Contribution of Mental Processes as Predictors of Skill Performance in Women's Futsal Players in Saudi Arabia

By

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***Abstract*:**

The current research aims to identify the degree of contribution of some mental processes in predicting skill performance in a sample of (48) players in indoor soccer from some women's teams in the Kingdom of Saudi Arabia. The mental processes tests were used and conducted by the researcher, and the skill performance test in indoor soccer for women's teams (passing, dribbling, scoring). The results reached: There is a correlation between mental processes (field intelligence, attention focus, response speed) and skill performance in indoor soccer in a sample of players in some women's teams in the Kingdom of Saudi Arabia, and that there is a high degree of contribution of mental processes in predicting skill performance in indoor soccer from higher mental processes including (field intelligence, attention focus, response speed) in a sample of players in some women's teams in the Kingdom of Saudi Arabia. Among the recommendations that the research came out with is the necessity of paying attention to mental processes during the process of learning and performing indoor soccer skills for different age groups.

Keywords: Mental processes - Skill Performance - Indoor Soccer - Women's Teams - Kingdom of Saudi Arabia.

Introduction:

The development of any sport and its arrival at the required level depends on the combination of all efforts and the elimination of all problems facing the game and the removal of all negatives in order to raise its level. Studies in the field of psychology have proven the close relationship between the level of mental abilities and the excellence of the athlete.

Sports receive wide and great attention in countries of the world in order to reach the highest levels of performance and achieve the best achievements in competitions and various sports, including indoor football. Continuous development and modern technology are the foundations used in various sports sciences due to their uniqueness in their methods, means and multiple and advanced theories, especially the higher mental processes, including (field intelligence, focus of attention, speed of response) that made sports take good steps towards progress and development, and this was not without planning or by chance, but on the contrary, it came as a result of real and advanced studies by researchers and diligent work by those in charge of sports and specialists. Futsal is characterized by changing situations and its speed during the process of skill performance in matches, and there is an overlap in many decisions between the attacking player who makes a decision aimed at correctly ending the attack and the defender from the opposing team, who must also make a quick decision to confront the attacking player and prevent him from implementing his decision and thwarting the attempt to complete the skillful motor performance.

Higher Mental Processes, including (field intelligence, focus of attention, and speed of response) play an important role in performing the skills of futsal in particular, as we deal with the level of the female gender, as it is an effective element in controlling various forms of behavior and that any motor or cognitive activity cannot be done except through it, and every duty or task in futsal during the game requires one or more important mental abilities, as these abilities are the basis of futsal players, which they acquire as a result of their interaction with the conditions of learning, training and competition.

One of the important technical aspects of the players is the skill capabilities, without which the special distinctive character of the type of sporting activity practiced will not appear. Futsal differs in diversity and distinction in its basic skills, and it is noticeable that the level of performance has increased significantly so that it has become in line with the development of playing methods or styles.

While futsal needs many scientific studies that contribute to inferring the actual reality to predict skill performance through some mental abilities and drawing a special path for each variable separately.

The research problem was defined by the following question:

• Is there a correlation between higher mental processes (field intelligence, focus of attention, speed of response) and skill performance in futsal among a sample of players in some women's teams in the Kingdom of Saudi Arabia?

• Can skill performance in futsal be predicted from mental processes including (field intelligence, focus of attention, and speed of response) among a sample of players in some women's teams in the Kingdom of Saudi Arabia?'

Research objectives:

• Identifying the possibility of predicting skill performance in light of mental variables, and determining the percentage of contribution of each mental variable to the skill performance of female futsal players in a sample of players in some women's teams in the Kingdom of Saudi Arabia.

• Finding a predictive equation for skill performance in futsal mental processes including (field intelligence, attention focus, response speed) in a sample of female players in some women's teams in the Kingdom of Saudi Arabia.

***Research Methodology and field Procedures*:**

- Research Methodology:

The descriptive and predictive approach was used.

Theoretical framework and previous studies:

The higher mental processes will affect the level of psychological preparation of players, including perception, attention, mental imagery, reaction speed, etc., and they are important matters in the field of scientific research for competitive sports, as focusing and constancy of attention plays a major and important role in the basics of performance required to raise and improve the athlete's level, especially in indoor soccer.

Skill in indoor soccer is the essence of the game, and a player with weak skill cannot reach high levels.

Basic skills are also a way to resolve multiple situations and conditions on the field with great boldness by the player, making decisions, and acting on the ball quickly.

- Mental processes in indoor soccer:

Mental processes are an essential part of athletic performance in indoor soccer, and are considered an essential component for achieving excellence in any sport. Mental processes include a number of brain activities that include memory, attention, decision-making, critical thinking, and mental imagery. Studies have shown that athletes with high mental skills tend to improve their skill performance (Dinu et al., 2021).

- ***Memory*****:** Memory plays a vital role in remembering sports techniques and match-specific skills in futsal, and the opposing team's movements, playing strategies, and previously learned tactics are remembered (Dimmock et al., 2020).

