



Attentional control and its relationship to the shooting accuracy of the University of Diyala futsal team players

Control de la atención y su relación con la precisión de tiro de los jugadores del equipo de fútbol sala de la Universidad de Diyala

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Abstract

Objective: To identify the relationship between attentional control and shooting accuracy for players on the University of Diyala futsal team.

Research methodology: The researcher used the descriptive approach using the correlational method because it is the most appropriate method for the nature of the problem and achieving the study's objectives. The (University of Diyala) futsal team players, (16), represented the research players for the 2024-2025 academic year; the research sample was randomly selected by lottery, comprising 14 players, representing 87% of the research community. Two (2) players were excluded from the exploratory study, as they were not part of the main sample.

Result: Researchers note that the arithmetic mean for the attentional control test was (7.34), while the arithmetic mean for the scoring accuracy test was (14.32). The calculated (r) value was (-0.434). When compared to the tabular (r) value at a significance level of (0.05) and a degree of freedom of (13), which was (0.532), a significant correlation between attentional control and scoring accuracy in futsal is evident. The researcher attributes this to the fact that attentional control is an important variable in sports competitions, especially those that require concentration, rapid perception, and the ability to analyze logically based on the foundations of the sports training process.

Conclusions: The research sample exhibits a level of attentional control while performing the shooting skill in futsal, the research sample exhibits good performance in performing the shooting skill in futsal, and there is a significant correlation between attentional control and shooting accuracy in futsal.

Keywords

Attentional control; shooting accuracy.

Resumen

Objetivo: Identificar la relación entre el control atencional y la precisión de tiro en los jugadores del equipo de fútbol sala de la Universidad de Diyala.

Metodología de la investigación: El investigador utilizó un enfoque descriptivo con el método correlacional, ya que es el más adecuado para la naturaleza del problema y para alcanzar los objetivos del estudio. de investigación estuvo representada por los jugadores del equipo de fútbol sala de la Universidad de Diyala, 16 jugadores para el curso académico 2024-2025. La muestra de investigación se seleccionó aleatoriamente por sorteo, compuesta por 14 jugadores, lo que representa el 87% de la de investigación. Dos jugadores fueron excluidos del estudio exploratorio por no formar parte de la muestra principal.

Resultado: Los investigadores observaron que la media aritmética de la prueba de control atencional fue de (7,34), mientras que la media aritmética de la prueba de precisión de tiro fue de (14,32). El valor (r) calculado fue de (-0,434). Al comparar el valor tabular (r) con un nivel de significancia de (0,05) y un grado de libertad de (13), que fue (0,532), se evidencia una correlación significativa entre el control atencional y la precisión de tiro en fútbol sala. El investigador atribuye esto a que el control atencional es una variable importante en las competiciones deportivas, especialmente en aquellas que requieren concentración, percepción rápida y capacidad de análisis lógico, basándose en los fundamentos del proceso de entrenamiento deportivo.

Conclusiones: La muestra de investigación muestra un buen nivel de control atencional al ejecutar la técnica de tiro en fútbol sala, y existe una correlación significativa entre el control atencional y la precisión de tiro en fútbol sala.

Palabras clave

Control de la atención; precisión de tiro.

Introduction

In the second half of the last century, the world witnessed significant developments in various sports sciences and knowledge, including football, which is one of the most popular and widely played sports. It has global significance and is characterized by multiple skills, the mastery of which depends on players possessing sufficient physical and kinetic fitness, which contributes to successful skill development.

Futsal represents one of the developments in modern football. It is a new style of play and a fundamental pillar of the development of football. It is an ancient and modern game, ancient in origin and source, yet modern in its style and independence. Developed countries, and Iraq in particular, are striving to develop football and all the rules related to this game and raise the skill level of its players. This will create a strong foundation for this game in Iraq to become a competitive game and of interest to athletes and specialists.

Attentional control is crucial to the precision of football skills and is a very important aspect, as every player needs it to perform their tasks to the fullest. It represents mental and psychological responses to external stimuli, interpreting and organizing them in the brain to perform kinetic and skill tasks to the fullest. The concept of attentional control has been addressed by many researchers and specialists from various perspectives. Sports psychologists define attentional control as: the ability to successfully perform a desired behavior, and the desired behavior may involve a sport.

