



Predictive Ability of Extrinsic Causal Attribution to the Level of Psychological Burnout in Futsal Players

Saad Jassim Hamoo

Al-Muthanna University- College of Physical Education and Sport Sciences

saad.jassim@mu.edu.iq

Abstract

The aim of the present research is to explore the predictive power of the dimensions of external causal attribution at the level of psychological burnout among futsal clubs (youth category) participating in the Iraqi league for the 2025-2026 sports season. The researcher used the descriptive approach with correlational and predictive methods as they are appropriate for the nature of the study. The sample included all 124 players from seven sports clubs, and 56 players were selected by stratified random method to build the final predictive model, and these players showed an extrinsic causal attribution pattern. The research included the use of a 21-item psychological burnout scale and a 32-item causal attribution scale, and their psychometric characteristics such as discriminatory truthfulness, internal consistency stability, and Jackson's sensitivity index were verified. The results showed that the players suffered from a psychological burnout level higher than the average by 65.16%. The emotional and mood aspect was the most prominent dimensions of this phenomenon. It was also shown that the pattern of external causal attribution was clearly controlled, especially in the dimensions of attribution to defeat and attribution of poor performance. The results of the gradual multiple regression analysis revealed a high predictive ability, as the dimensions of attribution of defeat and attribution of poor performance explained 65.0% of the total variation in psychological burnout. Based on these findings, the researcher recommended the importance of implementing counseling programs that focus on retraining on causal attribution and providing a psychological preparation specialist accompanying sports teams.

Keywords: *Extrinsic Causal Attribution, Psychological Burnout, Futsal Football, Gradual Decline*

INTRODUCTION

In contemporary elite athletics, physical prowess and technique intersect with intricate psychological and emotional hurdles (Weinberg & Gould, 2024). Exceptional athletic achievement is now contingent not solely on physical conditioning or strategic preparedness, but also on mental resilience and the capacity to handle escalating pressure in competitive environments (Aberdeen, 2026). Futsal possesses a unique nature that renders it one of the most demanding team sports for participants, attributed to restricted playing area, rapid ball dynamics, elevated performance tempo, continuous physical interaction, and the necessity for prompt decision-making amidst the scrutiny of spectators and mounting pressure (Méndez-Dominguez, Nakamura & Travassos, 2022).

This intensification of psychological impacts in indoor gyms amplifies the emotional strain on the athlete, heightening the likelihood of experiencing athlete burnout, a multifaceted syndrome stemming from prolonged stress rather than a mere fleeting sensation of fatigue (Čulák, 2023). It presents as physical and emotional fatigue, a diminished feeling of personal accomplishment, and the emergence of negative or indifferent attitudes toward the sport and the team (Rodrigues Alves et al., 2022). Attaining this phase results in a deterioration of a player's competencies and a waning of his emotional faculties, jeopardising his athletic career and frequently nudging him toward premature retirement (Mendes et al., 2026). From a psychological standpoint, psychological burnout is elucidated by the significance of how players perceive events and results, be they victories, failures, performance downturns, or even officiating calls (Gonzalez-Martin et al., 2026).

This concept is referred to in psychological literature as causal attribution, as per Weiner's hypothesis. Participants employ a specific strategy in reporting their outcomes, as some may lean toward external attribution, rationalising achievements or setbacks through elements outside their influence, such as inadequate officiating, errors made by teammates, or variable external conditions (Al Behadili & Kasim, 2022; Ulas, Adilogullari & Şenel, 2025). The significance of this study is underscored by its emphasis on the correlation between extrinsic causal attribution and the degree of psychological burnout. Overdependence on external attribution can strip the player of self-accountability and personal efficacy, fostering feelings of powerlessness and a lack of control over the game's results. This diminishing mindset and the conviction that outcomes rely on uncontrollable factors hasten the onset of psychological exhaustion.

Thus, the significance of the study is in offering sophisticated statistical instruments to assess the predictive capacity of external attribution as a standalone metric, and its influence on the psychological burnout levels of indoor football players. The tangible advantage of this research is its provision of precise scientific data to technical personnel, coaches, and psychologists, facilitating the formulation of early intervention strategies and guidance programs that alter players' mindsets from detrimental external influences to beneficial internal processes, thereby improving self-regulation and mitigating the likelihood of psychological exhaustion, which guarantees sustained high performance and the maintenance of players' mental well-being.

