

## Mental skills and their relationship to psychological endurance among boxers

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### Abstract

Training science is now focusing on mental abilities, as they significantly affect learning, skill performance, and physical and psychological energy, as well as mental health, as physical fatigue can weaken determination. To accomplish gain has a detrimental influence on psychological endurance. On the other hand, sports psychology is critical to our present and future. Because its sciences and procedures are specialized and mastered in enhancing athletic performance. Furthermore, enhancing psychological health and developing mental capacities in a way that guarantees the training process goes properly and is subject to the reality of the situation. As Well As the amount of psychological preparation demonstrated by all teams competing in individual and group games, particularly boxing. Therefore, the relevance of the research is in defining the degree of mental abilities and psychological endurance of boxers since they are closely related to the ability to adjust to varied conditions that psychological endurance needs. It also helps us identify the extent of the relationship. Between them and mental abilities for the purpose of modifying weak points and developing strengths, which helps us identify an important aspect of the psychological aspects that support the efforts of coaches and those in charge of the training process in bringing boxers to higher levels. The research aimed to identify the mental skills and psychological endurance among the boxers in the Babylon Governorate clubs, as well as to identify the relationship between the mental skills and psychological endurance among the boxers in the Babylon clubs. In his research, the researcher assumed the existence of a real correlation between mental skills and psychological endurance among boxers in Babel Governorate clubs. Through the presentation, analysis and discussion of the results, and after statistical treatments of the preliminary results of the research, the results proved the hypotheses set for this study. The researcher concluded that the percentage of mental skills among the boxers in the sample in general was low, and also that no significant differences appeared between the boxers of the research sample teams in all mental skills. The researcher also concluded that an inverse significant correlation appeared between the measure of mental skills and the measure of psychological endurance for the boxers in the research sample.

**Keywords:** Mental skills; psychological endurance; boxers.

## **1-Research Introduction:**

### **1-1 Introduction and Importance of Research:**

The development of any sport and its achievement at the desired level depend on the collective efforts of all. In addition to eliminating the problems facing the sport, it is essential to remove all negativities to enhance its level. Studies in the field of psychology have proven the close relationship between the level of mental abilities and athletic superiority.

Nowadays, coaching science has begun to focus on mental abilities due to their importance in the learning process and the application of strategies. Additionally, the mind plays a significant role in developing skill performance levels, as it affects both physical and psychological energy, considering that physical fitness is an important part of mental health.

Physical fatigue may weaken the determination to achieve success, resulting in a negative impact on psychological endurance. On the other hand, sports psychology is of great importance in our present and future because its sciences and methods specialize in enhancing athletic performance. Furthermore, it improves mental health and develops mental abilities, ensuring that the training process proceeds correctly, which is contingent upon the current reality and the level of psychological preparation achieved by all leading teams in both individual and team sports, especially in boxing.

As a result, the research plays a role in determining boxers' mental abilities and psychological endurance due to its close relationship with the ability to adapt to various situations that require psychological fortitude. Additionally, it enables us to determine the extent of the association between them and mental ability in order to improve shortcomings and enhance strengths. This allows us to uncover an important component of the psychological aspects that support the efforts of trainers and those in charge of the training process in elevating boxers to new heights.

### **1-2 Research Problem:**

Mental abilities are psychological factors that play an essential role in the process of skill learning and the application of game plans during bouts. They are also considered a decisive factor in many cases of play during matches, in addition to their impact on cognitive processes. Through the researcher's experience and work in the field of boxing, it was observed that the attention given to mental skills—including aspects such as visualization, cognitive preparation, self-confidence, anxiety management, and other mental skills—along with the nature of their relationship with psychological endurance has not received adequate attention from coaches and those responsible for the training process. Despite their impact on a boxer's ability to perform optimally when mastered and trained, this often stems from a lack of focus in training curricula developed by coaches on the psychological preparation aspect. This is where the problem lies.

Therefore, the researcher intends to study the mental skills of boxers and their relationship with psychological endurance in order to assess the psychological level of boxers and to determine whether coaches give this aspect special importance, given its relation to the performance of boxers during matches.

