

# An analytical study of levels of innovative thinking among handball players

HAYDER ODDA ZEGHAIR ✉, KADHIM HABEEB ABBAS, SAEED HUSSEIN HASAN

*College of Physical Education and Sports Sciences, Basra University, Iraq*

## ABSTRACT

The main objective of this paper is building and applying the scale of innovative thinking among handball players to the degree and finding standards and levels of emotional thinking among handball players. There is no doubt that there are skills that individuals share, and nevertheless there are skills in which they differ as well, and the level of variation in possessing them is an important indicator of the success of some and the failure of others. Among these skills are those that are visible to the eye, and some of them are not apparent, as they are related to the secrets of the human soul. Thinking is of great player in accordance with the requirements of the game that the player performs, especially the handball player. Of which International, skill, and psychological in addition to innovative thinking that favours his ability to do better than what makes a difference. The matter is not limited to the cognitive potential, but extends that to include the non-cognitive potential, represented by the emotional skills that have a great significance in the success of the player. Players differ in their responses to different alerts and situations depending on individual differences. The situation that includes a challenge to the player may be threatening to another player, and this is why he encourages the first to deal with this situation and tries to solve the problem that he is exposed to and sees in it an opportunity to enhance himself and his appreciation and increase his sense of self-confidence and here the role of innovative thinking is prominent in these situations. The athlete needs to think when practicing sports as the many difficult and complex situations during matches and competitions necessitate him to have an appropriate degree of intelligence, and there are differences between sports in the degree of intelligence it needs, and handball is played from complex and team games that have a special character in terms of Schematic, which requires a higher degree of intelligence, must be demonstrated by the person who practices it, handball and other games that contain a lot of planning and legal elements, And there are sports that need a degree of intelligence, however Less because it takes place in one well-known format, and also for the quality of participation with the competitor, so the more direct competition between competitors, the more innovative the athlete needs to outperform his competitor, as the short seconds and sudden movements play a role in determining the superior in the sports competition, and for this he must be adorned. The athlete has innovative thinking.

**Keywords:** Scale of innovative thinking; Emotional thinking; Handball skills; Innovative thinking.

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✉ **Corresponding author.** *College of Physical Education and Sports Science, Basra University, Iraq.*

E-mail: [gazizovramis132@yahoo.com](mailto:gazizovramis132@yahoo.com)

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## INTRODUCTION

There is no doubt that there are skills that individuals share, and nevertheless there are skills in which they differ as well, and the level of variation in possessing them is an important indicator of the success of some and the failure of others. Among these skills are those that are visible to the eye, and some of them are not apparent, as they are related to the secrets of the human soul. Thinking is of great player in accordance with the requirements of the game that the player performs, especially the handball player. Of which International, skill, and psychological in addition to innovative thinking that favours his ability to do better than what makes a difference. The matter is not limited to the cognitive potential, but extends that to include the non-cognitive potential, represented by the emotional skills that have a great significance in the success of the player. Players differ in their responses to different alerts and situations depending on individual differences. The situation that includes a challenge to the player may be threatening to another player, and this is why he encourages the first to deal with this situation and tries to solve the problem that he is exposed to and sees in it an opportunity to enhance himself and his appreciation and increase his sense of self-confidence and here the role of innovative thinking is prominent in these situations The athlete needs to think when practicing sports as the many difficult and complex situations during matches and competitions necessitate him to have an appropriate degree of intelligence, and there are differences between sports in the degree of intelligence it needs, and handball is played from complex and team games that have a special character in terms of Schematic, which requires a higher degree of intelligence, must be demonstrated by the person who practices it, handball and other games that contain a lot of planning and legal elements, And there are sports that need a degree of intelligence, however Less because it takes place in one well-known format, and also for the quality of participation with the competitor, so the more direct competition between competitors, the more innovative the athlete needs to outperform his competitor, as the short seconds and sudden movements play a role in determining the superior in the sports competition, and for this he must be adorned. The athlete has innovative thinking.

### **Research problem**

The mind is a purely human essence and its growth takes place in different stages, and it is responsible for distinguishing a person from the rest of living things, but the person in itself differs with his brother man in his mental capabilities and among these capabilities we find intelligence, which is considered mental energy or mental return or is the attribute accompanying the mind that works Actively, understanding, depth and speed, and this is what makes us find innovative thinking that considers mental energy or mental return or is the accompanying characteristic of the mind that works actively, understanding, depth and speed of the athlete's behaviour, and according to the researchers' knowledge there is no standard for thinking in the mathematical field, especially in the game of handball. During this study, results were reached that have positive connotations on different aspects of training work, as the handball game requires speed in performance and constant change in playing plans, which requires the presence of a player with a degree of innovative thinking on the field in various situations as well as training.