RESEARCH PROBLEM

Futsal is seeing swift advancement and elevated professionalism, which has introduced unparalleled physical and psychological demands on athletes (Fahey, 2022). The sport is defined by a highly competitive atmosphere marked by significant stress stemming from restricted field dimensions and rapid fluctuations in events and results, rendering victory or defeat precarious (Himawan & Purwoto, 2026). These circumstances subject the participants' nervous and psychological systems to continual scrutiny, heightening the probability of encountering accumulated psychological stress (Borges et al., 2022; Hussein & Kasim, 2022). The research issue is encapsulated in the growing adverse trend of "psychological burnout" among futsal athletes, where psychologists observe a marked deterioration in the performance of certain gifted players, characterised by emotional and physical fatigue, diminished enthusiasm, and a reduced perception of athletic success, culminating in psychological disengagement or premature retirement.

Scholarly investigations into the psychological underpinnings of this phenomena reveal a trend of "causal attribution" that participants utilise to rationalise their failures or setbacks. Numerous athletes in challenging circumstances or after defeats often attribute their misfortunes to external reasons, such as officiating mistakes, unfavourable luck, tactical choices, the venue, or insufficient support from teammates. An overdependence on external attribution fosters a detrimental cognitive atmosphere that undermines the player's perception of competence and accountability, resulting in a psychological condition termed acquired helplessness, wherein the player perceives his endeavours and training as futile against dominating external influences. This cognitive impairment hastens the depletion of emotional vitality and directly contributes to psychological exhaustion. Notwithstanding the significance of this subject, there exists a deficiency in understanding and implementation in studies connecting extrinsic causal attribution to psychological exhaustion, particularly in futsal. The majority of research emphasises a general description of the condition, neglecting to delineate predictive capabilities or develop statistical models that assist technical teams in forecasting which players are at most risk of burnout before the issue escalates.

Based on the research problem identified above, the current study seeks to answer several main academic questions concerning the relationship between external causal attribution and psychological burnout among futsal players. Specifically, the study

investigates the level of both external causal attribution and psychological burnout among futsal players, examines whether there is a statistically significant correlation between external causal attribution and the level of psychological burnout among the research sample, and determines the predictive power of external causal attribution in relation to psychological burnout. Furthermore, the study seeks to formulate a predictive regression equation that expresses the relationship between external causal attribution and psychological burnout and can be used to estimate the level of psychological burnout based on the degree of external causal attribution among futsal players. The current research aims to identify the level of external causal attribution among futsal players in the research sample and to determine the level of psychological burnout across its various dimensions, including physical and emotional exhaustion, low self-achievement, and emotional sluggishness or apathy.

In addition, the study aims to reveal the nature and direction of the correlation between external causal attribution and psychological burnout among the research participants. The study also seeks to determine the predictive power of external causal attribution as an indicator of psychological burnout among futsal players and to develop a statistical predictive regression equation that may assist technical staff and sports psychologists in predicting the level of psychological burnout based on the degree of external causal attribution among futsal players. The human scope of the study consists of youth-category futsal players who are officially registered with clubs in the Southern Region and participate in the Iraqi Futsal League competitions during the 2025–2026 sports season. The temporal scope of the research extends from October 10, 2025, to April 10, 2026, covering the preparation and application of the measurement instruments, the implementation of the exploratory experiment, the administration of the field measurements, and the completion of the final statistical analyses. The spatial scope of the study includes the indoor sports stadiums and halls of the clubs covered by the research in the Southern Region, particularly the facilities designated for official training and matches, including South Gas, Maysan Oil, Basra Oil, Mina, Al-Janoub, Basra Municipality, and Naft Al-Wasat.

METHODOLOGY

The selection of the research method is determined by its suitability to the nature of the research objectives and hypotheses to be achieved. Considering the nature of the

variables under investigation, particularly the aim of determining the predictive ability of external causal attribution in relation to the level of psychological burnout among futsal players, the researcher adopted a descriptive research approach using correlational and predictive studies. The descriptive approach is considered appropriate for investigating psychological and sports-related phenomena as they naturally occur, without intervention, manipulation, or laboratory control. Furthermore, this approach extends beyond the mere description of observed data by examining relationships between variables and developing predictive models through appropriate statistical procedures. In the present study, multiple regression analysis is employed to determine the predictive contribution of the dimensions of external causal attribution to the outcome variable, namely psychological burnout.