### **1- 3 Research objectives:**

- 1- Identifying mental skills and psychological endurance among boxers in Babylon Governorate clubs.
- 2- Identifying the relationship between mental skills and psychological endurance among boxers in Babylon Governorate clubs.

**1-4 Research hypothesis:**

1- The existence of a real correlation between mental skills and psychological endurance among boxers in Babylon Governorate clubs.

**1-5 Research areas:**

1-5-1 Human field: Boxers in Babylon Governorate clubs.

1-5-2 Time field 5/16/3023 - 7/16/2023

1-5-3 Spatial field: Boxing hall in Hilla Sports Club.

**2- Research Procedures:****2-1 Research Methodology and Field Procedures:**

Depending on the problem the researcher seeks to solve, the methodology is chosen to achieve the desired results. Therefore, the researcher used the descriptive method, which is defined as "the precise depiction of the interrelationships between society, trends, inclinations, desires, and developments. It provides a picture of the reality of life, as well as establishing indicators and building future predictions." This descriptive method was employed using survey and correlational techniques.

**2-2 Research Sample:**

The research community is defined by boxing initiators in the Babylon Governorate, totaling (40) boxers. Subsequently, (30) boxers were randomly selected to represent the research sample (by lottery). The sample percentage reached (84.21), which represents the community authentically and accurately.

**2-3 Means, Devices, and Tools Used in Research:****2-3-1 Means:**

To obtain the comprehensive facts deemed necessary for solving the problem, the researcher resorted to various means. It is "impossible to have a single comprehensive means to study behavior." Among these means are:

1. Psychological and skill sources
2. Psychological and skill measurements and tests

**2-3-2 Devices and Equipment Used in Research:**

The research included the following instruments and devices:

- Arabic sources and references.
- Observation.
- Questionnaire (mental skills scale and psychological endurance scale).

As for the devices used:

- Handheld calculator type (flamingo).
- Computer type (Pentium 4).

**2-4 Psychological Measurements and Tests Used:****2-4-1 Mental Skills Scale:**

The psychological skills tests were designed by (Bull, McHugh, and Shambrook (1996)) to measure essential mental (psychological) aspects of sports performance. It was translated and modified by (Alawi). The test includes 24 statements, with each of the six dimensions represented by four statements. The boxer responds to the test statements according to a six-point scale, which includes:

- ❖ Applies very much.
- ❖ Applies a lot.
- ❖ Applies moderately.
- ❖ Applies a little.
- ❖ Applies very little.

- ❖ Does not apply at all, as shown in Appendix No. 2.

**Correcting the scale:**

- The statements for the ability to visualize are numbered 1, 7, 13, and 19. All of them are positive statements in line with the dimension, except for statement 13, which is negative in relation to the dimension.
- The statements about the ability to relax are numbered 20, 14, 8, and 2. All are positive statements in line with the dimension, except for statement 8, which is negative in relation to the dimension.

**2-4-2 Psychological Endurance Scale:**

As for the psychological endurance scale, it relies on scientific sources, specifically the psychological endurance scale by (Haider Naji Habash, 2010), which consists of (16) situations that the subject responds to. Each situation contains three verbal positions. The first position measures (high endurance), the second position measures (moderate endurance), and the third position measures (low endurance). Scores of (1, 2, 3) were assigned to them. The scale was then presented to a group of experts and specialists, who expressed their opinions on the appropriateness of the scale with some minor adjustments in the wording of certain items, resulting in its final form, as shown in Appendix No. (3).

**2-5 Final Application of the Scales:**

After completing the necessary requirements for preparing the scales of (cognitive skills and psychological endurance), the final experiment was applied to a sample of (80) boxers representing four clubs: (Hilla, Hashimiah, Mahawil, Al-Qasim). The scales were then distributed to the boxers in the arenas of those clubs, ensuring they sat apart from each other to avoid influencing each other's responses. The time taken to answer the items on the scales was (25-30) minutes. Afterward, the responses of the subjects were collected, and the final experiment was initiated by the researcher and the assisting team.

**2-6 Statistical Methods:**

The researcher relied on appropriate statistical methods in a way that served the research, using the following:

- ❖ Arithmetic means.
- ❖ Standard deviation.
- ❖ Simple correlation coefficient (Pearson).
- ❖ Percentage.

