

The Relationship of Mental Toughness to Shooting Accuracy among Advanced Basketball Players

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Abstract: Examining the correlation between mental toughness and the accuracy of basketball shooting skills among advanced players is the key aim of the current study. The researcher employed the descriptive method by using the correlational approach, as it was the most appropriate for addressing the research problem. The research community was deliberately selected and consisted of advanced basketball players in Kirkuk Governorate, distributed across several clubs. The research sample was randomly selected by lottery and included 18 players from North Gas Basketball Club. The study found a statistically significant positive relationship between mental toughness and shooting accuracy among advanced basketball players, highlighting the importance of psychological factors in enhancing skill performance. Players with high mental toughness demonstrated greater confidence in decision-making during shooting, which was reflected in higher shot success rates. While psychological pressure and stress negatively affected shooting accuracy, mental toughness helped reduce the impact of these factors. The researcher recommends incorporating psychological training programs aimed at developing mental toughness among basketball players through exercises that focus on stress management and mental concentration. It is also suggested to adopt pressure-simulation methods during training to enhance players' shooting accuracy under real-game conditions, and to encourage coaches to integrate techniques such as mental imagery and mindfulness meditation into training sessions to strengthen self-confidence and improve performance under pressure.

Keywords: Mental Toughness, Shooting Accuracy, Basketball

Introduction

Sports psychology, seemingly, is a branch of psychology that focuses on studying the psychological effects related to athletic performance and how to improve it by addressing various psychological factors. Sports psychology overlaps with many aspects of athletic life, such as motivation, concentration, anxiety, stress, attention, emotions, and mental health. This field seeks to understand how the mind influences physical performance and how psychological tools can be used to enhance athletes' abilities in different sports. In the athletic field, success is not limited to physical strength or technical skills alone but also extends to mental abilities that play a crucial role in developing performance and achieving excellence. An athlete who has the ability to control emotions and direct psychological energy toward goals is more capable of responding effectively to challenges and stressful

situations faced during competitions. Moreover, it contributes to improving the athlete's ability to make quick decisions, maintain focus for long periods, and cope with the psychological pressures of competition, such as performance anxiety in important matches. In addition, the method of motor learning is characterized by a high degree of variability during training and practice (Hussein, 2024).

Aspects such as motivation, concentration, and mental toughness are considered vital psychological factors in various sports. For example, motivation can be intrinsic, such as the desire to improve personal performance, or extrinsic, such as encouragement from the audience or intense competition. Mental toughness, on the other hand, helps athletes adapt to difficult conditions, overcome defeats, and continue striving for success. Sports psychology also enhances coaches' ability to understand athletes more deeply, as it helps them develop training strategies that take into account the psychological factors influencing performance. This, in turn, improves interaction among players and increases their ability to work as a team. Moreover, this field contributes to designing specialized training programs that assist athletes in overcoming anxiety and achieving their maximum performance during practices and competitions.

Mental toughness is one of the important psychological factors that play a major role in determining an individual's ability to adapt to the psychological and physical pressures that may arise during athletic performance. The term *mental toughness* is defined as a person's ability to face challenges and difficult situations by strengthening patience and endurance, developing the capacity to make sound decisions under pressure, while maintaining psychological balance and intrinsic motivation. Accordingly, mental toughness is regarded as an essential element in athletes' success, especially in team sports that require performance under pressure, such as basketball. Performance, in this sense, has great significance within any institution seeking to achieve its goals as well as success and progress, being considered the ultimate outcome (Saber, 2022).

In basketball, shooting is one of the fundamental skills that determine a team's success in scoring points and winning games. However, shooting accuracy does not rely solely on technical and physical aspects; it also extends to the psychological dimension, which can have a direct impact on athletic performance. Therefore, understanding the relationship between mental toughness and shooting accuracy is vital for both players and coaches.