Thus, psychological burnout represents the dependent variable (Y), while the dimensions of external causal attribution represent the predictor variables (X_1 , X_2 , and X_3). The research population consists of youth-category futsal players who are officially affiliated with futsal clubs in the Southern Region and participate in the Iraqi Futsal League competitions during the 2025–2026 sports season. A comprehensive census of the research population identified a total of 124 players distributed across seven officially accredited sports clubs. The distribution of the research population according to the participating clubs and their respective governorates is presented in Table 1.

Table 1. Distribution of the members of the original research community by clubs and geographical regions

No.	Club Name	Region / Governorate	Number of Players	Percentage of the community
1	South Gas	Basra	18	%14.52
2	Missan Oil	Maysan	18	%14.52
3	Basra Oil	Basra	18	%14.52
4	Port	Basra	18	%14.52
5	South	Basra	17	%13.71
6	Basra Municipality	Basra	18	%14.52
7	Al , Wasat Oil	Najaf / Region	17	%13.71
Total	7 Clubs	-	124 players	%100

The research sample was selected from the total population of 124 youth futsal players using an equal stratified random sampling method in several stages. First, an exploratory sample of 14 players, consisting of two players from each of the seven participating clubs, was selected to assess the clarity of the measurement instruments,

completion time, research procedures, and application conditions. Second, a psychometric calibration sample of 35 players, with five players from each club, was selected to examine the scientific and psychometric characteristics of the instruments. Including the exploratory sample, the total calibration sample comprised 49 players, representing 39.52% of the research population. Finally, after applying the instruments to all 124 players, they were classified according to their causal attribution patterns: 68 players showed an internal attribution pattern, while 56 showed an external attribution pattern. Since the study focused on predicting psychological burnout based on external causal attribution, the 56 players with an external attribution pattern constituted the main sample for the multiple regression analysis.

Table 2. Detailed Distribution of Research Samples by Clubs and Procedural Stages

No	Club Name	Research Community	Sample Exploratory Experiment	Psychometric Legalization Sample	Sample Predictive Model Building Extrinsic) (Attribution
1	South Gas	18	2	5	8
2	Missan Oil	18	2	5	8
3	Basra Oil	18	2	5	8
4	Port	18	2	5	8
5	South	17	2	5	8
6	Basra Municipality	18	2	5	8
7	Al , Wasat Oil	17	2	5	8
Total	7 Clubs	124 players	14 players	35 players (+14)	56 players

Data Collection Instruments

The data collection instruments constituted the main means used by the researcher to obtain quantitative data and accurate field information. The study employed relevant Arabic and foreign references in measurement, evaluation, and sports psychology; two psychological questionnaires measuring psychological burnout and causal attribution; a laptop equipped with IBM SPSS Statistics version 27; and official records and documents of the Iraqi Football Federation, Futsal and Beach Soccer Branch.

The first instrument was the Futsal Burnout Measure (Athlete Burnout Measure), adopted from the sports-oriented version developed by Allawi/Martens and adapted to the futsal context. The final form consisted of 21 items covering physical and physiological,

emotional and mood, relationship with the sports system, and reduced self-achievement aspects. The physical and physiological dimension included items 1, 5, 9, and 14 and assessed stress, muscular fatigue, and the body's need for recovery. The emotional and mood dimension included items 13, 17, 20, and 21 and assessed emotional exhaustion, boredom, depression, and irritability. The relationship with the sports system was assessed through items 4, 7, 12, and 19, focusing on players' perceptions of insufficient appreciation from management and coaches. The reduced self-achievement dimension assessed decreased confidence in personal abilities and achievement. Responses were scored using a five-point scale ranging from very severe to very weak. Negative items were scored 5, 4, 3, 2, and 1, respectively, whereas positive or reverse-scored items, such as item 2 ("I have a desire to excel") and item 3 ("I am alert while playing"), were scored 1, 2, 3, 4, and 5. The total score ranged from 21 to 105, with higher scores indicating higher levels of psychological burnout.

