

Psychological Stress Surrounding Athletes Who Have Previously Sustained Injuries and Its Role in Sports Injury

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Abstract:

Psychological stress is considered a characteristic of life; it may be required, if not necessary, to motivate individuals and drive them toward success and achievement. However, when it exceeds its limits, it may lead to problems that are difficult to resolve due to its negative effects on mental and physical health. Inadequate attention to psychological stress may worsen the situation and lead to problems that cause various injuries. Therefore, this study aimed to identify the psychological stress surrounding athletes who have previously been injured and its role in sports injuries within the educational institution among secondary school students aged 16–18 years. The descriptive method was used due to its suitability for the nature of the research. The researcher selected the study sample purposively from secondary school students aged 16–18 years who participate in school sports activities. The study sample consisted of 60 male and female students, and the questionnaire was adopted as a tool for data collection.

The results of the study revealed that psychological stress (anxiety, aggression, and depression) surrounding athletes plays a role in the occurrence of sports injuries among them.

Keywords: psychological stress – sports injury – athletes.

Introduction and Research Problem

Sports activity is considered one of the most widespread physical activities among youth, especially in educational institutions and schools. Practicing sports activity provides individuals with good physical fitness, which in turn gives them a sense of psychological comfort and self-confidence. This self-confidence makes them more interactive with their society and reduces many complexes and behavioral hesitations that appear during performance. Therefore, exposure of athletes to certain external psychological pressures or pressures within the playing field may lead to physical injury, which can cause feelings of frustration and weakness. Consequently, the athlete does not only need medical and physical treatment, but also psychological treatment in order to overcome the fear of sports injury risks, which in turn helps them return to the true level they enjoyed before the injury.

1. Study Hypotheses

Main Hypothesis:

Psychological stress surrounding athletes plays a role in the occurrence of sports injuries among secondary school students.

Sub-Hypotheses:

– Anxiety plays a role in the occurrence of sports injuries among secondary school students.



- Depression plays a role in the occurrence of sports injuries among secondary school students.
- Aggression plays a role in the occurrence of sports injuries among secondary school students.

2. Objectives of the Study

- Identifying the psychological factors resulting from sports injuries.
- Enriching the scientific library with information about the risk of sports injuries, particularly from a psychological perspective.
- Finding some solutions that help injured athletes overcome physical injury and cope with their psychological condition.

3. Importance of the Research

Psychological problems that may face secondary school student-athletes can be a major cause of undesirable injuries that may undermine athletes' morale. Therefore, studying such topics may contribute to providing more knowledge and information, especially in the field of sports injury psychology, which helps develop the psychological aspects of injured athletes.

The results of this study also play an important role in directing researchers' attention toward conducting further scientific studies addressing aspects that were not covered in the current study.

Physical education teachers and sports medicine specialists can benefit from the results of this study in designing integrated preparation programs for athletes returning from sports injuries.

4. Research Terminology

4.1. Psychological Stress

Psychological stress in the sports field refers to pressures related to the complex and intertwined relationships between the individual and others within the sports environment. These pressures may be associated with the nature of these relationships, such as lack of appreciation, insufficient motivation or encouragement, or demands to achieve exaggerated levels of ambition (Mohamed Hassan Allawi, 1998: Introduction to Sports Psychology, Book Center for Publishing, Cairo, pp. 20–39).

4.2. Physical Injury

It is a negative experience resulting from contact or collision between a player and another player, whether a teammate during training or an opponent during competitions. It may also result from collision with equipment or any fixed or movable sports tools, leading to the athlete being prevented from practicing sports until recovery (Mostafa Hussein et al., 2002, Mental Health in the Sports Field, Cairo, Book Center for Publishing, pp. 142–143).

4.3. Adolescence

Adolescence, in its precise meaning, is the stage that precedes and leads the individual to full maturity. In this sense, it extends for both females and males until the individual reaches the age of 21, thus spanning from puberty to adulthood (Fouad El-Bahy El-Sayed, 1979, Psychological Foundations of Development from Childhood to Old Age, Dar Al-Fikr Al-Arabi, Cairo, Egypt, p. 257).

4.3.1. Temporal Delimitation of the Beginning and End of Adolescence

Some scholars artificially divide adolescence for study purposes into three sub-stages corresponding to successive educational stages:

- Early adolescence: from 11 to 14 years, corresponding to middle school.

- Middle adolescence: from 15 to 17 years, corresponding to secondary school.
- Late adolescence: from 18 to 21 years, corresponding to university education.

Thus, adolescence ends around the age of twenty-one, when the individual becomes physically, physiologically, sexually, mentally, emotionally, and socially mature (Hamed Abdel Salam Zahran, *Studies in Developmental Psychology*, 1st ed., Alam Al-Kutub, Cairo, Egypt, p. 223).

5. Research Procedures

5.1. Study Fields

Spatial field: This study was conducted in some secondary schools in the city of El Oued, El Oued Province.

Temporal field: From April 7 to April 15, 2021.

Human field: A purposive sample was adopted, consisting of some secondary school students in the city of El Oued. The sample size was 60 students.

5.2. Adopted Methodology

This study relied on the descriptive-analytical method, which is appropriate for describing the phenomenon as it exists in reality.

5.3. Data Collection Tool

The questionnaire was used as the data collection tool, with response alternatives represented by: always – sometimes – rarely.

5.4. Statistical Methods for Data Analysis

The percentage method was used in this study, where the percentage formula is: $(\text{frequency} \times 100) / \text{total}$.