Research Problem

Mental toughness is one of the significant psychological factors that greatly influence athletic performance, as it enhances athletes' ability to adapt to pressure and difficult situations during competitions. In a sport such as basketball, which requires a high level of concentration and precise control of both physical and technical performance, the importance of mental toughness becomes particularly evident in determining shooting accuracy, a crucial element in deciding game outcomes. Although many studies have addressed the importance of mental toughness in sports in general, few have focused on its direct impact on specific basketball skills such as shooting accuracy. Basketball players face numerous psychological challenges during games, such as anxiety, stress, or pressure

resulting from competition and critical situations, which may negatively affect their technical performance. The research problem lies in the knowledge gap regarding the impact of psychological factors, such as mental toughness, on shooting accuracy among advanced basketball players, and how these psychological factors can contribute to improving athletic performance in moments of pressure or decisive situations.

Research Objective

To identify the correlation between mental toughness and the accuracy of the shooting skill in basketball among advanced players.

Research Hypothesis

There is a significant correlation between mental toughness and the accuracy of the shooting skill in basketball among advanced players.

Research Domains

- Human Domain: Basketball players in Kirkuk Governorate.
- Temporal Domain: From January 6, 2025, to February 28, 2025.
- Spatial Domain: Sports Hall in Kirkuk Governorate.

Research Methodology

Research Method

The researcher employed the descriptive method using the correlational approach, as it is the most appropriate method for addressing the research problem

Research Community and Sample

The research community was deliberately selected, consisting of advanced basketball players in Kirkuk Governorate, distributed among several clubs. The research sample, however, was chosen randomly by lottery and included the players of North Gas Basketball Club, totaling 18 players.

Instruments, Tools, and Data Collection Methods:

Data Collection Methods

Arabic and foreign sources, the Internet, testing and measurement, and observation.

Instruments and Tools Used in the Research

A standard basketball court, 10 official basketballs, markers, cones, pencils, pens, a photographic camera, a video camera, and an HP laptop computer.

Field Research Procedures:

Mental Toughness Scale

The researcher used the Al-Saadi's (2012) scale for mental toughness, which was developed for team sport athletes. The scale consisted of 29 items with five response alternatives: (Always applies to me, often applies to me, sometimes applies to me, rarely applies to me, never applies to me). The maximum score for the scale is 145, and the minimum score is 29

Basketball Shooting Accuracy Test:

Jump Shooting Test from Under the Basket (Al-Hakim, 2004)

- Purpose of the Test: To measure the ability to score consecutively under time pressure.
- Required Equipment: A basketball hoop, a basketball, a stopwatch, and a whistle to signal the start.
- Performance Specifications: The examinee stands at any point under the basket and attempts to score as many shots as possible within 30 seconds. The examinee may use any shooting technique they prefer.
- Conditions:
 - If the player loses the ball, they are allowed to repeat the test, but this may not be repeated more than once.
 - Each player is allowed two full attempts, with the best attempt being recorded.
- Scoring: The player is awarded one point for every successful shot made within the 30-second test period. Both attempts must be recorded, but only the best attempt is counted.

Exploratory Experiment:

This experiment was conducted on January 14, 2025, at 2:30 p.m. in the Sports Hall of Kirkuk Governorate, on a sample of four players outside the research sample, whose results were excluded. The purpose of this experiment was to:

1. Determine the time required to carry out the basketball shooting accuracy test.
2. Ensure the safety and functionality of the instruments and equipment.
3. Identify obstacles or challenges the researcher might face during the implementation of the main experiment.
4. Assess the suitability of the test for the sample members.
5. Evaluate the efficiency of the assisting research team.

Main Experiment

After identifying and addressing the obstacles and challenges during the exploratory study, the researcher set January 22, 2025, at 2:30 p.m. in the Sports Hall of Kirkuk Governorate to conduct the main experiment. The procedure involved distributing the Mental Toughness Scale to the research sample. After completing the scale, the researcher conducted the basketball shooting accuracy test.