The second instrument was the Causal Attribution Scale, developed by Muhammad Hassan Allawi based on Weiner's theoretical framework. The scale was designed to identify athletes' explanatory styles and their tendencies to attribute competition outcomes, including winning, losing, and performance. It consisted of 32 items distributed equally across four dimensions: attribution of victory, attribution of defeat, attribution of good performance, and attribution of poor performance, with eight items for each dimension. The scale used a forced-choice format in which each item presented two alternatives, representing either internal attribution (e.g., effort, ability, and determination) or external attribution (e.g., luck, refereeing bias, opponent difficulty, and environmental conditions). An internal attribution response was assigned a score of 1, whereas an external attribution response was assigned a score of 0. Accordingly, each subdimension ranged from 0 to 8, with lower scores indicating greater dominance of an external attribution pattern.

To control extraneous variables and minimize the effects of fatigue and response order, a counterbalancing procedure was employed. The participating clubs were divided into two approximately equal groups, with the order of administration of the two scales varied between groups. This procedure was used to reduce possible order effects and ensure more standardized measurement conditions.

Psychometric Properties of the Instruments

The scientific foundations of the measurement instruments, including validity, reliability, sensitivity, and objectivity, were examined to ensure the accuracy and statistical validity of the collected data. The psychometric evaluation was conducted on a sample of 49 players. Content and face validity were established by presenting the preliminary versions of the instruments to experts and specialists in sports psychology, measurement and evaluation, and football. The experts evaluated the appropriateness of the items, their relevance to the intended constructs, and the clarity of the linguistic formulation. Lawshe's Content Validity Ratio (CVR) was used to quantify expert agreement, and items meeting the established academic criterion were retained.

Discriminant validity was examined using the extreme-groups method. The players' total scores were arranged in descending order, and the upper and lower groups were identified using 33% of the distribution, resulting in 16 players in each group. The differences between the two groups were examined using an independent-samples *t*-test. For the psychological burnout scale, the upper group obtained a mean of 59.813 (SD = 2.509), compared with 49.625 (SD = 1.668) for the lower group, producing a *t* value of 13.524 with 30 degrees of freedom ($p < 0.001$). For the causal attribution scale, the upper group obtained a mean of 27.188 (SD = 4.183), compared with 11.875 (SD = 3.462) for the lower group, with a *t* value of 11.281 ($df = 30, p < 0.001$). These findings demonstrate that both instruments possess significant discriminating power. Reliability was assessed using Hoyt's ANOVA reliability method, which estimates the consistency of measurement by examining individual variance and measurement error variance. The psychological burnout scale produced a Hoyt reliability coefficient of 0.95 and a coefficient of common interpretation (R^2) of 0.90. For the causal attribution scale, the Hoyt reliability coefficient was 0.97 and the coefficient of common interpretation was 0.94. These coefficients exceeded the commonly accepted minimum criterion of 0.50, indicating a high degree of measurement stability and reliability for both instruments.

The sensitivity of the instruments was examined using Jackson's Sensitivity Index to determine their ability to detect subtle individual differences and distinguish responses around the central portion of the distribution. The calculated sensitivity index was 5.16 for the psychological burnout scale and 5.48 for the causal attribution scale, both of which exceeded the reference value of $Z = 1.69$. These findings indicate that both

instruments possess high sensitivity for measuring psychological burnout and causal attribution. Objectivity was ensured through several procedures, including the use of clear and unambiguous instructions, standardized response formats, and predetermined scoring keys. The five-point response format of the burnout scale and the forced-choice format of the causal attribution scale reduced the possibility of subjective interpretation. In addition, standardized scoring procedures were used to minimize differences between assessors and prevent researcher-related scoring bias.

Exploratory Study and Field Application

An exploratory study was conducted on January 5, 2026, involving 14 players. The purpose was to verify the clarity and comprehensibility of the items and instructions, estimate the actual response time, and assess the readiness of the research assistants and environmental conditions for data collection. The administration time ranged from 10 to 16 minutes for the psychological burnout scale and from 12 to 18 minutes for the causal attribution scale. The exploratory study confirmed the suitability of the instruments and field procedures for the main application. Following completion of the standardization and psychometric evaluation procedures, the final field application was conducted among the remaining 75 players from January 22 to February 7, 2026. Combined with the players involved in the psychometric procedures, the total number of respondents reached 124 players. The completed questionnaires were subsequently coded and prepared for statistical analysis and development of the predictive regression model.

Statistical Methods

The collected data were analyzed using IBM SPSS Statistics version 27. Appropriate statistical procedures were employed to examine the psychometric characteristics of the instruments, including validity, reliability, discriminating power, and sensitivity, as well as to process the main field data and develop the predictive regression model. The statistical procedures and equations were selected according to the objectives of the study, the characteristics of the collected data, and the relevant theoretical and empirical literature in sports psychology, measurement, and evaluation.