### 3- Presentation of Results and Discussion.

#### 3-1 Presentation of Statistical Processing Results for Mental Skills:

##### 3-1-1 Presentation of the Percentage of Raw Scores for Mental Skills of Boxers:

**Table (1)** Illustrate the percentage of mental skills for boxers in the research clubs

Mental skills Clubs	Imagination Ability	Mental Numbers	Self- Confidence	Dealing with Anxiety	Ability to Focus	Ability to Relax	Motivation
Al-Hilla	54%	61%	57%	57%	59%	53%	63%
Abi Ghraq	63%	61%	63%	57%	59%	53%	66%
Mahwil	56%	52%	57%	52%	48%	51%	60%
Al-Qassim	55%	56%	60%	52%	55%	57%	58%

##### 3-1-2 Presentation of the Means and Standard Deviations for Mental Skills of Boxers:

**Table (2)** Illustrates the means and standard deviations for the mental skills of the players in the research sample teams

Mental skills Clubs	Imagination Ability		Mental Numbers		Self- Confidence		Dealing with Anxiety		Ability to Focus		Ability to Relax		Motivation	
	-S	A	-S	A	-S	A	-S	A	-S	A	-S	A	-S	A
<b>Al-Hilla</b>	<b>13.1</b>	<b>3.1</b>	<b>14.6</b>	<b>3.16</b>	<b>13.8</b>	<b>3.6</b>	<b>13.7</b>	<b>3.8</b>	<b>14.3</b>	<b>3.93</b>	<b>12.7</b>	<b>3.52</b>	<b>15.3</b>	<b>3.00</b>
<b>Abi Ghraq</b>	<b>15.1</b>	<b>3.0</b>	<b>14.8</b>	<b>2.54</b>	<b>15.1</b>	<b>3.4</b>	<b>13.7</b>	<b>3.9</b>	<b>14.2</b>	<b>3.14</b>	<b>12.8</b>	<b>2.79</b>	<b>16</b>	<b>2.30</b>
<b>Mahwil</b>	<b>13.6</b>	<b>2.0</b>	<b>12.5</b>	<b>1.60</b>	<b>13.7</b>	<b>1.4</b>	<b>12.5</b>	<b>2.0</b>	<b>11.8</b>	<b>2.05</b>	<b>12.2</b>	<b>2.49</b>	<b>14.8</b>	<b>2.35</b>
<b>Al-Qassim</b>	<b>13.4</b>	<b>1.9</b>	<b>13.5</b>	<b>3.25</b>	<b>14.4</b>	<b>3.3</b>	<b>12.5</b>	<b>2.5</b>	<b>13.4</b>	<b>2.93</b>	<b>13.7</b>	<b>2.75</b>	<b>14.1</b>	<b>2.26</b>

##### 3-1-3 Presentation, Analysis, and Discussion of the Relationship Between Mental Skills and Psychological Endurance of Boxers:

**Table (3)** Demonstrates the mean, standard deviation, and the value of the correlation coefficient (R) for the research results

Statistical indicators Researched variables	Arithmetic mean	Standard deviation	Correlation coefficient (R) value	Significance
Mental skills scale	34.22	4.2	<b>0.16 -</b>	moral
Psychological endurance scale	38.33	4.51		

### 3-2 Discussion of Results.

After the researchers presented the tables related to the results of the statistical treatments, which pertain to the psychological and cognitive variables of the boxers in the research sample, they will now discuss these results. Table (1) shows that the percentage of mental skills ranged between (48%) for the ability to concentrate among the boxers of Al-Qasim Club, while the highest percentage was in the skill of the boxers of Al-Hilla Club, which reached (66%).

These percentages generally indicate a weakness in the ability to utilize mental skills among the boxers in the sample teams, which is attributed to the coaches' limited focus on developing their boxers' mental skills during training. Recent research and studies confirm that there is an urgent need to select and classify boxers according to their physical, motor, and psychological abilities, in addition to the positive correlation with mentality and its role in the sports training system, as well as the high sports levels that require making urgent decisions in less than a fraction of a second.

