was determined by the students of the fourth stage, Faculty of Physical Education and Sports Sciences - University of Babylon, who numbered (160) students for the academic year 2022-2023, and the researcher chose (32) students to represent his research sample.

#### Means of data collection

- Sources, references and literature related to the current research.
- Stopwatch number. (1)
- Portable calculator type (Dell) number (1).
- Stationery (papers – pens).
- Arab and foreign sources.
- Tests and measurements.

#### Field search procedures

##### Academic self-motivation scale

Use the scale of academic self-motivation built by (2005,

Lepper) and expressed by (Ahmed Falah Alwan and Khaled Abdul Rahman Al-Attayat, 2010), as the scale consisted of (24) paragraphs with a positive trend, and the paragraphs of the scale were distributed on three areas, the alternatives to answer the paragraphs were triple (always, sometimes, never) and the weights of the answer are (3-2-1), as the degrees of the scale are limited between (24 - 72) The paragraphs of the scale were presented to a group of experts and specialists in sports psychology and their number (7) to indicate the validity of the paragraphs, and show the acceptability of all paragraphs because their calculated value is higher than their tabular value of (3.84) under the level of significance (0.05) and the degree of freedom (1), and table (1) shows the areas and numbers of paragraphs of the scale.

**Table 1:** Fields and numbers of paragraphs of the academic self-motivation scale

t	Domaine	Paragraph numbers	Total
1	Challenge preference	From 1 to 8	8
2	Curiosity	From 9 to 16	8
3	The desire to master independently	From 17 To 24	8
	Total	24	24

### Self-skill scale

The skill self-scale built by (Ahmed Muayad 2016) was used on handball players in the northern region of Iraq, consisting of (22) paragraphs, including (11) positive paragraphs, which are paragraphs with sequences (1, 2, 3, 4, 5, 8, 12, 14, 17, 19, 21) and (11) negative paragraphs, which are paragraphs with sequences (6, 7, 9, 10, 11, 13, 15, 16, 18, 20, 22), and the scale is corrected in the light of triple alternatives (always, Sometimes, never) and the weights of the answer are (3-2-1) for the positive paragraphs and vice versa for the negative paragraphs, as the highest or largest degree is the best in self-assessment skill, as the scale scores are limited between (22-66), and the paragraphs of the scale were presented to a group of experts and specialists in sports psychology and their number (7) to indicate the validity of the paragraphs, and show the acceptability of all paragraphs because their calculated value is higher than their tabular value of (3.84) below the level of Significance (0.05) and degree of freedom (1).

### Positions of offensive tactical handball behavior

After reviewing the previous studies that dealt with offensive tactical behavior in handball, the tests designed by (Sorour 2020) were relied upon, which numbered (12) attitudes, and the answer to them is to choose one alternative from four alternatives and give grades (3, 2, 1), and a score (zero) is not given because all alternatives are correct, but the degrees differ among themselves, as the highest score is given to the most important alternative and then the next, The positions were presented to a group of experts and specialists in handball and their number (5) to indicate the validity of the positions, and show the acceptability of all positions because their calculated value is higher than their tabular value of (3.84) under the level of significance (0.05) and the degree of freedom (1).

### Exploratory experiment

The exploratory experiment was applied to (10) students from

the fourth stage, Faculty of Physical Education and Sports Sciences - University of Babylon, from the research community and outside the research sample, on Sunday, 1 5/1/2023, in order to ensure the clarity of paragraphs and instructions of the scale that the sample, and the clarity of the positions of the offensive tactical handball behavior For students.

### Main experience

The application of the academic self-motivation scales, the skill self-motivation and the attitudes of offensive tactical behavior were conducted on the (32) students of the fourth stage, on (Monday, Tuesday) 23-24/1/2021.

### Scientific foundations

#### Validity of the two standards

Check the sincerity of the two scales and the offensive tactical behavior in handball through the indicator of virtual validity, which is found depending on the external appearance of the test, and this type of validity was achieved when the paragraphs of the scale and the offensive tactical behavior test in handball were presented to a group of experts and specialists to express their opinion on the validity of the paragraphs and the positions of the tactical behavior or not.

#### The Reliability

In order to verify the reliability of the scale that the test used the method of segmentation half, as the paragraphs of the scale J (academic self-motivation, self-skill) and the test of offensivetactical behavior into individual and other even paragraphs, and according to the correlation coefficient (Pearson) between the scores of the two groups mediated by the statistical bag (spss), as in the scale of academic self-motivation reached the degree of stability (0.82), and to find the full degree of reliability used equation (Spearman - Brown), as the degree of reliability then (0.90), which is a high s indicates the reliability of the scale, and for the paragraphs of the scale of self-skill reached reliability factor half of the test (0.67) and the coefficient of total reliability (0.80), a high value indicating the stability of the scale, and for the positions of the offensive tactical behavior The reliability coefficient was half the test (0.72), the total reliability coefficient was (0.84), which is a high value indicating the reliability of the scale.