RESULTS

In order to identify the general level of psychological burnout among the members of the statistical community and the model construction sample ($N = 56$), the descriptive

statistical parameters of the total score of the scale consisting of (21) items were calculated on a five-point scale (1-5), where the theoretical score of the scale ranges between (21) minimum and (105) as the highest, with a hypothetical mean of (63) degrees.

Table 3. Descriptive Statistical Indicators for the Total Score of the Psychological Burnout Scale (N = 56)

Variable	M	SD	Median	Mode	Top Grade	Lowest grade	Skewness
Total psychological burnout	68.42	8.15	68.00	67.00	86.00	52.00	0.184

Table 3 shows that the arithmetic mean of the results of the sample members on the total psychological burnout scale reached (68.42) degrees with a standard deviation of (8.15), which is higher than the hypothetical mean of the scale of (63) degrees. The value of the torsion coefficient (0.184) confined between (± 1) indicates the moderation of the distribution of the results of the sample members and its proximity to the normal moderate curve (Gauss Curve), which enables the use of parametric tests with high statistical confidence. The Psychological Burnout Scale consists of four fundamental dimensions that cover the manifestations of psychological and physical phenomena in futsal players. Table 4 shows the descriptive measures and the relative importance of these dimensions:

Table 4. Arithmetic Media, Standard Deviations, and the Relative Importance of the Dimensions of the Psychological Burnout Scale

No	Dimensions and axes of the scale	No	The hypothetical medium	M	SD	Percentage	Rank
1	Emotional and moody aspect	6	18	21.34	3.12	%71.13	1
2	Physical and physiological aspect	5	15	17.28	2.64	%69.12	2
3	The Relationship with the Sports System	5	15	15.82	2.41	%63.28	3
4	Lack of self-fulfillment	5	15	13.98	2.18	%55.92	4
Total	Overall Scale	21	63	68.42	8.15	%65.16	-

Detailed distribution of the paragraphs of the dimensions of psychological burnout:

Summary of the Findings and Discussion

The results show that youth futsal players experienced a relatively high level of psychological burnout, with a cumulative percentage of 65.16%. The burnout scale consisted of four main dimensions: emotional and mood exhaustion, physical and physiological burnout, sports system and organizational problems, and reduced sense of accomplishment. The Emotional & Mood Exhaustion dimension was particularly prominent. The highest-rated item was the feeling of being very tired and highly stressed before official matches, with a mean of 3.92 and a standard deviation of 0.74. This was followed by feelings of urgency and distress toward teammates after making mistakes on the court ($M = 3.71$; $SD = 0.81$). These findings indicate that competitive situations can create considerable emotional pressure for young futsal players.

The Physical & Physiological Burnout dimension also showed considerable levels of exhaustion. The highest-rated concern was the players' perception that their bodies were unable to recover quickly between training sessions and consecutive matches ($M = 3.88$; $SD = 0.69$). This was followed by chronic physical fatigue and muscle heaviness even before warming up ($M = 3.64$; $SD = 0.77$). These results are consistent with the demanding physical characteristics of futsal, including rapid transitions, continuous attacking and defensive movements, and limited recovery periods. The Sports System & Organizational dimension reflected difficulties in the players' relationships with coaches, technical staff, and management. The highest-rated item concerned the feeling that players' efforts were not adequately appreciated by the technical staff and administration when results were poor ($M = 3.52$; $SD = 0.83$). This suggests that organizational expectations and a lack of perceived support may contribute to players' frustration and psychological exhaustion.

The Reduced Sense of Accomplishment dimension showed that some players experienced doubts about their technical and tactical abilities. The highest-rated item concerned doubts about their ability to make the technical difference necessary to determine the outcome of a match in favor of their team ($M = 3.11$; $SD = 0.88$). Although this dimension had a lower mean than the other burnout dimensions, it still indicates a decline in confidence and motivation among some players.

Overall, the findings suggest that psychological burnout among youth futsal players is influenced by the combination of intense physical demands, emotional pressure, competitive expectations, limited recovery, fear of making mistakes, pressure to secure a starting position, and relationships with coaches and administrators. The specific characteristics of futsal may intensify these pressures because mistakes can immediately affect the score, while the fast pace of the game requires continuous physical and mental engagement. The discussion therefore emphasizes the importance of adequate recovery, psychological support, and a more supportive sporting environment in reducing burnout among young athletes.