Attentional control is an important psychological variable for an athlete, enabling them to perform various skills correctly. This is primarily due to the athlete's perception and cognitive system, which can sometimes be difficult to process with the overwhelming amount of information and stimuli. The cognitive system has a limited capacity, and it has become necessary to determine the volume of stimuli an athlete receives through the senses. This type of behavior requires organization and regulation of these stimuli and how to deal with them without disrupting concentration, attention, and decision-making. Attention consists of two important processes: selection and attentional control. This is what William James mentioned when discussing the topic of attention. He was the first to refer to the concept of attentional control, a cognitive-psychological process that involves selecting specific stimuli, prioritizing information and ideas, while ignoring unrelated and distracting stimuli. Therefore, attentional control is a relatively modern concept that has received widespread attention in recent years in the fields of psychology in general, and sports and cognitive psychology in particular. Attentional control is linked to the athlete's self and their awareness of their ability to organize their thoughts and abilities while participating in highly competitive matches. Given the limited space in this game, the small goal, the proximity of the audience, and the rapid decision-making process, the player requires high attentional control to improve the accuracy of their shooting skill, as this skill requires a high level of technique from the player. Psychological factors are a key factor in achieving success and athletic achievement. At the forefront of psychological factors is the emotional aspect and player control, as it is one of the psychological factors associated with achieving victory and athletic achievement. Emotional situations in athletic competition have an impact on a player's physical, skill, and tactical state.

The importance of this research lies in its scientific attempt to uncover the relationship between attentional control, an important and fundamental psychological factor for every player, and the shooting skill of players on the University of Diyala's futsal team for the 2024-2025 season.

Research Problem

A futsal player must possess the psychological, kinetic, and physical abilities, as well as the basic skills necessary to achieve the desired excellence. Psychological influences have negative effects on the player, especially when faced with a difficult skill or move on a small field. The player feels pressured, which increases their need for greater balance and a good sense of attentional control while performing an important skill such as shooting.

Since futsal is an activity that contains essential skills that require high concentration and attention, emotional control, and control over one's behavior in appropriate situations, it also requires control of one's abilities and capabilities, and control over external influences, such as the interference of others or the influence of luck or chance. Therefore, the researcher found it urgent to study the nature of the relationship between psychological influences (attentional control) and their relationship to the accuracy of futsal shooting, and to explore the importance of the interrelationship between these variables



to develop a problem worthy of study. The researcher also wanted to provide a modest scientific contribution to the limited research that has addressed these topics, in order to develop a formula for how players deal with difficult and unexpected situations that affect their performance level and their reduced skill performance. This prompted the researcher to study this problem.

The problem can be summarized in the following question: Is there a relationship between attentional control and shooting accuracy in futsal?

Research Objective

To identify the relationship between attentional control and shooting accuracy for players on the University of Diyala futsal team.

Research Hypothesis

There is a statistically significant relationship between attentional control and shooting accuracy for players on the University of Diyala futsal team.

Definition of Terms

Attentional Control

Defined it as "a higher, organized, and planned mental process that aims to help the individual select meaningful stimuli and ignore and avoid irrelevant stimuli." (Abdullah, 2017)

Defined it as "the athlete's ability to withstand various pressures and the ability to control and select responses that serve the performance of kinetic duties." (Al-Jubouri, 2021)

Method

Research Methodology

The researcher used the descriptive approach using the correlational method because it is the most appropriate method for the nature of the problem and achieving the study's objectives. The research Community was represented by the (University of Diyala) futsal team players, (16) players for the 2024-2025 academic year.

The research sample was randomly selected by lottery, comprising 14 players, representing 87% of the research community. Two (2) players were excluded from the exploratory study as they were not part of the main sample.

Research Tools and Data Collection Methods

- Arabic Sources and References.
- Personal Interviews.
- Questionnaire.
- Computer (Laptop).
- Handheld Calculator.
- Indicators.
- Stopwatch.
- Footballs.
- Adhesive Tape.
- Small Goal.
- Whistle.