#### The discriminatory function of the student

The discriminatory analysis was used to describe the students (discrimination between students) into two categories in the research variables (academic self-motivation, self-skill, offensive tactical behavior), knowing that the researcher called the term (distinguished) on students who possess academic self-motivation, self-skill and offensive tactical behavior, and the term (non-distinguished) on students who do not They possess academic self-motivation, self-skill and offensive tactical disposition.

#### Statistical means

The Statistical Portfolio for Social Sciences (SPSS) was used to extract the results.



**Presentation, analysis and discussion of results****Presentation, Analysis and discussion of the results of research variables****Table 2:** The value of the mean, hypothesis, standard deviation, and the calculated value of (t) for variables

Variables	Mean	Standard deviation	Hypothetical mean	(t) Calculated	Sig level	Sig type
Academic self-motivation	55.438	6.080	48	6.920	0.000	Sig
Self-skill	49.313	5.152	44	5.833	0.000	Sig
Offensive tactical action	26.375	2.485	24	5.405	0.000	Sig

It is clear from Table (2) that the value of the arithmetic mean of the academic self-motivation scale reached (55.438) degrees, and the value of the standard deviation reached (6.080) and after comparing the mean with the hypothetical mean, it was found that it is higher than the hypothetical mean, and to test the significance of these differences statistically, the T-test was used for one sample, the calculated T value was (6.920) which is statistically significant at the level of significance (0.05).

It turns out that the value of the mean of the skill self-scale amounted to (49.313), and the value of the standard deviation amounted to (5.152), and after comparing mean with the hypothetical mean, it was found that it is higher than the hypothetical mean, and to test the significance of these differences statistically, the T-test was used for one sample, the calculated T value appeared at the value of (5.833), which is statistically significant at the level of significance (0.05).

It turns out that the value of the mean of the positions of the offensive tactical behavior in handball amounted to (26.375), and the value of the standard deviation (2.485), and after comparing the mean with the hypothetical mean, it was found that it is higher than the hypothetical mean, and to test the significance of these differences statistically, the T-test was used. For one sample, the calculated T value appeared at a value of (5.405) which is statistically significant at the level of significance (0.05).

**Presentation, analysis and discussion of the correlation between academic self-motivation and skill self-behavior of offensivetactics****Table 3:** The correlation between academic self-motivation and skill self-behavior

Variables	Correlation coefficient	Sig level	Sig type
Academic self-motivation	0.885	0.000	Sig
Self-skill	0.930	0.000	Sig

Table (3) shows that there is a positive significance correlation between academic self-motivation and offensive tactical behavior in handball among students, that is, the greater the academic self-motivation of students, the greater

their tactical behavior, if we see students accepting academic work with enthusiasm and activity, and making the maximum effort to obtain high grades in school subjects and determined with desire and passion to succeed with excellence and love the environment University, we look at them as possessing motivation study, which leads to their activity and movement and thus will affect the tactical behavior and find appropriate solutions during the offensive tactical behavior handball, and sees (El-Khouly 2002) <sup>[8]</sup> that academic motivation refers to the set of physical, psychological or social forces that urge students to make the maximum effort to overcome academic obstacles and associated activity, In light of this, the behavior associated with achievement in academic work is a function of two important factors, namely the motivation to achieve success and this motivation makes the student go towards the goal, and the motivation to avoid failure, which makes the student move away from the goal. (Al-Khouli: 2002, 213)

It is also shown from Table (3) that there is a direct moral correlation between the skill self and the offensive tactical behavior of handball among students, that is, the greater the skill self in students, the greater the tactical behavior they have, that students are interested in what they learn, and they are more effective and active in performing lesson skills, and tend to choose tasks in which there is a novelty and a challenge to achieve high academic achievement, The university environment constitutes the appropriate climate that helps the student to acquire self-skill, as well as the role of the teaching staff in directing students to the correct style and high ability in analyzing play situations and thus choosing the appropriate tactical behavior. In addition to the feelings and emotions that are related to situations, which leads to the selection of the successful alternative from among the proposed alternatives and making the right decision.

**Discriminatory classification according to academic self-motivation and skill self as a function to predict the level of offensive tactical behavior of students in handball:**

To identify the discriminatory classification according to academic self-motivation and self-skill as a function to predict the level of offensive tactical behavior of handball students (distinguished, and non-distinguished).