- ***Attention*****:** The ability to maintain focus during matches is very important. Futsal players need to maintain high attention to determine the best path for the ball, anticipate the opponent's movements, and react to changing situations in the game quickly (Ryan & Deci, 2021).

- Decision-making: In futsal, quick decisions, whether passing, shooting, or changing tactics, require quick reactions. Studying how mental processes affect decision-making can provide valuable information about skill performance (Fodor & Jones, 2022).

Skill Performance in Futsal**:** Sports such as futsal rely on advanced skill techniques, and skill performance is a key indicator of a player's success in matches, and skill performance in football includes several areas such as passing, shooting, tactical movements, and defensive coverage.

- Individual skills: This includes the player's technical skills such as handling the ball, dribbling, and shooting. - Group skills: This includes coordination between players, understanding, and building attacks.

- Tactics: Adapting to variables in the game and constantly changing methods (Al-Obaid, 2023).

The Relationship Between Mental Processes and skill performance:

Previous studies have shown a close relationship between mental processes and athletic performance. For example, players with high concentration and attention skills have a greater chance of success in competitive sports.

The ability to make decisions quickly and with detailed intelligence is important to maintain the skill level in futsal, and mental processes such as memory and decision-making can greatly affect technical and tactical performance.

- The role of attention: Team play in futsal requires players to move between different mental movements quickly.

Players who can maintain attention can make better decisions during play.

Women's sports in Saudi Arabia:

Women's sports in Saudi Arabia have witnessed remarkable development in recent years, as many women's teams have been launched in various sports, including football. Within the framework of the Kingdom's Vision 2030, the Kingdom seeks to improve women's participation in sports through government support and the provision of sports facilities for women.

- The Impact of Women's Sports on Society:

Women's sports, including futsal, are an important means of empowering women and enhancing their social role.

The development of women's football teams contributes to raising the skill level of this category of players in the Kingdom.

- Challenges Facing Women's Sports:

Despite the remarkable development, women's sports face some challenges such as lack of support or the small number of specialized trainers.

However, there has been remarkable progress in recent years at the institutional and sports levels.'

The Importance of Research in Developing Women's Sports Performance:

This research seeks to study the extent to which some mental processes contribute to predicting skill performance in women's indoor soccer in the Kingdom of Saudi Arabia. The research includes conducting an analytical study to develop mental training strategies that may contribute to improving the skill performance of female players in sports.

Previous Studies on Mental Processes and Skill Performance in Women's Sports:

The study (Moran & Collet (2022) examined the effect of mental processes on skill performance in football and how mental processes such as decision-making and attention affect skill performance in football. The results showed that high attention and focus are key factors that affect players' success in effectively implementing skills, which emphasizes the importance of attention training for athletes in team sports.

The study (Moran & Collet (2022) showed that high-level futsal players have advanced mental skills compared to novice players. The study focuses on the importance of attention and quickly assessing situations in football and futsal, as rapid analysis of situations and strategic planning are important factors for high performance.

The study (Jones & Fodor (2021) also examined mental processes and mental training in women's sports by examining the effect of mental training on improving skill performance in athletes, with a focus on women's sports. The results showed that mental processes such as improving focus and attention had a significant relationship with achieving better skill performance in team sports such as football, which emphasizes the need for mental training In developing women's athletic performance.

The study (Schneider & Büsch (2021) examined the effect of attention and focus on skill performance in futsal, and it was found that training players on mental focus and sustained attention improves performance in competitive situations, especially in sports that require quick decisions such as futsal.

The study (Dimmock et al. (2020) examined the role of mental processes in athletic performance by examining the effect of mental processes such as attention, decision-making, and memory on skill performance in team and individual sports. The results showed the importance of mental focus among athletes in making quick and effective decisions, which contributed to improving skill performance.

The study (Al-Obaid & Jones (2020) also reviewed women's sports in the Middle East and the impact of mental processes by focusing on women's sports in the Middle East region, and reviewed the effects that mental processes such as memory and attention can have on the performance of female players in sports such as football and futsal. The results showed an effect of attention and decision-making on performance in competitive sports, with a focus on team sports such as football. Researchers have found that women who have advanced mental skills in concentration and quick decision-making achieve better skill performance, and this also applies to women's futsal teams.

A study (Lopes et al. (2020) investigated the effect of mental skills on skill performance in futsal. The results showed that working memory, sustained attention, and the ability to make quick decisions were among the basic mental skills that contribute to improving skill performance in futsal players.

The study (Williams & Ford (2020) also examined the important role of decision-making in futsal, and how rapid decision-making processes affect skill performance, and discusses the importance of mental training to improve a player's ability to make decisions under the pressure of fast competitions.

The study (et al. (2019 Gabbett) focused on the role of mental processes such as attention and decision-making in team sports such as football and futsal. The researchers discussed how rapid decision-making and attention processes affect improving players' skill performance, highlighting the difference between football and futsal players in terms of the use of different mental processes.