As shown in Table (3), the mean of the mental skills scale for the research sample participants was (34.22). The standard deviation was 4.2, and the computed value of (r) was -0.61. This is a higher value than the tabulated value of (0.21) with a degree of freedom of (78) and a significance level of (0.05). As a result, psychological resilience is significantly inversely related to mental capabilities. The second measure, psychological resilience, obtained a mean score of (38.3) on the resilience scale for the research sample. The standard deviation was 4.51, and the computed value of (r) was -0.61. This number is higher than the tabulated value of (0.21) with a degree of freedom of (78) and a significance level of (0.05). This indicates a significant inverse correlation.

### 4- Conclusions and recommendations:

#### 4-1 Conclusions:

- 1- The percentage of mental skills in the sample boxers is generally low.
- 2- There were no significant differences between the boxers of the research sample teams in all mental skills.
- 3- There was an inverse significant correlation between the mental skills scale and the psychological endurance scale for the research sample of boxers.

#### 4-2 Recommendations:

- 1- Including mental skills training mainly in the training curriculum for boxing coaches.
- 2- The requirement in order to continuously work on the development of boxers' mental skills through training to withstand difficult conditions in competitions and their psychological endurance.
- 3- The requirement in order to select boxers not only on the basis of their skill level, but also on the basis of their psychological level or aspect, because of its importance and essential role in the boxers' use of the skills they train.
- 4- In order to study the remaining psychological variables that have not been studied and to correlate them with mental skills, psychological endurance or other psychological variables.

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**Appendix (1)**

Explains the expert survey form used to determine the validity of the mental skills and psychological endurance scales.

**Expert and Specialist Opinion Questionnaire**

Professor.....

The researcher intends to conduct his research titled "Mental Skills and Their Relationship to Psychological Endurance Among Boxers." In light of your scientific experience and sound opinions, the researcher would like to know your thoughts on the validity of the attached mental skills and psychological endurance scales for use with boxers.

Thank you very much; we appreciate it.

**Researcher**

**Appendix (2)**  
**Mental Skills Scale**

No.	phrases	Grades					
		1	2	3	4	5	6
1	I can visualize any motor skill in my imagination clearly	1	2	3	4	5	6
2	I know very well how to relax during sensitive times in a fight	1	2	3	4	5	6
3	Many thoughts run through my mind while I am participating in the fight and interfere with the concentration of my attention	1	2	3	4	5	6
4	I often feel the probability of being defeated in the competition I am participating in.	1	2	3	4	5	6
5	I participate in all competitions and all my thoughts include confidence in myself	1	2	3	4	5	6
6	Before I participate in the competition, I am psychologically prepared to do my best.	1	2	3	4	5	6
7	In my imagination, I can imagine my performance of movements without doing by its performance really.	1	2	3	4	5	6
8	My muscles were tense before I competed.	1	2	3	4	5	6
9	It bothers me not being able to focus my attention at sensitive times of the fight.	1	2	3	4	5	6
10	I'm afraid of not being proficient in playing during the fight.	1	2	3	4	5	6
11	When the outcome of the fight is not in my favor, my self-confidence decreases as the fight is close to ending	1	2	3	4	5	6
12	I always prefer to participate in sensitive and important fights	1	2	3	4	5	6
13	It's hard for me to imagine in my imagination what a tragedy I do from a kinetic performance.	1	2	3	4	5	6
14	It's easy for me to be able to relax my muscles before participating in the competition.	1	2	3	4	5	6
15	My problem is that I lose the ability to focus attention at some times of fighting.	1	2	3	4	5	6
16	When I participate in a competition, I feel more anxious.	1	2	3	4	5	6
17	Throughout the competition, I can maintain a high degree of self-confidence.	1	2	3	4	5	6
18	I can always get excited by myself during the fight.	1	2	3	4	5	6
19	I always visualize what I will perform in the competition that I will participate in.	1	2	3	4	5	6
20	One of my obvious qualities is my ability to calm down and relax myself quickly before participating in a sports competition.	1	2	3	4	5	6
21	Events or noises that occur off the pitch help distract me in the fight.	1	2	3	4	5	6
22	I get upset when I make some mistakes during the competition	1	2	3	4	5	6
23	I suffer from my lack of confidence in some motor skills while participating in the competition.	1	2	3	4	5	6
24	I always feel like I'm doing my best throughout the competition.	1	2	3	4	5	6