### **Research objective**

- 1- Building and applying the scale of innovative thinking among handball players to the degree.
- 2- Finding standards and levels of emotional thinking among handball players.
- 3- Identify the reality of innovative thinking among handball players.
- 4- Identify the levels of innovative thinking among first-class handball players.

### **Research hypotheses**

The presence of different levels of innovative thinking among handball players.

**Research fields**

- 1- The human field: First-class and excellent handball players.
- 2- Time domain: 8/4/2020 12/20/2020.
- 3- The spatial domain: first-class and excellent handball stadiums and halls.

**METHODOLOGY AND FIELD PROCEDURES****Research methodology**

The researchers used the descriptive approach in the survey method for its relevance to the research objectives and the nature of the problem.

**Society and sample of research**

The objectives that the researchers set for their research and the procedures that they use will determine the nature of the sample that they will choose (2: 41: 1987) (therefore, the research community was deliberately chosen from the first-class and excellent handball clubs of (120) players representing (8) clubs for the season. 2020-2021 The sample was divided into two parts, the first for the procedures for designing and building the scale and the second for the purpose of implementing the scale as follows:

**First**

The scale building sample: It included a number of club players participating in the first division handball tournament, whose number reached (80) players, as their percentage reached (57.14%) from the research community.

**Second**

The application sample: It included (60) players from the first class handball clubs, as their percentage reached (42.85%) from the research community. Table 1 shows that.

Table 1. The application sample.

Seq	First-division clubs	The number	Excluded	Premier League clubs	The number	Excluded	Exploratory experience
1	AL-Ahly	22	1	AL-Baladiat	20		2
2	Andalus	20		Kufa	20		2
3	AL-Zubair	20		Karbala	20		2
4	Shatt al-Arab	20	1	Najaf	20		
Total		82	2		80		6

**Scale construction procedures**

It is "a set of basic steps that can be followed when building a test or scale and how to link the scale units to measure the overall aspects of a skill, trait, trait or ability" (2002: 320: 10), where researchers sought to build the scale of innovative thinking in line with the foundations The scientific basis from which the topic of their research.

**Scientific parameters of the scale**

To confirm the safety and scientifically of building the scale and to reveal its sufficiency, its paragraphs must be analysed. Here, basic and important conditions must be met to ensure this, and the most important of

these conditions is its honesty and consistency. (Davidoff) confirms this, noting that "test designers must evaluate the evidence of the reliability and validity of their tools" (1983: 538: 8)).

### **First: apparent honesty**

This validity is calculated after being examined by a number of experts in the field that the test measures. So, expert readers, this test measures the behaviour that was designed to measure it, so the researcher can rely on the experts' understanding (1999: 52: 7). This type of honesty was achieved when the researchers presented the scale to a group of experts to validate its validity and assess the extent to which each paragraph measured the components of each field. Thus, the fields and paragraphs that obtained the approval of the experts and the insincere paragraphs were deleted.

### **Second: validity of construction**

It is one of the most appropriate types of validity for building standards and it is called the sincerity of the concept or the sincerity of the hypothetical formation because it depends on the experimental verification of the extent to which the scores of the paragraphs coincide with the characteristic or the concept to be measured, and it refers to the extent of measuring the scale, which is the analysis of the scale degrees based on the construction of the characteristic to be measured in light of a specific concept (1981: 433: 2). Researchers have verified the validity of the construction in the research scale through these indicators.

### **The method of the two extremes**

The researchers reached a mechanism by distinguishing the paragraphs in the scale. This was verified when the discriminatory strength of the paragraphs was calculated by the method of the two extremes, and by using the T-test, we find that the distinct paragraphs were extracted and the non-distinct paragraphs excluded.

### **Internal consistency factor**

It is the ability of the scale to track the actual performance of the individual in the field of the characteristic to be measured. It is known in the construction of measures that the higher the coefficient of correlation of the paragraph with the total number. The scale increases the probability of obtaining a more homogeneous scale (12: 125: 1979). This type of validity is achieved through the use of the Simple Correlation Law (Pearson).

### **Stability**

There are several methods from which we can extract the stability factor from them, and the researchers have chosen from among them the method of retesting, and this method is summarized by conducting the test on the sample for two times separated by a period of time, after which the correlation between the two tests is identified and the extracted value represents the test reliability coefficient (4: 46: 1971). For this purpose, the test was repeated on (6) players from the South Oil Club (2), from the Kufa Club (2) and from the Najaf Club (2), and after five days had passed from the first test, and after collecting the results of the two tests, the researchers extracted the correlation coefficient, Liberson, it appeared The calculated value of (t) is (91.0) and the level of significance is .012.

### **Objectivity**

Objectivity is that the test is not affected by the change of arbitrators and that the test gives the same results regardless of the meaning of the test being evaluated, and this means excluding autonomy, as the more objectivity in the arbitration, the less subjectivity (1995: 9: 202).

