Overexcitability patterns according to Dabrowski's theory for Iraqi Premier League and Premier League football referees

Patrones de sobreexcitabilidad según la teoría de Dabrowski para árbitros de fútbol de la Premier League y la Premier League iraquíes

Authors

Abdulrazzaq Waheeb Yaseen [1]
Yousif Abdul Ameer Darweesh [1]
Abbas Fadel Abbas Mohsen [2]
Fadwa Mohammed Mohsin [1]

[1] University of Diyala, (Iraq)
[2] Ministry of Education, (Iraq)

Corresponding author:
Abdulrazzaq Waheeb Yaseen
abdulrazzaq.wahib@uodiyala.edu.iq

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Abstract

Objective: Developing a Overexcitability scale based on Dabrowski's theoretical patterns for Iraqi Premier League referees, and identifying the most representative Overexcitability pattern based on Dabrowski's theoretical patterns for Iraqi Premier League referees.
Research methodology: The researcher followed a descriptive survey approach to suit the research procedures. The research community included field referees, assistant referees, and VAR referees for the Iraqi Premier League and the 2024/2025 football season, totaling (227) referees. The research sample for constructing the Overexcitability scale was (215) referees, representing (94.71%) of the research community.
Result: The development of the referee's personality depends on the type and number of the super-arousal patterns he possesses. It has been shown that if the referee possesses high levels of arousal in all five patterns, this leads to significant development in personality.
Conclusions: A tool was developed to measure the concept of Overexcitability patterns, according to Dabrowski's theory, among Iraqi football referees, and the sensorimotor Overexcitability pattern is the most representative of the Overexcitability patterns among Iraqi football referees.

Keywords

Overexcitability patterns; Dabrowski's theory; football.

Resumen

Objetivo: Desarrollar una escala de sobreexcitabilidad basada en los patrones teóricos de Dabrowski para árbitros de la Premier League iraquí e identificar el patrón de sobreexcitabilidad más representativo según dichos patrones.
Metodología de la investigación: El investigador siguió un enfoque de encuesta descriptiva para adecuarse a los procedimientos de investigación. La comunidad de investigación incluyó árbitros de campo, árbitros asistentes y árbitros de VAR de la Premier League iraquí y de la temporada de fútbol 2024/2025, con un total de 227 árbitros. La muestra de investigación para construir la escala de sobreexcitabilidad fue de 215 árbitros, lo que representa el 94,71% de la comunidad de investigación.
Resultado: El desarrollo de la personalidad del árbitro depende del tipo y número de patrones de sobreexcitación que posee. Se ha demostrado que, si el árbitro posee altos niveles de excitación en los cinco patrones, esto conduce a un desarrollo significativo de la personalidad. Conclusiones: Se desarrolló una herramienta para medir el concepto de patrones de sobreexcitabilidad, según la teoría de Dabrowski, entre los árbitros de fútbol iraquíes, y el patrón de sobreexcitabilidad sensoriomotora es el más representativo de los patrones de sobreexcitabilidad entre los árbitros de fútbol iraquíes.

Palabras clave

Patrones de sobreexcitabilidad; teoría de Dabrowski ; fútbol americano.

Introduction

Football has become a global powerhouse with its fans, popularity, and financial resources, leading to an increased level of competition among referees from around the world. This progress in this game was not improvised or a coincidence, but rather the result of scientific planning, programmed according to correct contexts, and through the effective use of the results of research and studies conducted by countries seeking development.

Achieving the highest levels in this game requires the combined efforts of referees, coaches, and referees. There are several elements of this game: the field, the coach, and the referees, who constitute the key elements necessary to ensure the match is executed to its intended effect. Each match is managed by field referees, assistant referees, a fourth referee, and VAR referees, who have the authority to implement all provisions of the law in cooperation with the general supervisor of the match. "The referee is constantly interacting with the game's events on the field. This requires knowledge of its nature so that he can adapt to them and capitalize on them to achieve justice and make the right decisions. The psychological factor is one of the important factors in decision-making accuracy (Naidefer, 1991). Psychologists have researched many psychological topics and problems related to sporting events, but they still require further research and study. The process of selecting referees is a priority in the work of national and continental federations, based on sound scientific foundations for all aspects related to refereeing, most importantly the psychological aspect, due to its significant impact on the level of performance of football referees during their leadership of the match. The importance of this aspect lies in the referee's exposure to many exciting situations and psychological pressures during the match. When the referee is psychologically prepared, in addition to other aspects, this will lead to increased effectiveness in predicting match events in advance. This, in turn, leads to increased readiness and preparedness to respond to upcoming stimuli, self-confidence, and a focus on positive aspects that work to better anticipate performance and prevent the occurrence of negative perceptions that lead to impaired performance and increased anxiety as a result. Predictions of failure reduce the chances of success.

As is well known, the circumstances a referee experiences during a competition, such as the nature and importance of the competition, the playing surface, the referee's experience, age, training status, and crowd pressure, all affect his psychological state and may cause an increase in emotional arousal. Elite matches, characterized by speed and intensity, are among those that heighten arousal, as any loss is difficult to recover from, especially if they occur between popular teams, which ignite enthusiasm, excitement, and suspense for both referees and the crowd. Team ranking, crowd size, and media attention significantly influence these matches, increasing their importance compared to other matches. This effect can be negative, as the competition requires a great deal of focus, attention, and emotional stability when making appropriate decisions. (Dabrowski, 1964) suggests in his theory that these extreme psychological arousals hone the judge's cognitive and perceptual skills and contribute to building a personality characterized by novelty and impulsiveness when carrying out tasks (Hill, 2020), which are traits that distinguish talented referees in various fields. This theory also relies on the principle of balanced psychological excitement, which occurs unconsciously to enable the individual to reach higher levels of mental and emotional development (Laycraft, 2020), which contributes to the holistic processing of data and information, and creates latent arousal within the human brain that helps the individual produce a set of responses characterized by novelty, originality, and intellectual flexibility.

One of the duties of a football referee is to instill a sense of reassurance among coaches, referees, and the public. He must be honest and impartial, and provide reassurance to his fellow referees. His performance is linked to many aspects, including psychological, physical, and cognitive aspects, which relate to his understanding and appreciation of himself, in addition to his exposure to psychological stressors, which vary in intensity and type in competitions. One of these aspects is extreme arousal, which affects legal knowledge and decision-making. Developing referees is not an easy task, as the development process involves many requirements, such as psychological factors, in addition to the referee's personal aspect, which results in vision for the purpose of movement and the referee's taking the correct positions on the field. This creates a correct angle of vision that enables him to make precise decisions that rise to a distinguished level, consistent with the requirements of accuracy in decisions that do not exceed fractions of a second, which has the most significant impact on the outcome of the match. This matter is indispensable, especially in important matches, because a wrong decision can lead to the worst results.