Appendix (3)  
Psychological tolerability scale

No.	Paragraph
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1	<p><u>If you and a group of your friends decide to do an entertaining game and you are very excited about it but they postpone the date of the game, you will:</u></p> <p><b>Accept the situation calmly</b>  <b>You feel bad</b>  <b>revolt against them</b></p>
2	<p><u>If you're watching an important fight and suddenly your TV stops playing because of a malfunction, you can:</u></p> <p><b>Trying to practice a hobby</b>  <b>You feel bored</b>  <b>You feel a lot of pain and get upset</b></p>
3	<p><u>When you're hungry and know that the training will be delayed, you:</u></p> <p><b>She endures hunger until the end of training</b>  <b>You feel uncomfortable and you seem resentful</b>  <b>Get upset and blame others for being late</b></p>
4	<p><u>If you want to call someone and the coach blocks you, you are:</u></p> <p><b>She faces his ban quietly and tries to find out the insult</b>  <b>You get nervous without showing that</b>  <b>You protest and refuse to prevent it for you</b></p>
5	<p><u>If you need to buy sportswear for an important fight, but financial circumstances do not allow it, you can:</u></p> <p><b>Wait until your financial circumstances improve</b>  <b>You feel pain</b>  <b>You get nervous and get excited</b></p>
6	<p><u>When you face arbitrary situations and are unable to solve them, you:</u></p> <p><b>Keep thinking until you reach a solution</b>  <b>To evade the solution and the arbitration situation</b>  <b>You ask the coach about solving it</b></p>
7	<p><u>If you have an exam the next day and when you want to review your books and discover that someone from your family tampered with it, you are:</u></p> <p><b>Trying to solve the issue calmly</b>  <b>You get annoyed by the situation</b>  <b>You revolt and get very angry</b></p>
8	<p><u>If you are busy making a plan for a fight assigned by the instructor and someone intervenes in your work, you can:</u></p> <p><b>Continue your work quietly and don't care about it</b>  <b>You feel uncomfortable with his intervention</b>  <b>revolt and prevent him from intervening</b></p>
9	<p><u>If you are going to an important fight and if a speeding car pollutes your clothes with dirty water, you can:</u></p> <p><b>Trying to calmly address the situation</b>  <b>Complain to yourself</b>  <b>She utters sharp words</b></p>
10	<p><u>If you are training for an important and urgent fight and there is noise nearby, you:</u></p>

	<p style="text-align: center;"><b>You keep practicing and don't care</b>  <b>It continues despite your feeling of unease</b>  <b>Revolt and leave training</b></p>
<u>11</u>	<p style="text-align: center;"><u>If you expect a reward for your athletic performance excellence and for some reason you</u>  <u>don't get it:</u></p> <p style="text-align: center;"><b>You try to get it without emotion afterwards</b>  <b>She resents and tries to find another way to get her.</b>  <b>She suffers and complains</b></p>
<u>12</u>	<p style="text-align: center;"><u>If you're on a date with a friend for exercise and you're late:</u></p> <p style="text-align: center;"><b>Wait for him for as long as possible</b>  <b>She gets upset and tries to wait for him for a few minutes</b>  <b>You get nervous and get excited and don't wait for him at all</b></p>
<u>13</u>	<p style="text-align: center;"><u>If you lose a dear teammate, you:</u></p> <p style="text-align: center;"><b>You feel sad and accept the reality</b>  <b>You hurt a lot with yourself</b>  <b>You get excited and collapse</b></p>
<u>14</u>	<p style="text-align: center;"><u>If you are attacked during a fight by the opposing team, you are:</u></p> <p style="text-align: center;"><b>Trying to face the situation calmly</b>  <b>You feel scared</b>  <b>You get upset and you panic</b></p>
<u>15</u>	<p style="text-align: center;"><u>If you feel severe pain in your abdomen early in the fight, you:</u></p> <p style="text-align: center;"><b>Trying to endure the pain until the end of the game</b>  <b>You get troubled and ask others for help</b>  <b>Require your transfer to the hospital</b></p>