### **The final application of the scale**

After completing all the design requirements and procedures, the scale became ready for implementation, with a total of (30 items). The scale was applied in its final form, Appendix (1) to the main research sample (60) players from the first class handball players for the season 2020-2021. Statistical Portfolio (SPSS), version 19

## **ANALYSIS AND DISCUSSION OF THE RESULTS**

Presentation of the results of innovative thinking levels for premium class handball players.

Table 2. Raw scores, levels, number, and percentage of innovative thinking.

<b>Levels</b>	<b>Raw Score</b>	<b>Number</b>	<b>Percentage</b>
Very good	150-126	12	20%
Good	125-102	13	21.66%
Average	101-78	16	26.66%
Acceptable	76-54	10	16.66%
Poor	53-30	9	15%

### **Demonstrates levels of an innovative thinking scale**

After applying the innovative thinking scale, the researchers obtained several levels as shown in Table 1, which represents the levels of the innovative thinking scale, as the level is very good ranging between (126-150) and a good level between (102-125) and an average level between (78-101). An acceptable level between (54-76) and a weak level show (30-53). It also shows the percentage according to the levels of the innovative thinking scale as the players who reached a very good level were (12) with a percentage of (20%). Those who were at good level (13) and by the percentage of (21.66%), those who obtained an intermediate level were (16) and by a percentage (26.66%) and those who obtained an acceptable level were (10) and by a percentage (16.66%). Their number was weak (9) and in percentage (10%), as shown in Table 2.

The researchers believe the reason why players get the level (very good and good) is that innovative thinking is a quality that the player enjoys and at different levels. Intelligence is not limited to an individual without another or to a people without other peoples, but it is a matter that prevails in all human societies, because all types of people possess a quantity. A certain basic ability, and a certain level in each type of intelligence. (Gardner) also points out that people have multiple intelligences, but to varying degrees He explained that the capabilities that people possess are located in several matters that cover a wide range of human activity in different age groups and among these abilities (body-kinaesthetic intelligence), which means the individual's ability to use his mental abilities associated with the physical movements as a whole to express thoughts and feelings, and this intelligence includes skills A specific quality such as balance, strength, flexibility, speed, and a sense of body movement and its description (13: 6: 2002). But the coach has a great role in developing the innovative thinking of the player through psychological preparation of the players and when they reach this level of innovative thinking.

As a group of players, not the majority, were familiar with and interested in the period of psychological preparation, the psychological preparation would show the best behaviour and behaviour as it is characterized by positivity for the player and the team that is well prepared and can reach the highest levels through the development of the physical, skill and planning aspects in addition to the self-side which is considered the aspect The important and vital thing that should not be overlooked by any coach, so that a player goes through situations and conditions in training, especially in competitions full of strength, intensity,

excitement, and emotions that need a well-prepared player before a period of training before participating in sports races. Planning and organizing the numbers of the player must be done psychologically And educational and physical . This is confirmed by Kamal Jamil Rabadi (2001), "*Psychological numbers allow the athlete to lead himself and overcome the difficulties and problems he faces, no matter how difficult they are. When the players participate in it are equal in number (6: 116: 2001)*". And as Nahid Resan Sukkar (11: 72: 2002) adds, "*There is an effective role that the coach plays in the digestion and mastery of the players' psychological skills. The coach must clarify the role of psychological preparation in reaching the players to the higher levels and noting the individual characteristics of each player and thus building his psychological preparation.*" Researchers The reason why players get the (medium) level, which is higher in terms of the number of players in it, is to have information related to the psychological aspect that enables him to prepare the players psychologically and deal with them correctly in order to reach them to the higher levels and achieve the best results by helping the players in organizing psychological emotions that They form during training or a match . And Osama Kamel (1997) indicates that, "*A successful coach is not the one who is good at regulating the physical energy of the player by controlling the training loads only, but he is also the one who can regulate psychological emotions by helping him organize his thoughts and control his emotions, that is, concern for psychological numbers Such as the physical numbers (1997: 1: 7)*" The reason for the level (acceptable and weak) of the scale of innovative thinking is to the trainer as a result of the importance of his leadership role in the course of the training process and directing it towards effectively achieving its goal and objectives The coach is responsible for directing and motivating the players, raising the physical, skill, planning and psychological level in an integrated manner and providing all the appropriate material and psychological conditions possible for this, and all these responsibilities impose on the coach that he has the ability to assume responsibility and work accurately, otherwise the impact will be negative on the player, especially the player Inexperienced people who are more susceptible to injury in this situation, the handball player must learn how to behave under any circumstances and in any atmosphere, especially in competition that requires the player to have good behaviour and deal intelligently on the field inside the stadium and here the role of the coach in the training process and his personality emerges.