Overexcitability is an important factor in the development and integration of a referee's personality, as it contributes to enabling their psychological, emotional, and mental energy to emerge and grow. A driving force motivates referees to participate effectively in confronting stressful situations in competitions and to demonstrate a high level of valuesand personal and emotional maturity. (Dabrowski ,1964) believes that optimal personality development occurs when an individual is aware of their own ideals and is able to achieve them. This is in addition to their ability to understand the many levels of development that others reach, and then employ these abilities to control their conflicts with the surrounding environment. Highly aroused referees understand and respond to competition differently than lowly aroused referees, in a way that makes them more likely to develop at multiple levels, leading to a high level of personal development (Mendaglio & Tillier, 2006). Positive psychological experiences enable the referee to perform his difficult technical duties and increase his ability to withstand various psychological burdens. Negative psychological experiences, on the other hand, expose him to situations of failure and misfortune. Therefore, excessive arousal is related, in one way or another, to the referee's personality, as the referee's personality is the result of the interaction between his abilities and the circumstances he faces. Likewise, the referees' management of emotions, in both its aspects—whether related to the referee's management and control of his own internal emotions or his control and management of the emotions of others—plays a significant role in defining the referee's personality on the field and his particular philosophy in leading the match. For example, if the referee surrenders to his emotions when faced with boos or objections, this will inevitably lead him to lose control of the situation, and he will then resort to ways to appease the objecting parties, even if this comes at the expense of explicit legal statements. The importance of the variable (Overexcitability) among referees, which was not addressed by previous studies, means that the referee must be characterized by Overexcitability, as it plays a role in removing the dust of anxiety and hesitation due to his inability to perform his duties. Here, his ability to confront and control his emotions emerges, in a mature and balanced manner, far from rashness and impulsiveness, taking the appropriate response that is consistent with the requirements of the situation. Therefore, it can be said that the emotional aspect is a fundamental pillar for the integration of the referee's personality, and the current research is an attempt to find a measuring tool for the patterns of Overexcitability among referees and to know the pattern of Overexcitability that is most representative of an important segment of the sports community, which is the category of referees.

Research Problem

A referee's performance in football is one of the most important components of the game's success. It reflects not only the referees' abilities, but also the capabilities and goals of the institution to which they belong, especially if the referees possess a high level of mental and emotional management skills, enabling them to lead matches and emerge from them with the fewest possible errors.

Although patterns of Overexcitability are considered positive experiences for the development of referees' personalities, there are factors that negatively affect referees' lives if their nature is ignored, their requirements are not addressed, and their requirements are not met. Numerous previous studies and research confirm that emotional aspects manifested in referees, such as hypersensitivity, introversion, heightened feelings, and anger, are negative manifestations of Overexcitability patterns, especially among high-level referees. This requires studying and identifying them, and understanding their negative aspects and repercussions.

Based on the researchers' experience as former football players, they decided to delve into studying the patterns of Overexcitability among referees in the Iraqi Premier League and the Iraqi Football Premier League, with the aim of improving the quality of refereeing among football referees in Iraq.

Research Objectives

- Developing a Overexcitability scale based on Dabrowski's theoretical patterns for Iraqi Premier League referees.
- Identifying the most representative Overexcitability pattern based on Dabrowski's theoretical patterns for Iraqi Premier League referees.

Research fields

- Human field: Iraqi Premier League and Premier League referees for the year 2024-2025, totaling (227) referees.

- Time field: (1/11/2024) to (20/2/2025)
- Spatial field: The referee and the halls where the referees train.

Definition of Terms

- Overexcitability: (Dombrowski, 1964) defined it as "an above-average response that exceeds the stimuli causing it, manifesting in the form of high excitability (psychomotor, sensory, imaginative, mental, and emotional), expressed through the intensity of the response. This response takes the form of a significant reaction to internal and external stimuli, which can be viewed positively as indicators of the development of individual potential and aptitudes that indicate talent."
- Types of Overexcitability: (Al-Mutairi, 2008) defined it as:
- Psychomotor Overexcitability (POE): It is an excess of energy that can be observed through the desire to move, rapid speech, excessive motivation to work, challenging oneself to perform tasks, discomfort, and emotional tension that translates into psychomotor activity such as impulsive behavior, intense motor activity, and other indicative manifestations.
- Sensory overexcitability (SOE): Sensual overexcitability is a feeling of sensory delight and a search for sensory means to relieve internal tension. Its manifestations include a great interest in clothing and appearance, an attachment to jewelry and adornments, and a pleasure in sensory experiences such as touch, taste, and smell.
- Imaginational overexcitability (IMOE): An abundance of imaginative ideas, the use of metaphor in verbal expressions, and creative mental thoughts. It can also be evidenced by daydreaming and a tendency toward fantasy. This occurs because of allowing free rein to the imagination.
- Intellectual overexcitability (IOE): An intense and accelerated mental activity. It's most powerful expressions are manifested through the pursuit of understanding the unknown, a love of truth and knowledge, critical observation, and independent thinking, rather than through education and academic achievement per se.
- Emotional Overexcitability (EOE): The ability to understand and channel conflicting emotions in a positive way, contributing to emotional integration, including hypersensitivity, emotional memory, and introversion (Martowska, & Romanowicz, 2020).
- The researcher defines emotional overexcitability as the ability of a judge to process information and stressful situations encountered during athletic activity, contributing to their self-discipline and emotional balance. It represents a cognitive, emotional, and behavioral pattern that expresses the judge's ability to challenge environmental pressures and transform them into opportunities for personal and athletic growth.

Method

Research Methodology

The researcher followed a descriptive survey approach to suit the research procedures.

Research Community and Sample

The research community included field referees, assistant referees, and VAR referees for the Iraqi Premier League and the 2024/2025 football season, totaling (227) referees. The research sample for constructing the Overexcitability scale was (215) referees, representing (94.71%) of the research community.

Methods, Tools, and Devices Used in the Research

- Arabic and foreign sources and references.
- Supporting staff.
- Personal interviews.

- Dell Core i7 computer.
- Casio handheld calculator.
- Stopwatch.

Field Research Procedures

Domains of the Overexcitability Scale

The researcher adopted the overexcitability patterns identified by (Mendaglio □& Tillier □2006) in his theory as domains of the overexcitability scale, namely (psychomotor overexcitability, sensory overexcitability, imaginative overexcitability, mental overexcitability, and emotional overexcitability).

Determining the relative importance of the referees Overexcitability patterns

The scale's patterns and domains may differ in their representation of the referees Overexcitability measurement, as some patterns may be more important to the referees than others may. To determine the relative importance of each pattern or domain, it was presented to the experts to determine its relative importance. Accordingly, the researcher presents the steps for extracting relative importance (Al-Saadawi, 2007):

We calculate the total scores collected by each Overexcitability pattern:

Total scores = (number of repetitions × importance score).

Number of repetitions represents the number of experts' signals corresponding to each importance score.

Total scores for hyper-psychomotor arousal = (6 x 0) + (3 x 1) + (1 x 2) + (4 x 3) = 17

We calculate the maximum value of the range of scores:

Maximum value of the range of scores = Number of experts x Highest score in the range = 14 x 3 = 42

We calculate the relative importance of each of the patterns:

$$\textbf{The relative importance of each pattern} = \frac{\textbf{Total style scores}}{\textbf{Highest value of the range}}$$

The relative importance of psychomotor style = $\frac{17}{42} * 100 = 40.4$

Calculate the acceptable ratio:

calculate the acceptable ratio

$$= \frac{0.5\ (highest\ value\ of\ the\ range\ of\ scores\ +\ highest\ score\ in\ the\ range)}{Highest\ value\ of\ the\ score\ range}$$

According to the results of the statistical analysis of relative importance, the results came as shown in Table (1).