**Table 4:** Results of the classification of distinguished and non-outstanding students

Adjective	The Collection		Total
	The distinguished yen	Other than the distinguished yen	
Academic Self-Motivation	30	2	32
Self-skill	28	4	32
Offensive tactical behavior	27	5	32

It appears from Table (4) that there are (30) distinguished students in their possession of academic self-motivation and there are (2) non-distinguished students. When, either the characteristic of self-skill there are (28) distinguished students and nine in their possession of the characteristic of self-skill and (4) students are not distinguished. When, either attitudes

of tactical behavior Offensive There are (27) students distinguished in possession of offensive tactical behavior and (5) students are not distinguished.

**Presentation, analysis and discussion of the results of predicting offensive tactical behavior through academic**

**self-motivation and self-skill:**

To develop a predictive equation through which the degrees of offensive tactical behavior of students are predicted in

terms of academic self-motivation and skill self, the multiple regression method was used, and Table (5) shows the values of the multiple regression equation.

**Table 5:** Correlation coefficient and the percentage of the contribution of academic self-motivation and skill self-motivation to offensive tactical behavior

Nature of the correlation coefficient	Correlation coefficient value	Contribution Percentage R2	Degrees of freedom	Standard error	Calculated F value	Itself
Multiple	0.936	0.868	2-29	0.902	103.257	0.000

Table (5) shows that the contribution of academic self-motivation and self-skill to the offensive tactical behavior of handball for students was good, and this is confirmed by the calculated value of (F) of (103). 257) which indicates that the

covariance between the variables was significant, as the value of (f) was statistically significant at the level of significance (0.000) which is less than (0.05).

**Table 6:** The predictive equation of offensive tactical behavior through academic self-motivation

Variables	Transactions		t calculated	Sig level	Sig type
	Nature of the laboratories	Coefficient value			
	Constant (a)	3.945	2.514	0.018	Sig
Academic Self-Motivation	1B	0.102	2.654	0.017	Sig
Self-skill	2b	0.340	4.679	0.000	Sig
The predictive equation for offensive tactical behavior in terms of academic self-motivation and skill self	Offensive tactical behavior = the value of the constant coefficient A + (B1 x academic self-motivation) + (B2 x skill self).				

Table (6) for the values of multiple regression equations and the predictive equation shows the possibility of knowing the expected degree of tactical behavior in terms of the interaction of academic self-motivation of students, as it is shown from the table the significance of the regression tendency parameters by testing them with a value of (t), which appears to be a function at the level of significance (0.017) and (0.000), which indicates the high possibility of predicting the tactical behavior in terms of academic self-motivation and skill self of students, and the following example is a practical application of the predictive equation: If we assume that the score of one of the students in the academic self-motivation scale was (55) and the skill self-scale (49) The degree of offensive tactical behavior is as follows:

Offensive tactical behavior = 3.945 +(0.102×55) + (0.340×49)= 26.366 It is close to the mean score of the sample in the scale of tactical behavior of (26.375). Thus, the objective of the research was achieved.

From the foregoing, the development of a predictive equation for the behavior of the offensive handball tactical through academic self-motivation and self-skill is an important practical step in order to know the degree of offensive tactical behavior in handball among students through these two variables because of their close association with the tactical behavior, and this indicates that academic self-motivation and self-skill play an important role Very and the basis for the offensive tactical behavior of handball.

**Conclusions and Recommendations**

**Conclusions**

1. The sample of fourth-stage students enjoyed a high level of academic self-motivation, self-skill and offensive tactical behavior in handball.
2. The results showed a significant correlation between academic self-motivation and offensive tactical behavior in handball among students.
3. The results showed a significant correlation between the skill self and the offensive tactical behavior of handball among students.
4. The discriminatory classification according to academic

self-motivation and skill self-motivation appeared as a function to predict the level of offensive tactical behavior in handball for students.

5. Deriving a predictive equation through which the offensive tactical behavior of handball can be predicted in terms of academic self-motivation and self-skill of students.

**Recommendations**

1. Attention to the development of academic self-motivation and self-skill among students through the use of various programs and methods because of its great impact on academic achievement.
2. Activating the role of educational institutions of various components and facilities in developing academic self-motivation and skill self-motivation among their students.
3. The need for the university to work on strengthening the skill self by updating the sports curricula in line with the developments and developments in the sports community and strengthening relations between the sports university and the various institutions of the sports community through field visits, seminars, research and student participation in them.
4. Conducting similar studies that include other psychological aspects to predict offensive tactical behavior in handball
5. Adopting the predictive equation for the purpose of anticipating the offensive tactical behavior of handball for students.

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**Appendix (1)**

**Attitudes of offensive tactical behavior in handball**







Ninth position



Tenth position



Eleventh position



Twelfth position



Appendix (2): Corrective keys to test offensive tactical behavior

Attitudes	1	2	3	4	5	6	7	8	9	10	11	12
First choice	2	1	3	1	1	1	2	3	1	1	2	2
Second choice	3	2	1	3	3	3	3	2	3	3	1	1
Third choice	1	3	2	2	2	2	1	1	2	2	3	3