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The Effectiveness of a Mental Training Program in Developing Mental Toughness in the Players of Samawa Basketball Club

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ABSTRACT

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Research Objectives:

1- Identifying the effect of the mental training program on the development of mental toughness among the players of Samawa Basketball Club.

2- Comparing the results of the pre- and post-measurements to know the level of improvement resulting from the program.

Research Sample :

The players of Samawa Basketball Club for the sports season (2025-2026), which are (20) players.

The most important conclusions:

The (training – mental) program has a positive effect on improving the mental toughness of the players of Samawa Basketball Club.

Recommendations:

The program prepared by the researcher and the mental aspects it contained (mental and muscular relaxation, and visualization of skills) reflected positively in the process of improving mental toughness.

Keywords:

Basketball

Training

Club.

1- Introduction to the research :

1-1 Introduction and Importance of the Research :

Mental toughness is one of the main pillars in the modern sports field, as it is closely related to high performance and the ability to deal with difficult conditions during competition. A player who is able to control his thoughts and emotions has an advantage that helps him to continue to give despite the various pressures he is exposed to on the field. The importance of mental training comes as one of the psychological methods used in preparing the player through the development of concentration, self-confidence, and stress management. In recent years, the interest in mental programs in sports has increased because of the It has proven to have an impact on the psychological construction of athletes and raising their level of performance. Basketball is one of the games that requires quick decision-making and reaction, which makes the mental aspect a key factor along with fitness and skill. Hence, the need to develop mental training programs aimed at strengthening the mental toughness of basketball players. Mental training contributes to enhancing the ability to control emotions under the pressure of competition, and is an important part of psycho-sports preparation. (Al-Zayyat, 2016, 87)

Based on this, the idea of this research came to show the effect of a mental training program on the development of mental toughness in the players of Samawa Club and to consider whether it is possible to make a clear improvement after application compared to the tribal measurements.

1-2 Research Problem

Despite the development of basketball players, many of them still face a weakness in their ability to face pressure during the game, which reflects negatively on performance and concentration in crucial moments. Coaches note that some players possess physical and technical skill, but they lose mental control when the competition is high, which reduces their effectiveness in performance. Hence, the research problem arises in the question of the extent to which mental training programs can enhance mental toughness and help the player to be emotionally stable. Accordingly, the research problem is to answer the following question:

- Does the mental training program have a clear effect on the development of mental toughness in the players of Samawa Basketball Club?

1-3 Research Objectives :

1- Identifying the effect of the mental training program on the development of mental toughness among the players of Samawa Basketball Club.

2- Comparing the results of the pre- and post-measurements to know the level of improvement resulting from the training program.

1-4 Research Hypotheses :

1- There are statistically significant differences between the pre- and post-measurement in the level of mental toughness among the sample players.

2- The improvement in mental toughness is in favor of telemetry after the application of the mental training program.

1-5 Research Areas :

1.5.1 Human Field: Basketball players of Samawa Club.

1.5.3 Spatial Area: Samawa Club Hall and its training facilities.

1.5.3 Time Range: From 1/9/2025 to 1/12/2025

3- Research methodology and field procedures :

3-1 Research Methodology:

The experimental method is the closest research method to solving problems in the scientific way, as it is an attempt to control all the variables and basic factors except for one or more variables that the researcher changes in order to determine and measure its scientific impact (Sami Mohammed, 2000, 259), and because the nature of the research needs to know a specific effect

3-2 Research Population and Sample:

The researcher identified the research community, which is represented by the players of Al-Samawa Basketball Club for the sports season (2025-2026), which are (20) players.

Various samples were drawn from this statistical community, as they were:

First- Main Experiment Sample:

The researcher identified the sample of the main experiment represented by the players of Samawa Club in basketball and by lottery method, as they amounted to (16) players.

Second- Survey Study Sample:

The researcher determined the sample of the exploratory experiment by lottery method, which was (4) players.

3-3 Methods, tools and devices used in the research:

3.3.1 Means of Information Collection :

- Arab and foreign sources
- Personal interviews
- Questionnaires
 - A. Mental Toughness Scale

3.3.2 Tools and Devices Used in the Research :

- (1) camera
- Laptop Calculator (1).

3-4 Research Procedures :

3.4.1 Identifying Research Variables :

The researcher conducted a survey study on a number of scientific sources and previous studies, and it was agreed on the variables required in the current research:

- Mental toughness .

3.4.2 Preparation of the Mental Toughness Scale:

3.4.2.1 Objective of the Mental Toughness Scale Numbers:

Identify the level of mental toughness of the players of Al-Samawa Basketball Club.