Table 1. Shows the relative importance of hyper-arousal patterns

No.	Pattern	Number of experts	Total score	Relative importance
1	Psychomotor	14	39	92.8
2	Sensory	14	39	92.8
3	Imaginative	14	36	85.7
4	Mentality	14	34	80.9
5	Emotional	14	30	71.4

Preparing Scale Statements

The number of statements for the scale will be consistent with the relative importance of each pattern. To develop the initial formulation of the Referees Super-Arousal Scale, numerous sources related to the concept were consulted.

An open-ended questionnaire was distributed to (15) referees, who were selected by simple random selection. The questionnaire included the super-arousal patterns and a definition for each pattern. Referees were asked to list the Paragraphs they knew for each pattern, illustrating this with more than one example. This enabled the collection of a number of Paragraphs. After studying and analyzing these open-ended questionnaire Paragraphs, similar and unclear Paragraphs were excluded, and the remaining Paragraphs were reParagraphsd to align with the mathematical aspect. The total number of Paragraphs then reached (95), distributed across the five Overexcitability patterns according to their relative importance. Below, we explain how to calculate the number of Paragraphs for each Overexcitability pattern According to the relative importance:

First/ Calculating the total relative importance of the scale patterns = Relative importance of pattern 1 + 2 + 3 + 4 + 5 = 84.4 + 82.2 + 80 + 75.5 + 71.1 = 423.6

$$Second: Calculating\ the\ percentage\ of\ relative\ importance = \frac{relative\ importance\ of\ a\ single\ pattern}{Total\ relative\ importance\ of\ all\ species}$$

$$Percentage\ of\ importance\ of\ Overexcitability\ = \frac{92.8}{423.6} * 100\% = 21.9\%$$

Calculate the number of Paragraphs in each pattern $= \frac{Percentage\ of\ relative\ importance \times total\ number\ of\ paragraphs}{100} * 100\% = 21.9\%$

Calculate the number of overexcitability Paragraphs
= (21.9 × 95) / 100 = 20.8 ≈ 21 Paragraphs

Table (2) shows the percentage of relative importance of each type of hyper-arousal and the number of its Paragraphs.

Table 2. Shows the percentage of relative importance and the number of its Paragraphs

No.	Pattern	Relative importance	Percentage	Number of Paragraphs
1	Psychomotor	92.8	% 21.9	21≈ 20.8
2	Sensory	92.8	% 21.9	21≈ 20.8
3	Imaginative	85.7	% 20.2	19 ≈ 19.19
4	Mentality	80.9	% 19.09	18 ≈ 18.13
5	Emotional	71.4	% 16.8	16 ≈ 15.96

Validity of Scale Statements

The researcher prepared the preliminary form of the Referees' Super-Arousal Scale and identified the statements for each of the five types comprising the scale. The questionnaire included (95) statements, and was presented to a group of experts and specialists in educational and psychological sciences, sports psychology, and testing and measurement (Appendix 1). After the questionnaires were retrieved, the Chi-square test was used to identify valid statements. The results showed the validity of (91) statements to represent the types to which they belong, as shown in Table (3).

Table 3. Shows the validity of the statements to represent the types to which they belong.

	Paragraphs sequence	Number of experts		Agreement rate	Calculated value of chi-2	Semantic pattern
		Suitable	Not suitable			
Psychomotor	،16 ،12 ،11 ،10 ،3 ،2 ،1 21 ،19 ،18	14	0	%100	14	Sig
	20 ،17 ،15 ،13 ،8 ،5	13	1	%92.8	10.2	Sig
	14 ،9 ،6 ،4	12	2	%85.7	7	Sig
	7	10	4	%71.4	2.4	Non.sig
Sensory	،27 ،26 ،25 ،24 ،23 ،22 41 ،40 ،35 ،33 ،28	14	0	%100	14	Sig
	،39 ،38 ،27 ،34 ،31 ،29 42	13	1	%92.8	10.2	Sig
	36 ،30	12	2	%85.7	7	Sig
	32	10	4	%71.4	2.4	Non.sig

Imaginative	‹50 ‹48 ‹47 ‹45 ‹44 ‹43 ‹60 ‹58 ‹56 ‹55 ‹53 ‹52 61	14	0	%100	14	Sig
	59 ‹57 ‹54 ‹51 ‹46	13	1	%92.8	10.2	Sig
	49	10	4	%71.4	2.4	Non.sig
Mentality	77 ‹76 ‹74 ‹70 ‹65 ‹62	14	0	%100	14	Sig
	‹72 ‹71 ‹69 ‹68 ‹67 ‹64 75 ‹73	13	1	%92.8	10.2	Sig
	79 ‹78 ‹66 ‹63					Sig
Emotional	‹85 ‹83	14	0	%100	14	Sig
	95 ‹90 ‹89 ‹82 ‹80	13	1	%92.8	10.2	Sig
	94 ‹93 ‹92 ‹88 ‹86	12	2	%85.7	7	Sig
	91 ‹87	11	3	%78.5	4.4	Sig
	84	9	5	%64.2	1.14	Non.sig

The tabular chi-square value = 3.84 with a degree of freedom (n-1) = 2-1 = 1 and a significance level of (0.01).

Preparing the Referees Super-Arousal Scale

After excluding the statements unacceptable by the experts, (91) statements were randomly redistributed into a new questionnaire, with (20) statements for psychomotor and sensory arousal, (18) statements for imaginative and mental arousal, and (15) statements for emotional arousal. Table (4) shows the random distribution of each type of super-arousal, their number, and order.

Table 4. Shows the types of super-arousal, their number of statements, and their random distribution.

No.	Pattern	Number of Paragraphs	Paragraphs order
1	Psychomotor	20	.90‹ 88 ,84, 80, 76‹ 71‹ 66 , 61, 56, 51, 46 ,41 ,36 ,31 ,26 ,21 , 16 ,11, 1‹6
2	Sensory	20	.91 , 89‹ 85, 81‹ 77, 72‹ 67, 62 , 57, 52, 47, 42, 37, 32, 27, 22, 17, 12, 7 ,2
3	Imaginative	18	.86, 82, 78, 73, 68‹ 63, 58, 53, 48, 43 , 38, 33, 23‹28, 18, 13, 8 ,3
4	Mentality	18	.87 ,83‹ 79‹ 74, 69 , 64, 59 ,54 ,49, 44, 39, 34, 29, 24, 19, 14, 9 ,4
5	Emotional	15	.75‹ 70‹ 65‹ 60‹ 55 , 50‹ 45 , 40 ,35, 30 ,25 ‹20‹ 15 ,10 ,5

Preparing the Referees Super-Arousal Scale Instructions

The instructions were written on a separate page. They emphasized clarity of response, explained the importance of focusing and honesty in answering, and emphasized not leaving any statement unanswered. Participants were also reassured that their answers were confidential and would be used only for scientific research purposes. An illustrative example of how to answer the questionnaire was also provided.

Referees Super-Arousal Scale Scoring Keys

After the experts approved the response alternatives formulated according to the Likert scale and a five-point scale: (applies to me completely, applies to me a lot, applies to me sometimes, applies to me a little, and does not apply to me at all), the response alternatives were assigned scores of (5, 4, 3, 2, 1) for positive statements and (1, 2, 3, 4, 5) for negative statements. Each super-arousal pattern was treated as an independent dimension because the scale does not have a total score.