Regarding the Causal Attribution Scale, the study analyzed responses from 56 participants to 32 items using a forced-choice format between internal attribution (1) and external attribution (0). The scoring system was designed so that a lower score indicates a stronger tendency toward external causal attribution. This analysis was intended to identify whether players primarily attributed the causes of their experiences or outcomes to factors within themselves or to external circumstances.

Table 5. Descriptive Statistical Indicators of the Mathematical Causal Attribution Scale in All Its Dimensions (N = 56)

No	Dimensions of causal attribution	Number of paragraphs	Max Grade	M	SD	Medium	The trend of attribution
1	Attribution of defeat	8	8	2.14	1.02	4	Extreme externality
2	Attribution of poor performance	8	8	2.68	1.15	4	High exterior
3	Attribute the victory	8	8	3.82	1.28	4	Moderate exterior
4	Attribution of good performance	8	8	4.11	1.34	4	Balanced/Internal
Total	Total attribution scale	32	32	12.75	3.86	16	Dominant external attribution pattern

Table 5 shows that the arithmetic mean of the total score of the causal attribution scale in the study sample was (12.75) degrees with a standard deviation of (3.86), which is clearly lower than the hypothetical mean of the scale of (16) degrees. This statistically

proves that the members of this sample possess a clear pattern and a clear dominance of external causal attribution (external/causal/attribution) in interpreting their sports and field productions.

The causal attribution scale revealed a clear tendency among the youth futsal players to attribute negative outcomes, particularly defeat and poor performance, to external factors, while positive outcomes were more likely to be associated with personal abilities and effort. The Attribution of Defeat dimension recorded the lowest mean ($M = 2.14$; $SD = 1.02$), with 73.25% of responses favoring external explanations. Players commonly attributed defeat to factors such as refereeing bias or poor refereeing decisions, as well as the playing surface and bad luck. The Attribution of Poor Performance dimension also showed a relatively low mean ($M = 2.68$; $SD = 1.15$), with players frequently explaining declines in individual performance through inappropriate coaching tactics or the opponent's strength and strategy.

In contrast, the Attribution of Victory dimension had a higher mean ($M = 3.82$; $SD = 1.28$). Some players still associated victory with external factors, including the opponent's defensive weakness and luck. The highest mean was found in Attribution of Good Performance ($M = 4.11$; $SD = 1.34$), which was the only dimension exceeding the hypothetical mean of 4. This indicates that players tended to associate good individual performance more strongly with their own abilities and effort. Overall, the findings indicate a pattern of external attribution when experiencing failure or poor performance and greater internal attribution when experiencing good performance. This pattern is explained through Weiner's causal attribution theory, which suggests that athletes may attribute failure to external and uncontrollable factors in order to protect self-esteem and reduce feelings of personal responsibility. However, excessive reliance on external explanations may weaken players' sense of control, self-regulation, and personal responsibility, potentially reducing their motivation to correct mistakes and improve future performance.

The study then proceeds to examine whether external causal attribution can predict psychological burnout among futsal players. To address this objective, the researchers applied stepwise multiple regression analysis, using the four dimensions of external causal attribution (X_1 – X_4) as predictor variables and psychological burnout (Y) as the dependent variable. A Pearson correlation matrix was first calculated to determine

the direction and strength of the relationships between each external attribution dimension and psychological burnout.

Table 6. Pearson's Correlation Coefficients Matrix between the Dimensions of Causal Attribution and Psychological Burnout (N = 56)

Variables	X_1: Attributing defeat	X_2: Attribution of poor performance	X_3: Attribution of victory	X_4: Attribution of good performance	Y: Psychological burnout
X_1: Attribution of defeat	1.000	-	-	-	-
X_2: Attribution of poor performance	0.612**	1.000	-	-	-
X_3: Attribution to Victory	0.418**	0.385**	1.000	-	-
X_4: Attribution of good performance	-0.182	-0.214	0.152	1.000	-
Y: Psychological burnout	-0.742**	-0.685**	-0.512**	-0.124	1.000

* * Statistically at a significance level ($\alpha \leq 0.01$).