Defining Research Variables

Attentional Control Scale

The Attentional Control Scale was used. This scale was constructed, standardized, and applied to university students by (Abdul-Hafiz, 2015) (Appendix 1). It was presented to a group of experts and specialists in the field of sports psychology for the purpose of modifying the wording of some of the statements to make them more appropriate and relevant to soccer players (Appendix 2). The scale consists of (45) statements, allowing players to express their attitudes toward the scale components. The highest score on the scale is (225), and the lowest score that can be achieved on the scale is (45), with a hypothetical mean of (135). Table (1) shows the answer options for the scale. Table (2) shows the numbers of the negative and positive statements on the scale. Appendix (3) shows the scale's statements after they were modified by the experts.

Table 1. Shows the five-point rating scale and its answer options

Paragraphs	Always	Mostly	Sometimes	Rarely	Never
Positivity	5	4	3	2	1
Negativity	1	2	3	4	5

Table 2. shows the sequence of negative and positive statements for the scale

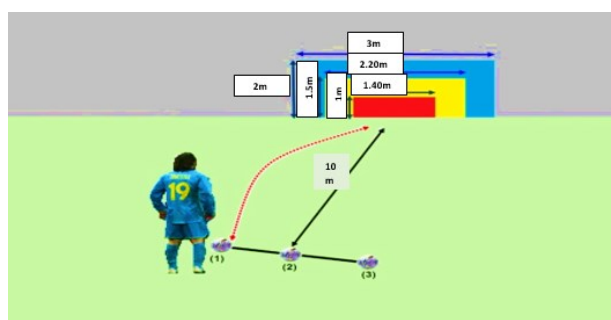
Paragraphs	Phrase numbers	Total
Positivity	43 42 41 40 39 38 37 36 35 34 32 31 30 29 28 27 26 24 23 22 18 17 16 13 11 10 9 7 1 45 44	31
Negativity	33 25 21 20 19 15 14 12 8 6 5 4 3 2	14
	Total	45

Overlapping Rectangles Foot Shooting Test (Khalil, 1991)

Purpose of the test: To measure shooting accuracy.

- Equipment: (3) indoor soccer balls, a smooth wall with three overlapping rectangles drawn on it, the dimensions of which are: the large rectangle (3m x 2m), the middle rectangle (2.20m x 1.50m), and the small rectangle (1.40m x 1m). The ground represents the lower edge of the rectangles, and a line is drawn in front of the wall at a distance of (10m).
- Performance Description: The tester stands behind the starting line (10m) and then shoots the three balls toward the wall in succession, attempting to hit the large rectangle.
- Performance Conditions: The test begins with ball number (1) and ends with ball number (3).
- Shooting Method:
 - The tester receives (one mark) if the ball hits the small rectangle.
 - The tester receives (two marks) if the ball hits the middle rectangle.
 - The tester receives (three mark) if the ball hits the large rectangle.
 - The tester receives (zero mark) if the ball lands outside the three rectangles.

Figure 1. show shooting accuracy test



Scientific foundations for the tests used in the research

Test validity

To determine the validity of the tests, the researcher used two types of validity: content validity, which relies on the opinions of experts and specialists, and subjective validity by finding the root of the stability coefficient, as shown in Table (3).

Test stability

To determine the stability coefficient, the researcher used the test-retest method, as it is considered the most appropriate method for assessing test stability. Table (3) shows the stability coefficient and validity coefficient for the tests used.

Table 3. Shows the stability coefficient and subjective validity.

No.	Test	Unit of Measurement	Stability coefficient	Self- validity
1	kinetic balance test	degree	0.914	0.956
2	foot shooting test on overlapping rectangles	degree	0.894	0.945

Exploratory Experiments

The experiment was conducted on a sample of (2) players outside the primary research sample and took place on 11/12/2024.

First exploratory Experiment (Measuring Attentional Control in Futsal)

The purpose of this application was to determine the clarity of the questions and instructions, as well as the time required to answer the attentional control scale statements.