Exploratory Application of the Referee Super-Arousal Scale

A Exploratory study was conducted on a sample of (10) referees from the research community on October 15, 2024. The results were encouraging regarding the measurement tool. It became clear from this that the response time ranged between (20-25) minutes, with an average of (22.5) minutes. All statements were clear and understandable to the referees.

Main Application of the Football Referee Super-Arousal Scale

The scale was applied to a research sample of (215) referees from the Iraqi Stars League and the Premier League for the year 2024-2025, from November 18, 2024, to February 29, 2025.

Correction of the Referees Super-Arousal Scale

After sorting the response forms, it was found that (7) forms were invalid due to errors in the answers, such as leaving some Paragraphs unanswered or answering more than one alternative to a single Paragraphs. Accordingly, the researcher retained (208) forms, which were relied upon in the statistical analysis of the Referees Super-Arousal Scale statements to determine their discriminatory power, validity, and reliability.

The test-takers' scores ranged from (45-85) for psychomotor arousal, (46-84) for sensory arousal, (43-86) for imaginative arousal, (42-75) for mental arousal, and (28-63) for emotional arousal.

The normal distribution of the sample constructing the super-excitability scale for referees

To ensure the normal distribution of the sample construct scores and to determine the extent to which the sample construct scores are close to or far from the normal distribution, some statistical indicators related to the characteristics of central tendency, dispersion measures, and frequency distribution measures were calculated, as shown in Table (5).

Table 5. Shows the statistical indicators related to the sample construct.

Statistical indicators / Arousal patterns	Arithmetic mean	Median	Mode	Skewness	Kurtosis	Range	Lowest degree	Highest degree
Psychomotor	68.322	68.308	68.000	-0.003	-0.728	33.000	52.000	85.000
Sensory	67.567	67.786	66.000	-0.149	-0.477	33.000	51.000	84.000
Imagination	62.394	62.182	60.000	0.185	-0.708	27.000	50.000	77.000
Cognitive	57.466	58.095	58.000	-0.229	-0.472	27.000	42.000	69.000
Emotional	48.192	48.559	52.000	-0.556	0.469	35.000	28.000	63.000

It is clear from the table that the statistical indicators are close to the normal distribution, as the test is considered to be normally distributed if Pearson's skewness coefficient ranges between (1). This proves the suitability of all tests (statements) to the level of the research sample (Al-Takriti, and Al-Ubaidi, 1999).

Statistical Analysis of the Statements of the Referees Super-Arousal Scale:

The two extreme groups (external consistency)

After the scale was administered, the researcher followed the following steps:

- Determine the total scores for each scale (the sum of the five patterns' scores) separately.
- Arrange the total scores in descending order, then take the highest and lowest 27% of the total scores for each subscale, representing the upper group (27%) of highly aroused referees, and the lower group (27%) of low aroused referees. The number of referees for each group was equal to (56).

A two-sample t-test was applied to determine the statistical significance of the difference between the means of the upper and lower groups for the scale's statements. The t-value was considered an indicator of the validity of the statement by comparing it to the tabular value of (1.980) at a degree of freedom of (110) and a significance level of (0.05). The analysis results revealed that all of the scale's statements were distinct, with the exception of statements (12, 24, and 71), as shown in Table (6).

Table 6. Shows the statements, the arousal pattern, and the t-value of the discrimination coefficient that were excluded when extracting the discrimination coefficient using the external consistency method.

Paragraphs sequence	Arousal pattern	T-value
71	The breath is kinetic	0.279
12	Sensual	0.570
24	Mental	0.537

From this, it can be inferred that the scale contains statements that can distinguish between referees in terms of Overexcitability of football referees, as shown in Table (7).

Table 7. Shows the values of the t-test for the discrimination coefficient using the two-tailed sample method for the Overexcitability scale.

Arousal pattern	No.	Top Group		Lower group		T-value	Paragraphs calendar
		Mean	Standard deviation	Mean	Standard deviation		
Psychomotor arousal	1	3.928	0.969	3.339	1.311	2.704	Distinctive
	6	3.696	1.204	2.732	1.314	4.047	Distinctive
	11	3.875	1.265	3.017	1.286	3.554	Distinctive
	16	4.428	0.782	2.946	1.256	7.492	Distinctive
	21	3.910	0.977	3.232	1.220	3.247	Distinctive
	26	3.446	1.278	2.732	1.470	2.743	Distinctive
	31	3.928	1.373	2.642	1.227	5.224	Distinctive
	36	4.250	0.858	2.750	1.365	6.961	Distinctive
	41	4.535	0.570	2.910	1.504	7.555	Distinctive
	46	3.607	1.245	2.732	1.272	3.678	Distinctive
	51	3.821	1.415	2.642	1.340	4.524	Distinctive
	56	4.589	0.654	3.250	1.310	6.841	Distinctive
	61	4.142	0.903	3.196	1.313	4.444	Distinctive
	66	3.910	1.225	3.000	1.206	3.964	Distinctive
	71	3.410	1.005	3.285	1.423	0.537	Unmarked
	76	3.803	1.340	3.250	1.504	2.056	Distinctive
	80	3.375	1.258	2.571	1.582	2.974	Distinctive
	84	3.410	1.005	2.428	0.931	5.364	Distinctive
	88	3.785	1.186	2.785	1.485	3.936	Distinctive
	90	3.767	0.972	2.857	1.634	3.584	Distinctive
Sensory arousal	2	3.375	1.459	2.464	1.111	3.715	Distinctive
	7	3.392	1.216	2.696	1.463	2.738	Distinctive
	12	3.178	1.322	3.107	1.384	0.279	Unmarked
	17	3.803	1.118	3.160	1.005	3.199	Distinctive
	22	4.035	1.127	2.464	1.347	6.692	Distinctive
	27	4.142	1.197	2.910	1.404	4.995	Distinctive
	32	4.142	0.615	2.785	1.317	6.985	Distinctive
	37	4.267	0.884	2.785	1.410	6.663	Distinctive
	42	3.589	1.522	2.875	1.465	2.529	Distinctive
	47	3.785	1.289	2.607	1.245	4.919	Distinctive
	52	3.660	1.430	2.910	1.468	2.738	Distinctive
	57	4.250	0.939	3.178	1.466	4.605	Distinctive
	62	3.892	1.344	2.964	1.347	3.651	Distinctive
	67	4.357	0.861	3.410	1.569	3.955	Distinctive
	72	3.767	1.464	2.642	1.313	4.280	Distinctive
	77	4.357	0.772	2.839	1.372	7.212	Distinctive
	81	3.660	1.210	2.535	1.464	4.432	Distinctive
	85	3.928	0.891	2.928	1.346	4.634	Distinctive
	89	3.857	1.016	2.642	1.069	6.159	Distinctive
	91	4.089	0.977	2.750	1.378	5.931	Distinctive
Imaginative arousal	3	3.535	1.127	2.928	1.412	2.514	Distinctive
	8	3.857	1.271	2.660	1.325	4.876	Distinctive
	13	4.017	1.272	2.482	1.401	6.073	Distinctive
	18	3.857	1.367	2.714	1.344	4.459	Distinctive
	23	3.875	1.280	2.928	1.291	3.895	Distinctive
	28	4.214	0.779	3.214	1.473	4.489	Distinctive
	33	4.178	1.063	3.267	1.286	4.084	Distinctive
	38	4.035	1.278	2.785	1.371	4.989	Distinctive
	43	3.928	1.233	2.785	1.344	4.687	Distinctive
	48	3.696	1.451	2.571	1.346	4.253	Distinctive
	53	3.607	1.473	2.482	1.401	4.141	Distinctive
	58	4.089	0.958	3.482	1.348	2.746	Distinctive
	63	3.803	0.922	2.964	1.595	3.408	Distinctive
	68	4.339	0.837	2.946	1.432	6.282	Distinctive
	73	4.321	0.855	3.232	1.235	5.425	Distinctive
	78	3.517	1.489	2.678	1.415	3.057	Distinctive
	82	4.178	1.097	2.946	1.340	5.323	Distinctive
	86	3.678	1.145	2.642	1.051	4.983	Distinctive
Mental arousal	4	3.589	1.304	2.821	1.389	3.015	Distinctive
	9	3.517	1.293	2.571	1.291	3.875	Distinctive
	14	3.875	1.112	2.750	1.351	4.808	Distinctive
	19	3.803	1.326	2.928	1.248	3.594	Distinctive
	24	3.035	1.374	2.892	1.274	0.570	Unmarked
	29	3.839	1.202	3.160	1.498	2.642	Distinctive
	34	3.607	1.260	2.410	1.261	5.021	Distinctive
	39	3.642	1.118	2.589	1.247	4.705	Distinctive
	44	3.696	1.204	2.803	1.588	3.351	Distinctive
	49	3.392	1.370	2.357	1.212	4.235	Distinctive
	54	3.839	1.005	2.625	1.382	5.316	Distinctive
	59	3.875	1.028	3.178	1.415	2.979	Distinctive
	64	3.517	1.293	2.732	1.381	3.107	Distinctive
	69	3.785	1.216	2.732	1.286	4.453	Distinctive
	74	3.446	1.158	2.857	1.313	2.518	Distinctive