The study (Bélanger et al. (2019) examined the effect of attention and rapid decision-making on athletic performance in futsal, and focused in particular on how to use mental processes to achieve outstanding skill performance under pressure in fast-paced playing environments. The importance of cognitive and perceptual skills in improving players' skill performance in futsal emerged, and the researchers highlighted the role of cognitive training in improving the ability to perceive situations and react quickly to variables in the match.

While Williams & Ford (2019) examined the sports performance of professional female athletes by examining the influence of mental processes between mental expertise and rapid decision-making in sports, the results indicated that athletes with advanced mental skills, such as effective memory and sustained attention, achieve better results in sports that require rapid decisions such as football. In addition, the research addresses how women use these skills differently than men in team sports.

The study (Gabbett & Rhee (2018) focused on mental training and its effect on skill performance in football and futsal. The researchers indicated that improving mental processes such as attention and decision-making enhances players' ability to make faster and more accurate tactical decisions in real time, which contributes to improving their technical performance.

Research Conclusions and Directions:

- Previous studies show the importance of mental processes in improving sports skill performance, especially in sports that require focus and quick decision-making such as futsal.
- Based on these studies, it can be said that developing mental skills such as attention, memory, and decision-making plays a pivotal role in improving skill performance among female players in team sports such as futsal.
- Mental training should be part of the training program for female players to improve their technical and tactical performance.

Research community and sample: The research community was determined in 2022-2023, numbering (48) female futsal players in some teams in the Kingdom of Saudi Arabia, and they were all selected to represent the research sample.

Statement Ethics: The studies were conducted in accordance with local legislation and institutional requirements, and participants provided written informed consent to participate in this study.

Determining the Mental Operations Test in Women's Futsal: Prepared By: The researcher.

The field intelligence test was prepared by the researcher and its dimensions (response speed, attention focus, field intelligence) were determined in milliseconds (ms), i.e. (1/1000) of a second.

• Test description: The test contains (20) situations according to the responses of the five-point Likert method, graduated to obtain grades as follows (strongly agree 5 degrees, agree 4 degrees, neutral 3 degrees, disagree 2 degrees, strongly disagree 1 degree).

– Recording: A time of (6) seconds is given for each situation, and the number of situations given to the players reached (20) situations, and the responses are graded, noting that the highest score for the test is (100) degrees, and the lowest score is (20).

The Steps for Preparing the Mental Operations test in Women's Futsal Were as Follows:

1- Reviewing the theoretical framework and specialized scientific studies that dealt with mental operations in women's futsal.

2- Reviewing the relevant tests.

3- Applying an open questionnaire on mental processes in women's futsal, which included a question about the most important mental processes among women's futsal players.

Psychometric Characteristics of the Test of Mental Processes in Women's Futsal:

(A) Validity: The validity of the scale was confirmed by the following:

- Content Validity: The scale was presented in its initial form to ten specialists in sports sciences, and the views agreed upon by the arbitrators were taken into account, and the phrases that were agreed upon were excluded, and based on that, the scale now includes (40) phrases, with (10) phrases for each of its three dimensions.

(B) Reliability: The reliability of the scale was calculated as follows:

1- Test Retest Method: This was done by re-applying it to the standardized sample (100 students) with a time interval of two weeks, and calculating the correlation coefficient between the scores of the first and second applications. The correlation coefficients reached (0.834, 0.694, 0.687, 0.748) for the three dimensions of the test: field intelligence, attention focus, and response speed, and the total score, respectively, and all of them are significant at the level of (0.01).

2- Internal consistency method using the Cronbach Alpha equation. The reliability coefficient reached (0.824) for the field intelligence dimension, (0.827) for attention focus, (0.754) for response speed, and (0.737) for the entire scale. Final image of the test: (Appendix "1") .

The test for testing mental processes in women's indoor soccer in its final form consists of (20) statements, distributed over three dimensions: field intelligence, focus of attention, and speed of response. The high score indicates high mental processes, while the low score indicates low levels of mental processes. The following table shows the dimensions of the scale and its items.

Table (1) Dimensions of the test for mental processes in women's indoor soccer and its items

M	Dimensions	Items	Number
1	Field Intelligence	1-4-7-10-13-16-19 -17	7
2	Attention Focus	2-5-8-11-14-17-20	7
3	Response Speed	3-6-9-12-15-18	6
4	Whole Test	1-20	20

2-Skill Performance Test in Futsal :Prepared by: The researcher.

By reviewing many Arab and foreign scales that dealt with skill performance, a skill performance test in women's futsal was prepared, after reviewing many previous tests.

The current test includes (20) situations and (5) graded and different responses according to the situation, and distributed over (3) dimensions: passing, dribbling, and scoring.

***Psychometric Characteristics of the Skill Performance Test in* Women's Futsal: Prepared by: The researcher:**

The validity and reliability of the scale were calculated as follows:

(a) ***Validity:*** This was done through:

(b) *1- **Content validity:*** By presenting the scale to (12) specialists in sports sciences, and their full comments were taken into account.