Statistical Means

The researcher used the Statistical Package for the Social Sciences (SPSS) to process the data and extract the results.

Results and Discussion:

Presentation of the Results of Arithmetic Means, Standard Deviations, the Calculated *t*-Value, and the Correlation Coefficient for the Research Variables:

Table 1. shows the values of the arithmetic means, standard deviations, and correlation coefficients for the research variables.

No	Variable	Arithmetic Means	Standard Deviations	Standard Error	<i>t</i> -Value	Correlation Coefficient	Rate of Error	Level of Significance
1	Mental Toughness	111.08	2.518	3.578	25.390	0.765	0.002	Sig.
2	Shooting Accuracy	18.78	2.646	0.623				

Discussion of Results

The results presented in Table (1) indicate a significant correlation between mental toughness and shooting accuracy among the players of North Gas Basketball Club. The players demonstrated a good level of mental toughness, reflected in increased self-confidence, the ability to direct psychological pressure toward an optimal state, and the capacity to maintain focused attention and appropriate challenge during basketball shooting performance. The effectiveness of developing mental toughness in improving performance is evident, as the integration and balance between physical and mental (psychological) functions contribute to the development of mental capacities. This enables the athlete to achieve the best performance during competition (Ibrahim, 2016).

Mental toughness represents a value that supports a positive resilience in facing crises, which is essential for success in competitive sports characterized by challenges. Both the coach and the athlete must possess the ability to recover from failures during competition stages and maintain a high level of mental toughness to achieve victory (Shamoun, 2007). Moreover, when an athlete performs a motor skill or a planned ability, the performance is not executed solely by the body, muscles, hands, feet, or head. It is also carried out through the mind and thinking. For example, in sports, when performing a shooting skill, a player directs their effort toward a specific goal not only with their hands but by engaging the entire body and mind together (Alawi, 2001: 198).

Athletes require self-confidence toward achievement and specific field experience, particularly in team sports, to successfully perform skill-based and tactical tasks during competitions. This is conditional on maintaining persistence and ensuring that the players' physical fitness aligns with the demands of the sport (Abdulridha, 2023: 285). Increasing mental toughness requires this integration of confidence, experience, and physical readiness. Muhaidin (2020: 26) points out that the relationship between mental toughness

and basketball shooting accuracy during competitions involves the athlete considering potential outcomes and the strength of their opponents. The player compares what is required of them with their actual capabilities. If the requirements are below their abilities, this boosts their level, increases self-confidence, and enhances the likelihood of achieving a good result. Conversely, if the demands exceed their capabilities, this heightens psychological pressure, fear of failure, or missing points, especially since the basketball hoop is relatively small compared to other team sports, placing the athlete under multiple pressures. If the athlete demonstrates mental toughness, he can transform these pressures into increased focus, challenge, and adherence to the coach's instructions during technical performance. This, in turn, generates motivation to achieve the best possible performance during short-distance running and other competitive tasks.

Conclusions

- There is a statistically significant positive relationship between mental toughness and shooting accuracy among advanced basketball players, highlighting the importance of psychological factors in enhancing skill performance.
- Players with high mental toughness demonstrate greater confidence in decision-making during shooting, which is reflected in higher shot success rates.
- Psychological pressure and stress negatively affect shooting accuracy, while mental toughness helps reduce the impact of these factors.
- The results showed that players with a high level of mental toughness are better able to deal with mistakes and learn from them quickly without it affecting their performance.

Recommendations

- It is essential to incorporate psychological training programs aimed at developing mental toughness among basketball players through exercises that focus on stress management and mental concentration.
- Adopt pressure-simulation methods during training to enhance players' ability to shoot accurately under real-game conditions.
- Coaches should be encouraged to integrate techniques such as mental imagery and mindfulness meditation into training sessions to strengthen self-confidence and improve performance under pressure.
- It is recommended to guide players toward emotion-regulation strategies, such as deep-breathing exercises and refocusing techniques, to improve shooting accuracy during competitions.

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