	79	3.803	1.256	2.785	1.371	4.095	Distinctive
	83	3.678	1.402	2.803	1.432	3.266	Distinctive
	87	3.678	1.145	2.732	1.286	4.112	Distinctive
	5	3.642	1.419	2.642	1.340	3.832	Distinctive
	10	3.535	1.143	2.660	1.254	3.857	Distinctive
	15	3.571	1.346	2.767	1.175	3.364	Distinctive
	20	3.464	1.361	2.803	1.326	2.601	Distinctive
	25	3.446	1.204	2.446	1.204	4.392	Distinctive
	30	3.589	1.345	2.732	1.381	3.326	Distinctive
	35	3.839	1.318	2.589	1.276	5.099	Distinctive
Emotional arousal	40	3.553	1.234	2.803	1.034	3.485	Distinctive
	45	3.464	1.143	2.464	1.220	4.474	Distinctive
	50	3.482	1.595	2.446	1.360	3.696	Distinctive
	55	4.696	0.630	3.160	1.424	7.379	Distinctive
	60	3.464	1.320	2.696	1.263	3.144	Distinctive
	65	3.870	1.145	3.160	1.436	2.909	Distinctive
	70	4.375	0.905	3.125	1.549	5.211	Distinctive
	75	3.875	1.176	2.660	1.325	5.128	Distinctive

The tabular t-value at a significance level of (0.05) and a degree of freedom of (n+n-2) = (56+56-2) = 110 = 1.980.

Internal consistency method

Correlation coefficients of the statement with the total score of the pattern to which it belongs:

Pearson's correlation coefficient was calculated on the analysis sample, which consisted of (208) judgments. Accordingly, the statement with a low correlation coefficient with the total score was deleted, considering that the statement did not measure the entire phenomenon measured by the test. To determine statistical significance, it was compared with the tabular correlation coefficient value (0.138) at a degree of freedom of (206) and a significance level of (0.05). All values were significant except for statements (2, 76), as shown in Table (8).

Table 8. Shows the statements that were deleted using the internal consistency method.

Paragraphs sequence	Arousal pattern	Correlation coefficient value
2	Sensory	0.125
76	Psychomotor	0.104

From this, it can be inferred that the scale contains Paragraphs that can distinguish between individuals with hyper-arousal of football referees, as Table (9) show.

Table 9. Shows the correlation coefficient of each Paragraphs's score with the total score of the hyper-arousal scale using the internal consistency method.

Style	No.	Correlation coefficient	Semantic pattern	Style	No.	Correlation coefficient	Semantic pattern
	1	0.252	Sig		6	0.286	Sig
	11	0.290	Sig		16	0.443	Sig
	21	0.182	Sig		26	0.233	Sig
	31	0.368	Sig		36	0.438	Sig
Psychomotor arousal	41	0.584	Sig	Psychomotor arousal	46	0.220	Sig
	51	0.376	Sig		56	0.549	Sig
	61	0.323	Sig		66	0.275	Sig
	80	0.249	Sig		76	0.104	Non.sig
					84	0.431	Sig
	88	0.299	Sig		90	0.245	Sig
	2	0.125	Non.sig		7	0.180	Sig
					17	0.192	Sig
	22	0.423	Sig		27	0.370	Sig
	32	0.476	Sig		37	0.528	Sig
Sensory arousal	42	0.210	Sig	Sensory arousal	47	0.144	Sig
	52	0.224	Sig		57	0.379	Sig
	62	0.261	Sig		67	0.372	Sig
	72	0.279	Sig		77	0.494	Sig
	81	0.310	Sig		85	0.149	Sig
	89	0.387	Sig		91	0.347	Sig
	3	0.194	Sig		8	0.320	Sig
	13	0.386	Sig		18	0.307	Sig
	23	0.315	Sig		28	0.332	Sig
Imaginative arousal	33	0.325	Sig	Imaginative arousal	38	0.352	Sig
	43	0.357	Sig		48	0.329	Sig
	53	0.308	Sig		58	0.278	Sig
	63	0.308	Sig		68	0.455	Sig

Mental arousal	73	0.403	Sig	Mental arousal	78	0.258	Sig
	82	0.292	Sig		86	0.367	Sig
	4	0.167	Sig		9	0.290	Sig
	14	0.303	Sig		19	0.269	Sig
	34	0.366	Sig		29	0.175	Sig
					39	0.297	Sig
	44	0.303	Sig		49	0.334	Sig
	54	0.356	Sig		59	0.219	Sig
	64	0.306	Sig		69	0.306	Sig
	74	0.204	Sig		79	0.278	Sig
	83	0.215	Sig		87	0.288	Sig
Emotional arousal	5	0.272	Sig	Emotional arousal	10	0.339	Sig
	15	0.216	Sig		20	0.264	Sig
	25	0.357	Sig		30	0.231	Sig
	35	0.327	Sig		40	0.268	Sig
	45	0.377	Sig		50	0.276	Sig
	55	0.453	Sig		60	0.185	Sig
	65	0.315	Sig		70	0.340	Sig
	75	0.380	Sig				

* Table (r) value at a significance level of (0.05) and a degree of freedom of (n-2) = 208 - 2 = 206 = 0.138.