3.4.2.2 Summarizing and Counting the Paragraphs of the Mental Toughness Scale:

The researcher reviewed many previous sources and studies, and accordingly, the researcher adopted the scale prepared by (Azzion Muhammad Yemen), because the scale measures the same goal that the researcher seeks, as the scale consists of (18) items, with alternatives that are (not completely agree, disagree, do not know, agree, completely agree) and with correction keys (1,2,3,4,5) respectively, and thus the lowest score obtained by the laboratory (18)) Grade and highest score obtained by the laboratory (90) (Azizon, 2019, 99)

3.4.2.3 Determining the Validity of the Mental Toughness Scale:

The researcher prepared a questionnaire form for the scale and presented it to a group of (11) experts and specialists to express their opinions on the validity of the scale, and after determining the answers of the experts with (Fix, Not Fixed), the results were analyzed using (K2) as shown in the table.

Opinions of experts and specialists in determining the validity of the mental toughness scale

Statistic al Significa nce	Significa nce Level	Value K2	Percen tage	Validity		Numbe r of Expert s	Scale
				It doesn't work	he fixes		
you fix	000, 0	10	100%	0	11	11	Mental Toughness Scale

The table shows the acceptance of the mental toughness scale , which was presented to experts and specialists, as the significance of the (K2) test was less than the error rate (0.05), which indicates that the scale has validity, and this confirms that the acceptance rate came (100) percent.

3.4.2.4 Instructions of the Mental Toughness Scale:

The process of developing or preparing the instructions of the scale is of great importance and cannot be underestimated in the success of the process of conducting and performing the test, as studies have proven the importance of the role that these instructions play in changing the results of the tests or influencing them, which makes it difficult to compare the results of the same test in different situations, and from these instructions . (Amin El-Khouli, 1999, 67)

The instructions for the scale have been prepared to show the players how to answer its paragraphs, and in preparing these instructions, it has been taken into account that they are clear and easy to understand, and to increase clarity, the instructions have included a special model on how to answer the paragraphs of the questionnaires. It was also pointed out in the instructions that there is no right answer and no wrong answer, the important thing is to choose the answer

that applies to the player the most, and as a player must answer all the paragraphs of the questionnaire with all honesty and accuracy.

3-4-3 Exploratory Experience :

Scientific research experts recommend conducting exploratory experiments for the tests used in research in order to obtain the necessary and reliable results and information, to benefit from them when conducting the main experiment (Al-Anzi, 1999, 164), and accordingly, the researcher conducted the exploratory experiment on (4) players, as this experiment was applied in the stadium of Samawa Basketball Club at 3:30 p.m. corresponding to 6/9/2025, the form of the mental toughness scale was distributed. **The objective of the experiment is to¹:**

1. Identify the clarity of the paragraphs of the Mental Toughness Scale and its instructions.
2. Identify the errors and obstacles facing the researcher during the main experiment.
3. Recognize the potential of the auxiliary team
4. Identifying the time required to answer the scale and the answer time took between (7-9) minutes
5. Extracting the scientific foundations of truthfulness, consistency and objectivity.

The experiment has achieved its intended purpose.

3.4.4 Scientific Basis for Test Results

3.4.4.1 Validity of the test:

It is meant to actually measure the ability, trait, orientation, or willingness of the test to measure. (Muhammad Jassim, 2010, 72), to calculate the coefficients of the validity of the tests, the researcher used the content of honesty by presenting the mental toughness scale to a group of experts and specialists for the purpose of determining its validity, and thus the researcher verified the truthfulness.

3.4.4.2 Consistency of the results of the scale:

The fixed test is (the test that gives the results of an approach or the same results if applied more than once in similar circumstances), and the stability of the test refers to the scores obtained by the individuals themselves in different times of the procedure, and this means that the individual's position in relation to his group does not change substantially in this case, and the stability of the test means stability in the sense that if the measurements of the same individual are repeated, his score will show some stability (Nader Fahmy, 2005, p. 24) The researcher adopted the method of halving in the single and even style. The researcher worked to ensure the homogeneity of the two halves of the two laboratories with the help of the (LEVENE) test . The table shows that

LEVENE test for consistency between the two halves of the tests

Statistical Significance	Significance Level	LEVENE	Variables
homogeneous	0.899	0.015	Mental Toughness Scale

The table showed that the values of the significance level of the Levin test for the two halves of the tests were greater than the error ratio (0.05), which indicates that there are no differences between the two halves, which indicates homogeneity.

The researcher then resorted to the use of the Pearson correlation coefficient to show the correlation between the two halves of the test and the table shows this.