(c) **Stability:** This was done through:

1- *Reapplication Method:* By applying the test to the standardization sample, and reapplying it after two weeks, and the correlation coefficient between the scores of the two applications was (0.787).

2- *Cronbach's Alpha Coefficient:* Its value reached (0.893) for the academic confidence dimension, (0.883) for the academic effort dimension, and (0.876) for the scale as a whole.

Final form of the scale: (Appendix 2) The scale in its final form consists of (20) situations as in the following table.

Table (2) Dimensions of the skill performance test in women's indoor soccer and items of each dimension

M	Items	Dimensions	Number
1	Passing	1-4-7-10-13-16-19 -17	7
2	Dribbling	2-5-8-11-14-17-20	7
3	Scoring	3-6-9-12-15-18	6
4	The whole test	1-20	20

Exploratory experiment:

The exploratory experiment was conducted on a sample of the research community of (6) female futsal players for the 2022/2023 season, in the Green Hall in Riyadh, Kingdom of Saudi Arabia.

Main experiment: The mental operations test and the skill performance test in futsal were applied to the research sample of (48) in the Green Hall in Riyadh, Kingdom of Saudi Arabia.

***Statistical methods*:** The statistical software package (SPSS) version (24) was used for statistical analysis in order to process the results.

- Display, analysis and discussion of the results:
- Display and analysis of the results of the values of the arithmetic means and standard deviations of the variables:

Table (3) Values of the Arithmetic Means, Standard Deviations, Median and Skewness Coefficient of the Variables

T	Variables	Unit	Measurement Mean	Standard Deviation	Median	Skewness Coefficient
1	Field Intelligence	degree	19.879	616.2	20	203.0
2	Attention Focus	degree	1.875	0.809	2	0.123
3	Reaction Speed	second	2.995	0.079	2.156	0.610
4	Passing	degree	5.732	653.1	6	223.0-
5	Dribbling	degree	1.184	689.0	1	312.0-
6	Scoring	degree	10.998	3.854	11	0.615

Table (3) shows the values of the arithmetic means, standard deviations, median and skewness coefficient for the research variables.

The values of the standard deviations of the variables after applying the appropriate choices showed a value less than their averages, which means achieving the goal of this procedure, which is to ensure the integrity of the relationship.

The table also showed that all values were under the normal distribution curve and the skewness values expressed the normal distribution values of the sample members for each variable, as the variables were normally distributed due to the limitation of the skewness values (±1).

This means that we can issue a judgment on the normality of the normal distribution, its symmetry and its lack of skewness to the right or left, which confirms that there is no dispersion of data for the research variables.

The correlation between field intelligence, attention focus and response speed with skill performance:

Table (4) Correlation coefficient between the dimensions of mental operations and skill performance

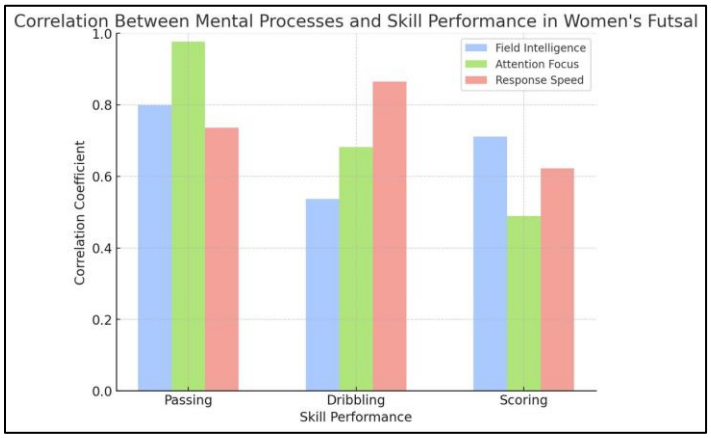
T	Variables	Passing		Dribbling		Scoring	
		Correlation coefficient	significance level	Correlation coefficient	significance level	Correlation coefficient	significance level
1	Intelligence Field	0.799	0.000	0.537	0.000	0.711	0.000
2	Attention Focus	0.976	0.000	0.682	0.000	0.489	0.002
3	Response Speed	0.736	0.000	0.865	0.000	0.622	0.001

Table (4) shows the values of the correlation coefficient between field intelligence, attention focus, response speed, and skill performance (passing, dribbling, scoring) in women's indoor soccer.

All correlations appeared significant because the significance level was less than (0.05). The researcher attributes the moral correlation between field intelligence and skills (passing, dribbling, scoring) in women's futsal to field intelligence being the mental process responsible for choosing the best solution from among the options available to the student and being one of the important factors in solving the problems that the learner faces.

She must choose the place where she can be present while learning the skills and choose the appropriate direction of the ball, the kicking force and the method in which she performs the skill, as the learner's ability to take the appropriate and effective solution from among a group of solutions available to her and in the shortest possible time or being present in influential locations or locations that prevent causing danger to the team plays an important role in the process of making the appropriate decision to perform motor skills in futsal. If the indoor player needs some intelligence during his physical and skill performance, he needs field intelligence when he performs those movements or skills (Saad Allah; and Al-Zuhawi: 2011, 249).