Correlation coefficients of the subscales with the total score of the scale

Simple correlation coefficients (Pearson) were extracted between the subscale scores and the total score of the scale and the sample members, as shown in Table (10).

Table 10. Shows the correlation coefficients of the subscales with the total score of the Overexcitability scale.

Arousal pattern	Psychomotor	Sensory	Imaginary	Mentality	Emotionality
Psychomotor					
Sensory	** 0.627				
Imagination	** 0.189	* 0.149			
Cognitive	* 0.158	** 0.179	* 0.168		
Emotional	** 0.309	**0.224	* 0.167	** 0.232	
Total score	** 0.567	** 0.486	** 0.527	** 0.497	** 0.553

The table shows that all subscale correlation coefficients with the total score are statistically significant at a degree of freedom of (206) and a significance level of (0.05).

Scientific Indicators of the Scale

Scale Validity

Content Validity

Content validity was achieved by presenting the Overexcitability patterns to a group of experts and specialists and extracting the relative importance of each Overexcitability pattern. The statements were also presented to another group of experts and specialists. After statistically analyzing their opinions using Chi-square, (4) statements were excluded for not achieving the acceptable level of agreement.

Construct Validity

Construct validity was achieved by excluding non-distinctive statements and retaining statements capable of distinguishing between referees in Overexcitability patterns using the two-party method and internal consistency.

Factorial Validity

Factorial validity was achieved when (86) statements were entered for factor analysis, after excluding statements that were unable to distinguish between referees on a sample of (208) referees. Using the statistical package (SPSS), the analysis results yielded (28) factors. These factors were then orthogonally rotated, and the Kaiser Permanente factor acceptance criteria were followed.

Scale Reliability Indicators

Split-Half Method

The scale's sub-type statements were divided into two halves, the first containing odd-number statements, while the second contained even-number statements. The Pearson correlation coefficient for the

total scores of the two halves of the test was extracted, and it ranged between (0.797 - 0.639). However, these values represent the coefficients of the test's half for the subscales, so these coefficients must be corrected using the Spearman-Brown equation to correct the reliability coefficient. After correction, the reliability coefficient ranged between (0.887 - 0.779), as shown in Table (11).

Table 11. Shows the split-half test reliability coefficients with the correction coefficient.

No.	Arousal pattern	Stability before correction	Stability after correction
1	Breath is kinetic	0.745	0.853
2	Sensual	0.639	0.779
3	Imaginative	0.741	0.851
4	Mental	0.671	0.803
5	Emotional	0.797	0.887

Cronbach's Alpha Equation

The researcher used Cronbach's Alpha Equation to calculate the test's reliability against the responses of the construct sample, which consisted of (208) referees. The reliability coefficients ranged between (0.791 - 0.883) for the subscales.

Factor Analysis

After verifying the validity of the statements of the super-arousal scale, (86) statements were nominated. Some statements were excluded due to their inability to distinguish between referees. The statement numbers were rearranged as shown in Table (12).

Table 12. Shows the number of statements for each super-arousal type nominated for analysis.

No.	Arousal pattern	Paragraphs numbers	Number	Percentage
1	Breath is kinetic	, 76 , 71 , 66 , 61 , 56 , 51 , 46 , 41 , 36 , 31 , 26 , 21 , 16 , 11 , 6 ,1 84 , 80	18	20.93
2	Sensual	, 77 , 72 , 67 , 62 , 57 , 52 , 47 , 42 , 37 , 32 , 27 , 22 , 17 , 12 , 7 , 2 85 , 81	18	20.93
3	Imaginative	, 78 , 73 , 68 , 63 , 58 , 53 , 48 , 43 , 38 , 33 , 28 , 23 , 18 , 13 , 8 , 3 86 , 82	18	20.93
4	Mental	, 79 , 74 , 69 , 64 , 59 , 54 , 49 , 43, 39 , 34 , 29 , 24 , 19 , 14 , 9 , 4 83	17	19.76
5	Emotional	75 , 70 , 65 , 60 , 55 , 50 , 45 , 40 , 35 , 30 , 25 , 20 , 15 , 10 , 5	15	17.44
		Total	86	99.99

Factors before rotation

The results of the principal components factor analysis revealed (28) factors. These factors cannot be accepted as the final form. In order to interpret these factors, they must be rotated.

Factors after Rotation

Exploratory factor analysis was used using the principal components method with orthogonal varimax rotation of the axes for the referees scores in the five patterns using the SPSS statistical program. The analysis results showed that the saturation of (0.40) was the minimum for accepting the statement and accepting the factor in which three or more statements were saturated and their saturations were (0.40) or more. This resulted in (28) factors. The value of the first factor was (5.474) with a latent root and a percentage variance of (6.366), the second had a root of (4.801) with a percentage of (5.583), the third had a root of (4.743) with a percentage of (5.515), the fourth had a root of (3.275) with a percentage of (3.809), the fifth had a root of (2.678) with a percentage of (3.114), the sixth had a root of (2.603) with a percentage of (3.027), and the seventh had a root of (2.524) and a ratio of (2.935), the eighth root is (2.501) and a ratio of (2.908), the ninth root is (2.454) and a ratio of (2.853), the tenth root is (2.405) and a ratio of (2.797), the eleventh root is (2.377) and a ratio of (2.764), the twelfth root is (2.372) and a ratio of (2.758), and so on, as well as the remaining factors.

Findings

Presentation and Interpretation of the Factor Analysis

In order to identify the factors comprising the super-excitability scale for football referees, the researcher will present the factors revealed by the orthogonal rotation results, which number (28) factors. Each group of statements represents an independent factor. These grouped statements are highly correlated with each other, while their correlation with the statements in the other groupings is either non-existent or very low. To determine the identity of acceptable factors, a factor that is saturated with at least three significant statements must be acceptable. The researcher used a criterion of (0.4) or higher to determine the saturation of statements. Factors that did not meet the basic conditions for acceptance were ignored.

Presentation and Interpretation of the First Factor

Based on the basic conditions for factor acceptance that the researcher relied on, this factor consisted of (12) statements with significant saturations. These statements with saturations of (0.4) or higher were arranged in descending order according to the degree of saturation. Table (13) illustrates this.

Table 13. Shows the Paragraphs, their numbers, arousal pattern, and their saturations with the first factor, arranged in descending order according to the degree of saturation.

No.	Paragraphs number	Saturation value	Arousal pattern
1	80	0.764	Psychomotor
2	29	0.626	Mental
3	31	0.574	Psychomotor
4	46	0.550	Psychomotor
5	84	0.549	Psychomotor
6	56	0.534	Psychomotor
7	11	0.532	Psychomotor
8	71	0.494	Psychomotor
9	66	0.491	Psychomotor
10	16	0.488	Psychomotor
11	54	0.442	Psychomotor
12	41	0.441	Mental

Table (13) shows that this factor is a single-component factor, with the Paragraphs saturated on its positive pole. The saturations on this factor ranged between (0.441 - 0.764). (10) Paragraphs were of the psychomotor arousal type, and (2) Paragraphs were of the mental arousal type. None of the Paragraphs saturated on this factor shared high saturation with other factors.