3.4.4.3 Objectivity of the results of the scale:

Objectivity means "the tests used are not affected by the change of the correctors" (Mohammad Radwan, 2006, 208), as the objectivity of the tests was taken in the presence of three correctors, and the results came out with high objectivity for the correctors, and there were no differences between their results, then the researcher used the Pearson correlation coefficient between the evaluation of the first judgment and the second judgment, and the table shows that

Consistency and objectivity of test results

Objectivity		Stability Coefficient		Variables
Significance Level	Value R	Significance Level	Value R	
0.000	0.1	0.000	0.898	Mental Toughness Scale

The table shows that all the values of the significance level of the Pearson coefficient (for consistency and objectivity) were less than the error ratio (0.05), which indicates that there are high correlations, which means that the sample has scientific foundations.

3.5 Main Experience:

3.5.1 Pre-Tests :

The researcher conducted the pre-test on the members of the research sample at the Samawa Basketball Club Stadium at three o'clock in the afternoon corresponding to 13/9/2025, the pre-test of the Mental Toughness Scale.

The researcher has proven all the belongings in terms of place, tools and time to benefit from them in the post-tests

3.5.2 Homogeneity and equivalence of the sample

In order to avoid the effects that may affect the results of the research for the individual differences that exist in the players and to reach a single and equal level of the sample in the variable of mental toughness, which is considered influential in the experiment, it must be adjusted, and for this the researcher conducted homogeneity and equivalence and the table shows this.

Homogeneity of the research sample in the variable of mental rigidity

Statistical significance	Significance Level	LEVEN E Value	Experimental Group		Control Group		Unit of Measurement	Variables
			on	Going to	on	Going to		
homogeneous	0.331	1.039	6.98	54.99	7.29	53.19	Degree	Mental Toughness Scale
			4		8	9		

The table shows that the values of the significance level of the (LEVENE) test were greater than (0.05) and this indicates that there is a homogeneity between the sample members for each group.

3.5.4 Program (Training-Mental)

The researcher prepared a (training-mental) program and applied it to the research sample, as the researcher implemented the first unit on 25/9/2025 in the Samawa Basketball Club court, and the last educational unit was implemented on 25/11/2025, and the training units included the appropriate exercises to develop mental toughness.

3-5-5 Post-tests:

After completing the implementation of the programs (training-mental) for the research sample, the researcher began to conduct post-tests on the research sample with the same conditions and specifications of the pre-tests on 27/11/2025, the research sample was tested in the Mental Toughness Scale, through the distribution of the questionnaire form.

3-6 Statistical Methods Used in the Research:

The researcher used the statistical package (SPSS) for data processing The researcher touched on statistical means The following:

- ❖ Arithmetic mean .
- ❖ Standard deviation .
- ❖ Square(K^2).
- ❖ Percentage.
- ❖ Correlation coefficient (Pearson).
- ❖ LEVENE test .
- ❖ T-test for correlated samples.
- ❖ T-test for independent samples.
- ❖ The value of the effect size.

2 Presentation , analysis and discussion of the results of the research sample

4.2.1 Presentation and analysis of the results of the research sample in the variable of mental toughness :

Arithmetic medians, standard deviations, t-value, significance level, and significance of the differences between the pre- and post-tests in mental toughness

Statistic al significa nce	Signif icanc e Level	Calcul ated value (t)	Post-tests		Pre-Tests		Unit of Meas urem ent	Variables
			on	Going to	on	Going to		
Moral	0.000	10.999	3.999	74.99	6.988	55.21	Degre e	Mental Toughness Scale

The results of the above table show that the values of the significance level of the (t) test for the correlated samples of the research variable (mental toughness scale) came less than the error rate (0.05) at the degree of freedom ((15), and this means that there are differences between the results of the pre- and post-tests and in favor of the results of the post-test of the research sample, then the researcher used the size of the effect to know the effect of the program prepared by the researcher on the sample of the experimental group, and the table shows That

Cohen's Impact Size and Type of Impact for Research Sample

Type Impact	Value Impact size	Variables
very strong	2.296	Mental Toughness Scale

The table showed that the value of the effect size of the research variable was greater than (2.0), and according to the interpretation of this value, the applied method has a (very strong) effect on the research sample.

4.2.2 Discussion of the results of the pilot group:

In the light of the data extracted by the members of the research sample, it was found that there are differences in the values of the variables between the pre- and post-tests and in favor of the post-tests, as the variable of mental toughness has a relationship with the way the player receives the experiences and organizes these experiences, and the more clarification of this information in a simplified and augmented way by the aids, the less the amount of burden placed on the learner. Mental toughness aims to build mental and emotional strength and increase the player's ability to cope and deal with all kinds of physical, mental and emotional pressures so that he becomes more reactive in the competition, and mental toughness starts with the personality and attitudes of the player, and develops with the team culture, which supports the value of positive survival in the face of crises, as he mentions according to **Bill Baswick** that reaching the Mental toughness requires a lot of mental and emotional strength along with physical fitness and a high level of performance.