Figure (1) Correlation Between Mental Processes and Skill Performance in Women's Futsal



Returning to the table (4), figure (1) and noting the significant correlation between attention focus and skill performance skills (passing, scoring, dribbling) in indoor soccer, attention focus is a basic pillar for performing indoor soccer skills, in addition to its main role in developing the level of skill performance, and the learner's ability to focus attention when performing sports skills or movements is one of the most important processes of commitment to his limited
duties to display control over his skill performance. Some research has confirmed that the development of performance, which is an important basis for the success of motor skills, is linked to the athlete's ability to focus his attention, which in turn affects the accuracy, clarity and mastery of the technical aspects of the motor skill parts, as solving the motor task requires a great deal of focused attention from the athlete.

Here, the researcher attributes that focusing attention in indoor soccer skills is one of the important factors that help in implementing the skill task in indoor soccer, as it has an important role in implementing the requirements of appropriate skill performance, and that moving from one place to another in the skill requires high concentration and awareness of the spatial division of movement, and also leads to linking the various
independent motor elements in the overall unit of skill performance, and that the great importance of focusing attention provides a suitable climate for performing basic skills better.

Table (5) Contribution percentage of mental process variables

Skill	Nature of the correlation	coefficient Value of the correlation	coefficient Contribution percentage	Degrees of freedom	Standard Error	F value	Significance level	Result
Passing	Multiple	0.940	0.877	35-2	0.576	132.497	0.00	Significant
Dribbling	Multiple	0.629	0.361	35-2	0.612	11.474	0.00	Significant

The researcher believes that the speed of motor response in indoor soccer is very important, decisive and important for many different situations, as it is characterized by the element of surprise and frequent switching of positions from one state to another, such as changing the position from the attacking position to the defense position and vice versa, and this is done as quickly as possible and within moments.

Also, the competitor's movement has become more effective and surprising in terms of the nature of the game and the speed of performance in it, the subject and the diversity of learning methods.

In addition to that, the deception movements that are performed during the performance of motor skills are used to bypass defenders. From here, the indoor player needs to master the speed of responding to what the competitor does, that is, to be ready to make quick movements that prevent the competitor from achieving his goals and then achieve the best possible performance.

If the student or player does not have the ability to distinguish her from her competitor in defense, as well as attacking and confronting him and responding to his movements, without that, it becomes impossible to achieve victory.

Displaying the results of the percentage of contribution of some mental processes in predicting skill performance in indoor soccer for a sample of players in women's teams: Multiple regression was used in order to extract the value of the percentage of contribution of mental processes (field intelligence, attention focus, response speed) to skill performance in indoor soccer, and Table (5) shows this.

Table (5) shows the values of the correlation coefficient between field intelligence, attention focus, response speed, and skills (passing, dribbling, scoring) in indoor soccer, and the percentage of their contribution to the skills, all correlations appeared significant because the value of (f) was high and the significance level was less than (0.05).

Figure (2) Contribution rate of field intelligence, attention focus and response speed

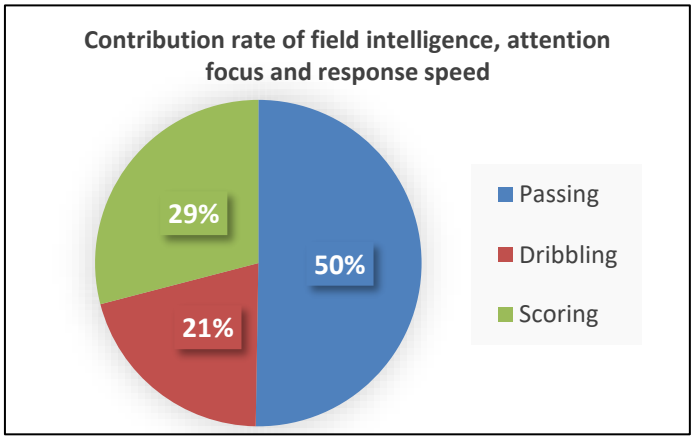


Figure (2) The percentage of contribution of field intelligence, attention focus, response speed, and skills (passing, dribbling, scoring) in indoor soccer

Presentation, analysis, and discussion of the results of predicting the passing skill in terms of field intelligence, attention focus, and motor response speed:

Table (6) The Predictive Equation for the Passing Skill through some Mental Abilities