Second Exploratory Experiment (Basic Skills Tests)

The purpose of conducting this exploratory experiment was to ensure the readiness of the tools, determine the time required for each test, as well as the total test time, and assess the competence of the support team. After completing the exploratory experiment, the readiness of the tools and the support team and the appropriateness of the time were verified.

Main Research Procedures

Main Experiment

The main experiment was conducted on a research sample of (14) players representing the University of Diyala Futsal Team. The main (field) experiment for the research sample began on Sunday, January 14, 2024, to test the attentional control scale. The shooting accuracy test was conducted on Sunday, January 21, 2024. The test scores were then collected and statistically processed.

Findings

Presentation, Analysis, and Discussion of the Results of the Relationship between Attentional Control and Shooting Accuracy

Table (4) presents the statistical data on the relationship between attentional control and shooting accuracy in futsal:

Table 4. Shows the arithmetic means and the calculated (r) value for the relationship between attentional control and shooting accuracy in futsal.

No.	Variables	Mean	R Calculated	R table	Sig
1	Attentional control	7.34	0.434-	0.532	Sig
2	Shooting accuracy	14.32			

The tabular value of (r) at a significance level of (0.05) and a degree of freedom of (12)



Discussion

From Table (4), we note that the arithmetic mean for the attentional control test is (7.34), while the arithmetic mean for the shooting accuracy test was (14.32), and the calculated value of (r) was (-0.434). When compared to the tabular value of (r) at a significance level of (0.05) and a degree of freedom of (13), which is (0.532), it becomes clear that there is a significant correlation between attentional control and shooting accuracy in futsal. The researcher attributes this to the fact that attentional control is an important variable in athletic competitions, especially those that require focus, rapid perception, and the ability to analyze logically based on the foundations of the athletic training process. This was confirmed by (Abdul-Hafiz, 2015). A player's control, maintaining composure, kinetic balance, and self-control in the most difficult circumstances, and avoiding confusion, are necessary and healthy factors for the player to perform kinetic and skill performance, whether defensive or offensive, correctly and achieve victory in the match.

This is in addition to the series of mental and cognitive processes that mediate between receiving stimuli and producing an appropriate response. It also includes the ability of players to pay attention to selecting closely related information by focusing on processing it and ignoring irrelevant information. Furthermore, players possess cognitive ability, which is an important stage complementary to attention and its control. Therefore, players' correct perception of the skill of shooting in soccer is evidence of their mastery of attentional control. Researchers believe that the variable of attentional control plays a major role in skill performance. This is because football requires high levels of physical stability to apply and master its basic skills. Training that focuses on intensifying control exercises, focusing attention, and kinetic coordination has a positive impact on improving the accuracy of football shooting.

Our study agrees with the study of, whose results confirmed that attentional control exercises have an impact on learning shooting accuracy and the effective role of attention in maintaining the player's overall balance when changing or repositioning the ball, enabling him to monitor it from all positions. The more the player maintains control while performing the movement, the more accurately he achieves (Muhammad, & Awad, 2021) believe that attentional control is clearly when performing all the movements required for basic futsal skills, as it requires coordinated movements between the legs, arms, and torso. Attentional control is considered one of the most important components of high kinetic ability. Furthermore, the performance requirements of futsal and the nature of playing in a small space require a high level of concentration and attentional control to perform other aspects of the game. Researchers also attribute this correlation between attentional control and shooting accuracy to a series of mental and cognitive processes that mediate the reception of stimuli and the production of an appropriate response. In addition to players' ability to pay attention when selecting information, they possess the ability to perceive, as it is a complementary stage to attention and control.

Therefore, players' awareness of their shooting accuracy is evidence of their mastery of cognitive organization. Players are alert, attentive, and aware of everything happening around them. They attempt to overcome some side effects and experiences, which may be external, such as interactions with others, or internal, such as thoughts and emotions. This helps them select appropriate responses to the various situations they encounter during the match.

Conclusions

- The research sample exhibits a level of attentional control while performing the shooting skill in futsal.
- The research sample exhibits good performance in performing the shooting skill in futsal.
- There is a significant correlation between attentional control and shooting accuracy in futsal.