According to the conditions for naming the factor, and given that most of the Paragraphs gathered in this factor are candidates for measuring the psychomotor arousal type, this first factor is called (Superior Psychomotor Arousal) and can be represented on this scale.

Presentation and Interpretation of the Second Factor

This factor consists of (9) Paragraphs with significant saturations. These Paragraphs with saturations of (0.4) or more were arranged in descending order according to the degree of saturation. Table (14) illustrates this.

Table 14. Shows the Paragraphs, their numbers, arousal patterns, and their saturations with the second factor, arranged in descending order according to the degree of saturation.

No.	Paragraphs number	Saturation value	Arousal pattern
1	86	0.851	Imagination
2	50	0.713	Emotional
3	28	0.565	Imagination
4	48	0.492	Imagination
5	63	0.484	Imagination
6	73	0.454	Imagination
7	72	0.435	Imagination
8	78	0.421	Sensory
9	13	0.411	Imagination

Table (14) shows that this factor is a single-component factor, with the Paragraphs saturated on its positive pole. The saturations on this factor ranged between (0.411-0.851). There were (7) Paragraphs of the super-imaginative arousal type, and one Paragraphs for both emotional and imaginative arousal. None of the Paragraphs saturated on this factor shared high saturation with other factors.

According to the conditions for naming the factor, and given that most of the Paragraphs gathered in this factor are candidates for measuring imaginative arousal, this second factor is called (super-imaginative arousal) and can be represented on this scale.

Presentation and interpretation of the third factor

This factor consists of (10) Paragraphs with significant saturations. These Paragraphs with saturations of (0.4) or more were arranged in descending order according to the degree of saturation, as shown in Table (15).

Table 15. Shows the Paragraphs, their numbers, arousal patterns, and their saturations with the third factor, arranged in descending order according to the degree of saturation.

No.	Paragraphs number	Saturation value	Arousal pattern
1	7	0.730	Sensory
2	81	0.629	Sensory
3	52	0.593	Sensory
4	40	0.553	Emotional
5	32	0.534	Sensory
6	17	0.507	Sensory
7	22	0.507	Sensory
8	85	0.490	Sensory
9	18	0.413	Imaginative
10	57	0.401	Sensory

Table (15) shows that this factor is a single-component factor, with the Paragraphs saturated on its positive pole. The saturations ranged between (0.401 - 0.730). There were (8) Paragraphs of the hypersensitivity type, and one Paragraphs each of emotional and imaginative arousal. None of the Paragraphs saturated on this factor shared high saturation with other factors.

According to the conditions for naming the factor, and given that most of the Paragraphs gathered in this factor are candidates for measuring sensory arousal, this third factor is called (hypersensitivity) and can be represented on this scale.

Presentation and interpretation of the fourth factor

This factor consists of (7) Paragraphs with significant saturations. These Paragraphs, with saturations of (0.4) or more, were arranged in descending order according to the degree of saturation, as shown in Table (16).

Table 16. Shows the Paragraphs, their numbers, arousal patterns, and their saturations in the fourth factor, arranged in descending order according to the degree of saturation.

No.	Paragraphs number	Saturation value	Arousal pattern
1	51	0.693	Psychomotor
2	60	0.647	Emotional
3	15	0.645	Emotional
4	65	0.551	Emotional
5	25	0.492	Emotional
6	5	0.488	Emotional
7	45	0.444	Psychomotor

Table (16) shows that this factor is a single-component factor, with the statements saturated on its positive pole. The saturations ranged between (0.444 - 0.693). (6) of the statements were of the super-emotional arousal type, and one statement was of the psychomotor arousal type. None of the statements saturated on this factor shared high saturation with other factors.

According to the conditions for naming the factor, and given that most of the statements gathered in this factor are candidates for measuring emotional arousal, this fourth factor is called (super-emotional arousal) and can be represented on this scale.

Factors Five, Six, Seven, Eight, Nine, Ten, and Eleven

Factors (Fifth, Sixth, Seventh, Eighth, Ninth, Tenth, and Eleventh) were discarded for not meeting the criteria for factor acceptance.

Presentation and interpretation of the twelfth factor

This factor consists of (5) statements with significant saturations. These statements, with saturations of (0.4) or more, were arranged in descending order according to the degree of saturation, as shown in Table (17).

Table 17. Shows the statements, their numbers, arousal patterns, and saturations in the twelfth factor, arranged in descending order according to the degree of saturation.

No.	Paragraphs number	Saturation value	Arousal pattern
1	19	0.825	Mental
2	64	0.574	Mental
3	6	0.508	Psychomotor
4	34	0.482	Mental
5	39	0.404	Mental

Table (17) shows that this factor is a single-component factor, with the Paragraphs saturated on its positive pole. The saturations ranged between (0.404 - 0.825). Four (4) Paragraphs were of the "supermental arousal" type, and one Paragraphs was of the "psychomotor arousal" type. None of the Paragraphs saturated on this factor shared high saturation with other factors. In light of the criteria for naming the factor, and given that most of the Paragraphs gathered in this factor are candidates for measuring mental arousal, this twelfth factor is called "super-mental arousal" and can be represented on this scale.

Presentation and interpretation of the remaining factors

These are the thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, eighteenth, nineteenth, twentieth, twenty-first, twenty-second, twenty-third, twenty-fourth, twenty-fifth, twenty-sixth, twenty-seventh, and twenty-eighth factors.

The saturations on these factors ranged between (3-1) of the Paragraphs. The factors on which three Paragraphs were saturated were considered composite polar factors, as they could not be explained. The remaining factors were saturated with one or two Paragraphs. Because these factors did not meet the criteria for factor acceptance, the researcher therefore believes that these factors should be neglected and not represented in the scale.

Presentation of the final specifications for the Super-Arousal Scale

Crystallized from factor analysis after orthogonal rotation and factor acceptance and interpretation (43) distributed across the super-arousal patterns of Dabrowski's theory. The statements are distributed as shown in Table (18), which shows the number of statements for each pattern.

Table 18. Shows the factors representing the scale, their statement numbers, and the super-arousal pattern.

No.	Worker number	Paragraphs	Factor name (mode)
1	1st	41 ,54 ,16 ,66 ,71 ,11 ,56 ,84 ,46 ,31 ,29 ,80	Psychomotor
2	2nd	13 ,78 ,26 ,73 , 63 , 48 , 28 , 50 , 86	Imaginational
3	3rd	57 ,18 ,85 ,22 ,17 ,32 ,40 ,52 ,81 ,7	Sensory
4	4th	45 ,5 ,25 ,65 ,15 , 60 ,27	Emotional
5	12th	39 , 34 , 6 ,64 , 19	Cognitive

Discussion

Thus, the first objective is achieved, which is to construct a scale of Overexcitability patterns based on Dabrowski's theoretical patterns for referees in the Iraqi Premier League and the Premier League (Appendix 2). Table (18) shows that the psychomotor arousal pattern is the most representative of Overexcitability among referees in the Iraqi Elite League and the Premier League, with (12) statements. This is followed by the sensory arousal pattern with (10) statements, then the imaginative arousal pattern with (9) statements, the emotional arousal pattern with (7) statements, and finally the mental arousal pattern with (5) statements. Here, we can point out the possibility of likening the referees' Overexcitability to

positive sports psychological reintegration, which requires strength, courage, guidance, skill, and perseverance. If the referee is unable to reintegrate positively at a higher level, he remains stuck at lower levels, which creates deep personal suffering for the talented or superior referee. The natural result is that when he possesses the skills, tools, and guidance to support his inner experience in sports competitions, he can let go of everything that hinders the execution of his duties. He is able to deliberately and consciously control the movement towards self-realization and self-transcendence, which leads to the resolution of that deep suffering (Pryde, 2018).