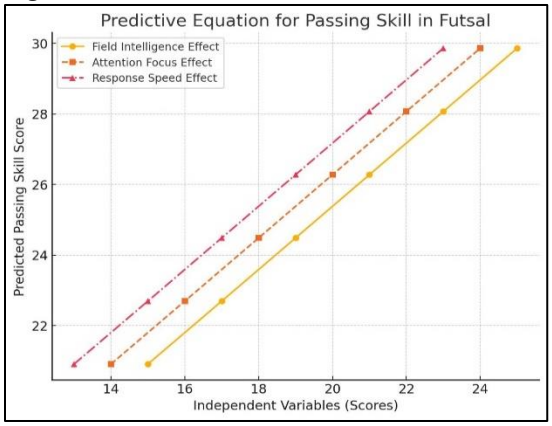
Variables	Transactions		Calculated T value	Significance level
	Nature of the constant parameter	Value of the constant parameter		
Constant	A	8.435	7.853	0.000
Field Intelligence	B1	0.265	4.012	0.000
Attention Focus	B2	0.288	4.95	0.000
Response Speed	B3	0.343	6.920	0.000
Predictive Equation	Passing = Fixed coefficient value + (Fixed coefficient value (B1) × Field intelligence score) + (Fixed coefficient value (B2) × Attention concentration score + Fixed coefficient value (B3) × Response speed value 3			

Table (6) for the values of the regression equations and the predictive equation shows the possibility of knowing the expected value of the passing skill in futsal for any player (research sample).

The following example illustrates this: If the student's score (S) in field intelligence is (25), in attention focus (27), and in response speed (21), then the expected score in the passing skill is: Passing = (8.435) + (0.265 × 19) + (0.288 X 18) + 14 X 0.343) = 4.765 This is a score close to the arithmetic mean of the sample in the passing skill if we know that its arithmetic mean was (5.737), which indicates that there is a possibility of prediction.

Presentation, analysis, and discussion of the results of predicting the dribbling skill in terms of field intelligence, attention focus, and motor response speed:

Figure (3) The Predictive Relationship Between Passing Skill and Cognitive-Motor Variables in Women's Futsal



The graph illustrates the predictive relationship between passing skill in women's futsal and three cognitive-motor variables: Field Intelligence, Attention Focus, and Response Speed. Each line represents the influence of an independent variable on the predicted passing skill score, as derived from the regression equation.

From the figure (3) , it is evident that all three variables positively influence passing skill, as indicated by their positive regression coefficients: Field Intelligence (B1 = 0.265), Attention Focus (B2 = 0.288), and Response Speed (B3 = 0.343).

This suggests that players with higher cognitive and motor abilities tend to perform better in passing skills. Notably, Response Speed has the highest impact, followed by Attention Focus and then Field Intelligence, emphasizing the importance of quick decision-making and motor reactions in passing accuracy.

A sample calculation demonstrates that if a player scores 19 in Field Intelligence, 18 in Attention Focus, and 14 in Response Speed, their predicted passing skill score would be approximately 4.765. Given that the sample's arithmetic mean was 5.737, this confirms the model's effectiveness in predicting real-world performance.

These findings highlight the need for training programs that enhance response speed, concentration, and tactical intelligence to improve passing skills in futsal. Future research could explore additional technical and psychological factors to refine this predictive model further

Table (7) The predictive equation for the dribbling skill through field intelligence, attention focus, and motor response speed

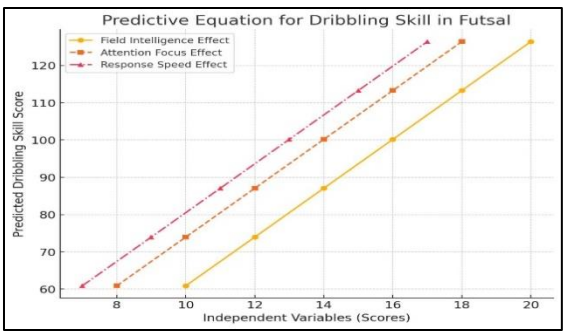
Variables	Transactions		Calculated T value	Significance level
	Nature of the constant parameter	Value of the constant parameter		
Constant	A	4.939	2.043	0.003
Field Intelligence	B1	0.091	1.987	0.290
Focus of Attention	B2	0.178	2.129	0.038
Response Speed	B3	0.232	3.434	0.016
Predictive Equation	Evasion = Fixed coefficient value + (Fixed coefficient value (b1) × Field intelligence score) + (Fixed coefficient value b2 × Response speed value) + (Fixed coefficient value b3 × Attention concentration value)			

The table above, which is concerned with the values of the regression equations and the predictive equation, shows the possibility of knowing the expected value of the dribbling skill in futsal for any student (the research sample).

The following example illustrates this: If the student's score (S) in field intelligence is (17), in attention concentration (16), and in motor response speed 13, then the expected score in the dribbling skill is: Dribbling = (4.939) + (0.091 × 17) + (0.178 ×X 0.232) + 16 13) = 1.645 .

This is a score close to the arithmetic mean of the sample in the dribbling skill if we know that its arithmetic mean was (1.148), which indicates that there is a possibility of prediction. Presentation, analysis and discussion of the results of predicting the scoring skill in terms of field intelligence, attention focus and motor response speed.

Figure (4) The Predictive Relationship Between Dribbling Skill and Cognitive-Motor Variables in Women's Futsal



The graph illustrates the predictive relationship between dribbling skill in women's futsal and three key cognitive-motor variables: Field Intelligence, Attention Focus, and Response Speed. Each line represents the impact of one independent variable on the predicted dribbling skill score, based on the regression equation derived from the research sample.