Recommendations

- Attention should be given to the psychological preparation of soccer players in a manner that helps them achieve stability and psychological harmony by identifying their various needs and attempting to address any deficiencies they may suffer from.
- Educating football players through ongoing courses that emphasize the importance of mental process tests, including attentional control, as well as skill tests.
- Developing shooting accuracy by providing a series of exercises that help players perform assigned tasks effectively.

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Appendix

Appendix 1. Attentional Control Scale

No.	Paragraphs	It doesn't apply to me at all.	Applies to me to a lesser extent	Applies to me to a moderate degree	Applies to me to a great extent	It applies to me very much.
1	I always remember to do my kinetic duties.					
2	My thoughts stray to my surroundings when I'm using the necessary expertise.					
3	I find it challenging to do skill tasks in the allotted time.					
4						
5	I have trouble concentrating on my performance because I am distracted by other things.					
6	I'm not paying attention to what's going on in the game.					
7	Even little things can divert my attention.					
8	I have difficulty organizing what is related to skill performance.					
9	I think about the kinetic performance before starting it.					
10	I never forget to fulfil my kinetic responsibilities.					
11	My mind wanders to my environment when I'm using the required skills.					
12	Completing skill assignments in the allocated time is difficult for me.					
13	Distracted by other things, I find it difficult to focus on my performance.					
14	I am not keeping up with the game's happenings.					
15	Little things have the power to distract me.					
16	I can easily complete challenging tasks when given the opportunity.					
17	I never forget to fulfil my kinetic responsibilities.					
18	When something distracts me i quickly return to what i was paying attention to.					
19	I have trouble switching my attention from one item to another.					
20	Skills requiring simultaneous completion are hard for me to do.					
21	I have trouble focussing on both listening to the coach and using my talents during a game.					
22	I can do two distinct tasks with ease.					
23	I am able to finish many things at once.					
24	I go on to another ability when I'm frustrated with one.					
25	When I am given an unexpected assignment, it has no bearing on how well I do the one before it.					
26	In light of the primary objective, I hone my kinetic reflexes to execute certain talents. I manage everyone's expectations with ease and efficiency.					
27	I have trouble switching my attention from one item to another.					
28	Skills requiring simultaneous completion are hard for me to do.					
29	I have trouble focussing on both listening to the coach and using my talents during a game.					
30	When I'm using the necessary abilities, my thoughts stray to my surroundings.					
31	I find it challenging to do skill tasks within the allotted time.					
32	I have trouble concentrating on my performance when I'm distracted by other things.					
33	I'm not following what's going on in the game.					
34	Small things can divert my attention.					

- 35 If given the chance, I can easily finish difficult projects.
- 36 I always remember to complete my kinetic obligations.
- 37 When I'm using the necessary abilities, my thoughts stray to my surroundings.
- 38 I can perform difficult skills in a match, even if i haven't practiced them sufficiently.
- 39 I can prioritize my interests according to the circumstances.
- 40 My performance during a match changes according to the task i am assigned to perform.
- 41 I am able to eliminate any influences that conflict with my performance of my athletic duties.
- 42 I repeat and repeat my performance of difficult or new skills.
- 43 I can perform the required skill by exploring multiple alternatives.
- 44 I organize the athletic duties required of me.
- 45 I remember to perform my kinetic tasks constantly.

Appendix 2. Experts whose opinions were surveyed by the researcher regarding the modification of the attentional control scale

No.	Aca- demic title	Name	Specialization	College and university
1	Prof. Dr.	Kamel abboud hussein	Sports psychology	College of physical education and sports sciences / university of diyala
2	Prof. Dr.	Saad abbas al-janabi	Sports psychology	College of physical education and sports sciences / university of tikrit
3	Prof. Dr.	Othman muhammad shahada	Management and organization	College of physical education and sports sciences / university of diyala
4	Prof. Dr.	Muslim hasab allah ibrahim	Sports psychology	College of physical education and sports sciences / university of diyala
5	Prof. Dr.	Hassanin naji	Sports negation	College of basic education / university of diyala