It is also **mentioned** that a player with mental toughness is able to apply performance even under difficult conditions. (Mohammed Shamoun, 2007, 39)

Conclusions and recommendations

5.1 Conclusions

- 1- The (Training-Mental) program has a positive effect on improving the mental toughness of the players of Samawa Basketball Club.
- 2- The Mental Toughness Scale is designed to measure the level of mental toughness of players.

5.2 Recommendations :

- 1- The program prepared by the researcher and the mental aspects it contained (mental and muscular relaxation, and the perception of skills) reflected positively in the process of improving mental toughness.
- 2- Conducting comparative studies of mental toughness between individual and group activities.

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Attachment (1)

Names of Experts and Specialists on Determining the Validity of the Mental Toughness Scale

Workplace	Jurisdiction	Name and Scientific Title	t
College of Physical Education and Sport Sciences for Girls University of Baghdad	Training - Duel	Prof. Dr. Fatima Abdel Maleh	1
Faculty of Physical Education and Sport Sciences Missan University	Psychology - Duel	Prof. Dr. Raheem Helou Ali	2
Faculty of Physical Education and Sport Sciences University of Baghdad	Training - Duel	Prof. Dr. Abdul Karim Fadel Abbas	3
Faculty of Physical Education and Sport Sciences Yaghdad University	Training - Duel	Prof. Dr. Abdulhadi Hamid Mahdi	4
Faculty of Physical Education and Sport Sciences Muthanna University	Learn - Duel	Prof. Dr. Mohamed Diaa Abdulrasool	5
College of Physical Education and Sport Sciences for Girls University of Baghdad	Training – Dueling	a.M. Dr. Ishraq Ghalib Odeh	6
Faculty of Physical Education and Sport Sciences University of Baghdad	Learn – Duel	Assoc. Prof. Dr. Alaa Abdullah Falah	7
Faculty of Physical Education and Sport Sciences	Learn – Duel	Assoc. Prof. Dr. Rola Miqdad Obeid	8

University of Qadisiyah			
Faculty of Physical Education and Sport Sciences University of Basra	Learn - Duel	Assoc. Prof. Dr. Abdulhassan Rahima	9
Faculty of Physical Education and Sport Sciences University of Babylon	Training - Duel	a.M.Dr Essam Taleb Albakri	10
College of Physical Education and Sport Sciences for Girls University of Baghdad	Tests - Duel	a.M.Noor Hatem Haddad	11

Attachment (2)

Mental Toughness Scale in its final form

Greetings ...

You have a list of paragraphs that measure Mental Toughness , the researcher asks you to answer the paragraphs of the list after reading them carefully, noting the instructions below before starting the answer:

- Not mentioning the name.
- The list consists of (18) paragraphs.
- The answer should be for all paragraphs, and not leave any paragraph unanswered.
- Answer the paragraphs openly and accurately.
- Choose the response that applies to you the most.
- There is no right answer and no wrong answer.
- You can answer the list items in the order you want.
- Choose one of the five alternatives.
- These responses are provided for scientific research purposes.
- The answer is by putting a sign (✓) in front of the paragraph and under the alternative that represents your response to the sub-paragraph.
- Here's an example of how to answer:

Alternatives to Answer					Paragraph	Paragraph Number
Totally OK	OK	I don't know.	Other than OK	Totally disagree		
			✓		I keep calm even when I'm under a lot of pressure	1

Regards

Totally OK	OK	no I know	Disagree	Totally disagree	Paragraphs	t
					I keep calm even when I'm under a lot of pressure	1
					I tend to worry about things even before they happen	2
					I find it difficult to gather my enthusiasm to perform the tasks assigned to me	3
					I behave well when I have problems	4
					I feel like a worthy person	5
					I don't know where to start, a feeling I usually get when I'm required to do several things at the same time.	6
					I don't hesitate to express an opinion when I have something to say	7
					When I make a mistake, I usually think about it for days.	8
					I tend to compromise in discussions even if I feel right	9
					I feel in control of the situation.	10
					I wish my life was without surprises	11
					When I'm tired, I find it hard to start working all over again.	12
					In general, I am able to act quickly when unexpected things happen	13
					No matter how bad things get, I feel like in the end it will end up being the best it can be.	14
					Look at the bright side of life	15
					I find it hard to relax	16
					When I am tired I find it difficult to perform any mental effort	17
					If I see that someone is wrong, I don't avoid arguing with them.	18