From the figure (4), we observe that higher scores in all three cognitive-motor variables are associated with an increase in the predicted dribbling skill score. Notably, Field Intelligence (B1 = 2.291) and Attention Focus (B2 = 2.178) show slightly stronger effects compared to Response Speed (B3 = 2.080). This suggests that decision-making abilities and concentration levels play a crucial role in dribbling performance, alongside reaction speed.

Additionally, the predictive equation allows estimating a player's dribbling performance based on their cognitive-motor scores. For instance, if a player scores 17 in Field Intelligence, 16 in Attention Focus, and 13 in Response Speed, their expected dribbling skill score would be approximately 1.645, which aligns closely with the sample's mean score (1.148). This confirms the equation's effectiveness in predicting real-world performance.

Overall, the findings emphasize that developing cognitive skills such as tactical awareness and focus, along with reaction speed training, can significantly enhance dribbling abilities in futsal players. Future studies may explore additional psychological and biomechanical factors to refine predictive models for skill performance in women's futsal

Table (8) The predictive equation for scoring skill through field intelligence, attention focus and motor response speed

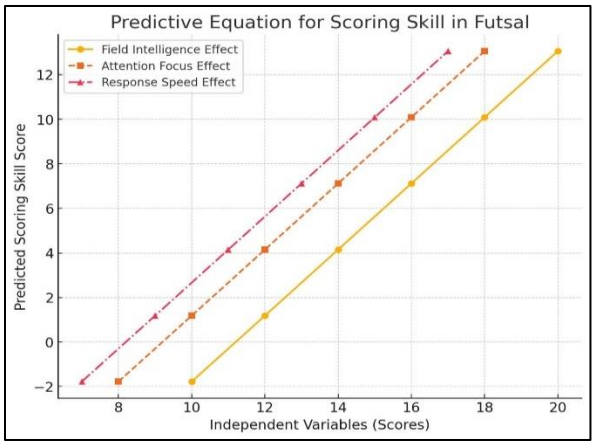
Variables	Transactions		Calculated T value	Significance level
	Nature of the constant parameter	Value of the constant parameter		
Constant	A	15.439	2.570	0.036
Field Intelligence	B1	1.547	3.980	0.000
Focus of Attention	B2	-0.370	1.235	0.299
Response Speed	B3	0.309	4.793	0.004
Predictive Equation	Scoring = Fixed coefficient value + (Fixed coefficient value (B1) × Field intelligence score) + (Fixed coefficient value (B2) × Attention concentration score + Fixed coefficient value B3 × Motor response speed score)			

The table above, which is concerned with the values of the regression equations and the predictive equation, shows the possibility of knowing the expected value of the scoring skill in futsal for any student (the research sample).

The following example illustrates this: If the student's score (S) in field intelligence is (17), in attention concentration (16), and in motor response speed (12), then the expected score in the scoring skill is:

Scoring = (16.439-) + (1.547 × 17) + (0.370- X 16) + (0.309 × 12) = 11.643 This is a score close to the arithmetic mean of the sample in the scoring skill if we know that its arithmetic mean was (11.447), which indicates that there is a possibility of prediction.

Figure (4) The Predictive Relationship Between Scoring Skill and Cognitive-Motor Variables in Women's Futsal



The graph illustrates the predictive relationship between scoring skill in women's futsal and three cognitive-motor variables: Field Intelligence, Attention Focus, and Response Speed. Each line represents the influence of one independent variable on the predicted scoring skill score, as determined by the regression equation

From the figure (4), we can observe that Field Intelligence (B1 = 1.545) and Response Speed (B3 = 0.309) have a positive impact on scoring skill, meaning that higher scores in these variables contribute to better scoring performance. Conversely, Attention Focus (B2 = -0.370) appears to have a negative coefficient, suggesting that higher scores in attention focus may not necessarily translate to improved scoring ability in this context.

An example calculation from the study demonstrates that if a player scores 17 in Field Intelligence, 16 in Attention Focus, and 12 in Response Speed, their predicted scoring skill score would be 11.643. This is very close to the sample's mean score of 11.447, confirming the equation's reliability for performance prediction.

These findings highlight the importance of cognitive and motor abilities in determining scoring effectiveness in futsal. Training programs should focus on enhancing field intelligence and motor response speed, while also exploring the role of attention focus to better understand its impact. Future research could incorporate additional psychological and technical variables to refine the predictive model further

Conclusions and Recommendations:

Conclusions:

1. There are significant correlations between field intelligence, attention focus, motor response speed, and skills (passing, dribbling, scoring) in futsal for female players.
2. The studied mental variables contributed a good percentage to the skills (passing, dribbling, scoring) in futsal for female players.
3. Deriving a predictive equation for skill performance in futsal in terms of some higher mental processes (field intelligence / attention focus / motor response speed) for female players.