Table (11) shows that there is a significant inverse correlation between the low degree of causal attribution dimensions (which indicates the pattern of external attribution) and psychological burnout. The highest correlation between external attribution of defeat and psychological burnout was ($r = -0.742$, $p < 0.001$), followed by attribution of external poor performance ($r = -0.685$, $p < 0.001$), and attribution of external win. ($r = -0.512$, $p < 0.001$). However, the attribution of good performance has not yet been recorded as statistically significant with psychological burnout ($r = -0.124$).

Results of Stepwise Regression Analysis In order to analyze the predictive power and exclude non-statistically significant variables, the dimensions of causal attribution were introduced in the progressive predictive model, and Table (12) summarizes the steps of building the final model:

Table 7. Summary of the steps to build the predictive model for the gradual decline of psychological burnout

Model	Variables	R	(R ²)	Adjusted (R ²)	SE	F	Sig
1	X_1: Attributing defeat	0.742	0.551	0.542	5.512	66.182	0.001
2	X_1: Attribution of defeat + X_2: Attribution of poor performance	0.814	0.663	0.650	4.821	52.028	0.001

The final regression model included only two predictors: attribution of defeat (X₁) and attribution of poor performance (X₂). The dimensions of victory attribution (X₃) and good performance attribution (X₄) were excluded because they did not make a statistically significant independent contribution ($p > 0.05$). The model showed a strong relationship between external attribution and psychological burnout ($R = 0.814$). The adjusted $R^2 = 0.650$ indicates that 65.0% of the variation in psychological burnout among futsal players can be explained by attribution of defeat and poor performance, while the remaining 35.0% is related to other psychological, environmental, or contextual factors. The regression model was statistically significant ($F = 52.028$, $p < 0.001$), confirming that the two attribution dimensions significantly contribute to predicting psychological burnout.

Regression coefficients and prediction equation derivation

To calculate the values of relative weights, non-standard and standard coefficients of the approved predictive variables, the values of the statistical features of the slope line were extracted as shown in Table 8:

Table 8. Non-standard and standard regression line coefficients and (t) values of significant significance

Final Model	Non- standard transactions	Standard Error	Modular Transactions	T	Sig	Statistical significance
Fixed Limit (Constant\alpha)	94.182	3.214	-	29.29	0.001	Very D
X_1: Attribution of defeat	-4.315	0.712	-0.538	-6.06	0.001	D Morally
X_2: Attribution of poor performance	-2.612	0.621	-0.371	-4.20	0.001	D Morally

Based on the results shown in Table 8, the non-standard multi-regression line equation was formulated to be used to predict the total degree of burnout (Y) in terms of raw results for both defeat attribution (X₁) and poor performance (X₂):

$$Y = 94.182 - 4.315 (X_1) - 2.612 (X_2)$$

Psychological Interpretation and Field Discussion of the Predictive Model

The predictive results indicate that external causal attribution plays an important role in psychological burnout among futsal players, explaining 65.0% of the variance in burnout (Adjusted R² = 0.650). Attribution of defeat ($\beta = -0.538$) and poor performance ($\beta = -0.371$) were significant predictors. This relationship can be explained through learned helplessness, where repeatedly blaming external factors such as referees, luck, playing conditions, or coaching decisions may lead players to believe that their own efforts cannot influence match outcomes. Such attribution can also prevent athletes from evaluating and correcting their own technical and tactical weaknesses, resulting in accumulated psychological stress and ineffective coping. In addition, consistently blaming external factors may create distrust toward coaches and teammates and cause players to feel that their efforts are unrecognized. Overall, the findings support the study hypothesis that external causal attribution is an important predictor of psychological burnout and highlight the need for psychological guidance and training that promotes constructive attribution, self-evaluation, effective coping, and a stronger sense of personal control.

CONCLUSIONS

The findings indicate that youth futsal players experience above-average psychological burnout, particularly in terms of emotional, mood, physical, and physiological exhaustion. The players also tend to rely on external causal attribution, especially when explaining defeat and poor performance. Regression analysis shows that attribution of defeat and poor performance are the main predictors of psychological burnout, while attribution of victory and good performance do not make a significant contribution. Excessive reliance on external factors may reduce players' sense of responsibility, limit self-evaluation and skill improvement, and contribute to learned helplessness and psychological burnout. Therefore, the study recommends attribution retraining programs to encourage players to focus on controllable factors such as effort, concentration, and individual practice, the involvement of a sports psychologist to

identify and manage emotional exhaustion, and coach training in providing constructive feedback after defeats while encouraging objective evaluation of players' mistakes.

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