Here (Ammar Abdel-Rahman) points out that "*the coach's psyche plays a big role during the training process that is reflected in the trainees themselves, and that is why the trainer must show the highest levels of psychological discipline in the most difficult and delicate cases and meet the emotion with calm, fanaticism and stubbornness with patience and anger with politeness and in the case of the opposite and a feeling Coach with the emotions of the players themselves, because this creates a kind of sensitivity and psychological tension among the players*" (5: 32: 1999).

## CONCLUSIONS

- 1- It was reached to build and apply a measure of innovative thinking for handball players.
- 2- The research sample was divided into five levels (very good - good - medium - acceptable - weak).
- 3- The player who has a high innovative thinking, this is reflected in his performance in matches and training and is more positive.

## Recommendations

- 1- Adopting the current scale designed by researchers to detect the level of innovative thinking among handball players.
- 1- 2 - The need to emphasize the positive psychological state of the players and work to create the appropriate climate for the development of this situation to serve the performance.
- 2- Studies of innovative thinking in various sports activities can be conducted.

## REFERENCES

- Abdul-Jalil Al-Zobaei et al. (1981). Psychological tests and measures. Mosul University Press, Mosul.
- Al-Essawi, Abdul Rahman (1971). Measurement and Experimentation in Psychology and Education. University Knowledge House, Alexandria.
- Allawi, Muhammad Hassan & Radwan, Muhammad Nasreddin (2002). Measurement in Physical Education and Sports Psychology, Arab Thought House, Cairo.
- Allen. (1979). Introduction to measurement theory. Book.col,California.
- Hasanein, Muhammad Subhi (1995). Measurement and Evaluation in Physical Education and Sports. Part 1, 3rd Edition , Arab Thought House , Cairo.
- Ibrahim, Marawan Abdel-Majeed (1999). Scientific foundations and statistical methods for tests and measurement in mathematical education. Dar Al-Fikr for printing and publishing, Amman.
- Karen, G. (2002). Multiple intelligences theory Afram work for personalizing science curricula Journal of school science and Mathematics.
- L.Davvidoff, Linda (1983). Introduction to Psychology (translated by Syed Al-Tawab and others), Mars Publishing House, Riyadh.
- Qabaa, Ammar Abdul Rahman (1999). Sports medicine. I2, Mosul University Press, Mosul.
- Rabdi, Kamal Jamil (2001). Athletic Training for the Twenty-first Century. 1st Edition, University of Jordan Publishing , Amman.
- Ratib, Osama Kamil. (1997). Burnout athlete between stress, training and emotional stress. Arab Thought House, Cairo.
- Sukkar, Nahida Reasan (2002). Sports Psychology in Sports Training and Competition. 1st Edition , the Scientific House for Publishing and Distribution, Jordan.



**ANNEX 1.** The scale is finalized.

<b>Seq</b>	<b>The paragraphs</b>	<b>Always</b>	<b>Often</b>	<b>Sometime</b>	<b>Rarely</b>
1	I can show how I feel in different situations				
2	I know how my feelings affected my performance in the match				
3	I can know the strengths and weaknesses of my character				
4	I have a sense of fun and humour anyway.				
5	I do not accept being defensive by receiving other people's views on my playing .				
6	I make the choices I face in training opportunities to learn and expand experience				
7	I feel self-confident when there is no coach supervision.				
8	I do what I believe in, even if others disagree with me				
9	9 I strive to be the best in the team I play for.				
10	act calmly in difficult and complicated situations in the match.				
11	I work to calm others in tense situations in training and while playing.				
12	I confront the unethical behaviour of others with good behaviour.				
13	My principles and values allow me to admit my mistakes to others.				
14	I change my opinions and ideas as soon as evidence against them emerges.				
15	I find myself comfortable with others, even in situations of anger and nervousness				
16	I strive to flexibly apply training routines and procedures				
17	17 I have standards and standards for others and through which I build relationships with team members.				
18	I work as possible instead of waiting to consider impossible options while playing.				

19	I see things from other people's perspectives and understand their behaviour.				
20	I am not prepared to understand the values, customs and traditions of others within the team.				
21	I deal responsibly with players' problems.				
22	Enthusiasm among the players has been made and the training always exciting.				
23	I work to urge players to train and play by demonstrating the strength of our mission.				
24	I use various methods to persuade and influence players.				
25	My vision of life is full of optimism				
26	When I hear inappropriate words I feel unable to complete the match.				
27	In my opinion, I do not have enough power to control the direction in which my performance in the match made me happy.				
28	I've always counted on destiny in my athletic performance.				
29	What will happen in my athletic future goes back to what I plan today.				
30	Do it right, even if no one is watching.				



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