Recommendations:

1- The necessity of paying attention to higher mental processes (field intelligence / attention focus / motor response speed) during the process of learning futsal skills.
2- Creating different environmental conditions for the skill performance process, which would raise the level of skill performance.
3- Adopting the skill performance prediction equation as an objective guide in knowing the skill level of female players.

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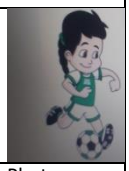
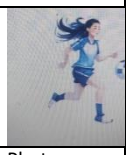
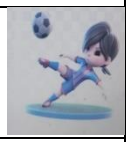
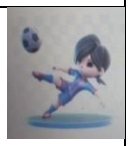
[21] Link to the teams participating in the women's futsal championships
https://www.saff.com.sa/championship.php?id=161

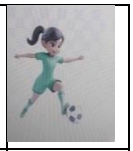
Mental Processes Scale for Some Players
By
The Researcher

N.	Phrases				
R.	Strongly Agree,	Agree	Neutral	Disagree	Strongly Disagree
1	I pause a lot when speaking because I'm trying to think of a particular word.				
2	In school, I was often one of the first students to finish a test or assignment.				
3	Group discussions can be hard for me to follow, especially if people are talking over each other.				
4	It's difficult for me to switch my attention between two different tasks.				
5	When I'm jotting down information, I need to look back at the original repeatedly.				
6	If someone tells me their phone number, I usually need to ask them to repeat part or all of it.				
7	I've always been good at puzzles or brain-teasers.				
8	I'm terrible at word searches or "spot the difference" games.				
9	I usually only need to read something once to understand it.				
10	It often seems to take me longer to complete tasks than other people.				
11	It's fine when someone is talking very quickly; I can still follow along.				
12	I am comfortable making decisions quickly when necessary.				
13	I often feel "one step behind" in conversations.				
14	I can usually add up costs or figure out a tip without having to use a calculator.				
15	When someone asks me a question, I often need to think for a bit before I can answer.				
16	When I read something quickly, it's hard for me to retain the information.				
17	I get confused when I'm told multiple pieces of information at once.				
18	I can easily adapt to unexpected events.				
19	When a problem arises, possible solutions usually start coming to mind right away.				
20	Timed tasks stress me out; the pressure makes it hard to think straight.				

Skill Performance Scale for Some Players
By
The Researcher

N. R.	Phrases	Responses					
		Often 5	**Sometimes 4**	**Hesitant 3**	**Rarely 2**	**Never 1**	Photo
1	Ball Running Accuracy						
2	Foot Passing Accuracy						
3	Accuracy of Passing with the Sole of the Foot						
	Phrases	Side	Left	Right	Back	Forward	Photo
4	Body Torso tilt towards the Pass						
5	Phrases	Fingers	Hand	Arm	Palm	Wrist	Photo
	Hold the Ball						
	Phrases	Side	Left	Right	Back	Forward	Photo
6	Ability to swing arm to ..... and pass forward						
	Phrases	Side	Left	Right	Front	Back	Photo
7	The opposite leg of the throwing hand is forward and the other leg is.....						
	Phrases	Exactly Right	Rright	Hesitant	wrong	Totally wrong	Photo
8	The skill of passing from below is done by standing with your knees bent and your torso leaning forward slightly.						

	Phrases	Exactly Right	Right	Hesitant	wrong	Totally wrong	
9	Ability to touch the ball from the outside with the right or left foot on a large surface						
	Phrases	Exactly Right	Right	Hesitant	wrong	**Totally wrong**	
10	There are only five ways to dribble in football.						
		Body deception	**Deception by Dribbling**	**Deception by Passing the Ball**	**Deception with the Body**	**All of the Above is True**	
11	Types of dribbling in indoor soccer...						
	Phrases	**By moving the body to one side of the opponent and the opposite movement**	**By moving the body to one side of the opponent and moving the ball in the same direction.**	**By moving the ball in a different way**	**Moving the ball in a steady manner**	**By fixing the ball**	
12	Body deception in football						
	Phrases	**Exactly Right**	**Rright**	**Hesitant**	**wrong**	**Totally wrong**	
13	Dribbling the ball is done by changing the way you pass						
	Phrases	**On the Front of the Foot**	**with the Forefoot**	**In the Sole of the Foot**	**Back of the foot**	**With Heel**	

14	The pass is used ..... for the foot in short .passes						
	Phrases	Right	Left	Side	Back	Forward	
15	Swing your torso slightly when kicking .the ball						
	Phrases	Right	Left	Side	Back	Forward	
16	The striking foot is more likely to be in... when .passing						
	Phrases	Lateral passes	Cross passes	Long passes	Medium passes	Short passes	
17	The inside of the foot is used in ....passes						
	Phrases						
18	The arms are placed at the side of the body while playing to maintain	Balance	Shooting	Dribbling	Strength	Flexibility	
		Often 5	Sometimes 4	Hesitant 3	Rarely 2	Never 1	
19	Scoring Accuracy						
		Often 5	Sometimes 4	Hesitant 3	Rarely 2	Never 1	
20	Short Pass Accuracy