Therefore, Overexcitability is essential for football referees to achieve the highest levels of human and athletic performance, characterized by moral and emotional growth. All types of arousal are essential for development. This is what (Dąbrowski, 1972) suggests, indicating that individuals who experience Overexcitability are more likely to reach a higher level of personality development, and that the stress, anxiety, tension, depression, sadness, despair, and neurotic tendencies they cause should be considered positive signs of emotional and personal growth. Overexcitability types are interconnected and must all be present in referees or ordinary individuals. Dabrowski emphasizes that different types of Overexcitability can lead to different outcomes. Individuals who possess only psychomotor and sensory arousal types have somewhat limited development. When these two types of arousal were found in ambitious and narcissistic individuals, it was associated with the emergence of signs of psychopathy such as sociopathy. They may become successful in life, but they will be driven to care about themselves and show little interest in others; that is, it makes the development process limited to the lower levels, while the presence of higher types of imaginative, mental and emotional Overexcitability led to the transformation of psychomotor and sensory Overexcitability into positive patterns, and thus these patterns are necessary for development to the higher and advanced levels of growth (Rinn, Mendaglio, & Rudasill, 2010).

It is clear from the above that the development of a referee's personality depends on the type and number of Overexcitability patterns they possess. It has been shown that if a referee possesses high levels of arousal in all five patterns, this leads to significant personality development. However, if they possess only one or two types, this leads to limited or no development, which is consistent with a study by (Soliman, 2022).

Conclusions

- A tool was developed to measure the concept of Overexcitability patterns, according to Dabrowski's theory, among Iraqi football referees.
- The sensorimotor Overexcitability pattern is the most representative of the Overexcitability patterns among Iraqi football referees.

Recommendations

- Apply the Overexcitability patterns scale to other samples of referees from various sports.
- Conduct a study to standardize the Overexcitability scale among Iraqi football referees to extract levels and derive criteria
-

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Authors' and translators' details:

Abdulrazzaq Waheeb Yaseen	abdulrazzaq.wahib@uodiyala.edu.iq	Author
Yousif Abdul Ameer Darweesh	yosef.abdulameer@uodiyala.edu.iq	Author
Abbas Fadel Abbas Mohsen	abbas.fadel.abbas@ec.edu.iq	Author
Fadwa Mohammed Mohsin	fadwa.mohamed@uodiyala.edu.iq	Author

Appendix

Appendix 1. Experts and specialists to whom the scale statements were presented in their initial form

No.	Name	Academic title	Specialization	Affiliations
1	Muhannad abdul sattar al-naimi	Prof. Dr.	Experimental psychology	University of Diyala - college of basic education
2	Akla sulaiman al-hawri	Prof. Dr.	Sports psychology	University of Mosul - college of basic education
3	Kamel abboud hussein	Prof. Dr.	Sports psychology	University of Diyala - college of physical education and sports sciences
4	Mowaffaq abis khudair	Prof. Dr.	Sports psychology	University of Baghdad - college of physical education and sports sciences
5	Firas hassan abdul hussein	Prof. Dr.	Sports psychology	University of basra - college of physical education and sports sciences
6	Khaled jamal jassim	Prof. Dr.	Educational psychology	University of Baghdad - Ibn Rushd
7	Adi abdul hussein karim	Prof. Dr.	Testing and measurement	University of Diyala - college of physical education and sports sciences
8	Nahla najmuddin mukhtar	Academic title	Educational psychology	University of Baghdad - Ibn Rushd
9	Abdullah hazza al-shafie	Prof. Dr.	Sports Psychology	University of Baghdad - College of Physical Education and Sports Sciences
10	Firas abdul moneim abdul razzaq	Prof. Dr.	Sports Psychology	University of Diyala - College of Physical Education and Sports Sciences
11	Senaria jabbar mahmoud	Prof. Dr.	Sports Psychology	University of Diyala - College of Physical Education and Sports Sciences
12	Haider saud hassan	A.M.D.	Testing and Measurement	University of Diyala - College of Physical Education and Sports Sciences
13	Ari anwar zubair	A.M.D.	Sports Psychology	University of Koya - School of Physical Education
14	Marwan abdul latif abdul jabbar	A.M.D.	Sports Psychology	University of Anbar - College of Physical Education and Sports Sciences

Appendix 2. A scale of Overexcitability patterns based on Dabrowski's theoretical patterns for referees in the Iraqi Premier League and the Premier League in football.

No.	Paragraphs	Applies to me perfectly	It applies .to me a lot	It applies to me sometimes	It applies to me a little	It doesn't apply to me .at all
1	I can focus my attention on all players' movements.					
2	I can make mistakes in critical moments of competition.					
3	I am confident in my ability to succeed, no matter how strong the competitors are.					
4	When i make a mistake in making a decision, i lose control of the match.					
5	I like to manage high-intensity physical matches.					
6	I exercise when i'm nervous.					
7	I control the match, regardless of the criticism and shouts of the audience.					
8	I enjoy competition more than training.					
9	I feel nervous as the match approaches.					
10	After the match, i feel capable of giving more than i did.					
11	I find it difficult to relieve stress during sensitive matches.					
12	I get nervous when the crowds in the stadium increase.					
13	I enjoy the cheers of large crowds.					
14	I feel happy when i am assigned to referee matches with large crowds.					
15	I feel bored when refereeing matches with smaller crowds.					
16	Serious player injuries excite me.					
17	I find refereeing football matches fun and interesting.					
18	I want to build friendships with players and coaches.					
19	I enjoy refereeing matches in rainy weather.					

20	I sympathize with teams with smaller crowds when they face larger teams.
21	I listen carefully to the opinions of my fellow referees.
22	I prefer watching tough matches rather than managing them.
23	I can imagine what might happen in the match i'm managing.
24	I focus on visualizing the situations i might face in matches.
25	The situations i visualize in my mind seem real to me.
26	I get nervous when i imagine the difficulty of important matches.
27	The words and voices of the fans create unusual mental images.
28	Before the match, i visualize a complete picture of my decisions.
29	It's difficult to visualize the actions of my fellow referees before the match.
30	I can visualize the behavior of some unruly players before the match.
31	I visualize my own actions on the field before the match.
32	In matches with fans, i feel like i'm going to make mistakes.
33	I change my thoughts according to the intensity of the competition.
34	I get distracted before the match.
35	When i enter the stadium, i isolate all thoughts unrelated to the match.
36	I stay calm, no matter when others criticize me.
37	Frequent objections make me lose focus during the match.
38	I get extremely emotional during crucial moments of the match.
39	I feel a little confused before entering the stadium.
40	Controlling my emotions leads me to dominate the toughest matches.
41	Negative feelings persist when i make a mistake in a match.
42	The fans' objections don't make me lose control of the match.
43	I face the players' emotions with high morale.