6. Analysis and Discussion of the Hypotheses

Table No. (01): Shows the distribution of the sample according to the gender variable.

Gender	Number	Percentage
Male	41	68.33%
Female	19	31.66%
Total	60	100%

From examining the results of the table, we note that males occupy the largest proportion at 68.33%, while females account for 31.66%.

Accordingly, we conclude that males are the group most inclined toward sports, in contrast to females, who appear at a lower rate in this field. This highlights the extent of males' interest in and enthusiasm for sports, as well as their greater participation in various sporting activities.

Table No. (02): Shows the distribution of the sample according to the type of sports activity.

Type of Sports Activity	Number	Percentage
Individual	26	43.33%
Team	34	56.66%
Total	60	100%

From the table, we observe that the percentage of athletes who prefer team sports activities is estimated at 56.66%, while those who prefer individual sports activities account for 43.33%.

Accordingly, we conclude that the highest percentage in the table is 56.66%, which leads us to say that team sports activities, such as football and others, have gained great popularity. This popularity has made them attract the interest of most individuals, both young and old, encouraging them to engage in and participate in these activities.

Table No. (03): Shows the distribution of the sample according to the duration of participation in sports activities.

Duration of Participation in Sports Activity	Number	Percentage
Less than 2 years	15	25%
2 years or more	45	75%
Total	60	100%

From the table, we observe that athletes who have participated for a period of less than two years represent 25%, whereas those who have participated in sports activities for two years or more account for 75%.

This leads us to conclude that most athletes possess experience exceeding two years in the field of sports. This indicates students' awareness of the importance of practicing sports in providing individuals with good physical fitness, which in turn offers psychological comfort and self-confidence.

6.1. The First Sub-Hypothesis of the Study States:

Anxiety plays a role in the occurrence of sports injuries among secondary school student-athletes.

Table No. (04): Shows student-athletes' responses regarding feelings of tension and fear.

Feeling of Stress and Fear	Number	Percentage
Rarely	10	16.66%
Always	45	75%
Sometimes	5	5%
Total		

From the table, we observe that 75% of the sample members confirm that they rarely feel tension and fear, while a proportion of respondents report experiencing tension and fear.

The emergence of anxiety symptoms in athletes causes functional impairment of the body, especially if they are excluded from the sports team or if their recovery period is prolonged. This may lead them to pass through different stages of anxiety and depression.

Table No. (05): Shows student-athletes' responses regarding experiencing certain imaginations and strange thoughts.

Feeling of Some Fantasies and Unusual Thoughts	Number	Percentage
Rarely	15	25%
Always	39	75%
Sometimes	06	10%
Total	100	100%

From the table, we observe that 75% of the sample members confirm that they experience imaginations and strange thoughts, while a proportion of respondents report the opposite.

Accordingly, we conclude that most athletes experience imaginations and strange thoughts, which generate anxiety, psychological stress, and fear of the future. This will inevitably be reflected in their athletic performance, making them more vulnerable to injury.

Table No. (06): Shows student-athletes' responses regarding experiencing an increase in heart rate.

Feeling of Increased Heart Rate	Number	Percentage
Rarely	17	25%
Always	35	58.33%
Sometimes	18	30%
Total	100	100%

From the table, we observe that 58.33% of the sample members confirm that they experience an increase in heart rate, while the percentage of athletes who do not experience an increase in heart rate is estimated at 25%.

Accordingly, we conclude that most athletes experience an increase in heart rate. This is due to feelings of anxiety and continuous fear, which generate heightened emotional and nervous arousal as well as frustration, making them more susceptible to physical injury.

6.2. The Second Sub-Hypothesis of the Study States:

Depression plays a role in the occurrence of sports injuries among secondary school student-athletes.

Table No. (07): Shows student-athletes' responses regarding nervousness and trembling.

Feeling of Nervousness and Trembling	Number	Percentage
Always	33	55%
Rarely	6	10%
Sometimes	21	35%

Total	60	100%
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From the table, we observe that 55% of the sample members confirm experiencing states of nervousness and trembling, while a small percentage of athletes deny this, estimated at 10%.

Accordingly, we conclude that nervousness and anger play a significant role in the possibility of exposure to sports injuries before or after engaging in play. When athletes experience anger and nervousness, they lose concentration and their attention becomes scattered during play, which makes them prone to various maladaptive behaviors that may lead to injuring others or injuring themselves.

Table No. (08): Shows student-athletes' responses regarding loss of hope in the future.

Feeling of Loss of Hope for the Future	Number	Percentage
Always	25	41.66%
Rarely	05	8.33%
Sometimes	30	50%
Total	60	100%

From the table, we observe that 41.66% of the sample members confirm experiencing a loss of hope for the future, while 50% of the sample fall between agreement and disagreement. In contrast, a small percentage of athletes deny this feeling, estimated at 8.33%.

Based on these results, we conclude that most members of the sample exhibit a state of depression, as reflected in their responses indicating feelings of hopelessness. This condition inevitably has a significant impact on their psychological state, affecting their self-confidence and, consequently, strongly influencing their functional performance during play due to distraction.

Table No. (09): Shows student-athletes' responses regarding feelings of helplessness and loss of energy.

Feeling of Helplessness and Loss of Energy	Number	Percentage
Always	28	46.66%
Sometimes	24	40%
Rarely	08	13.33%
Total	60	100%

From the table, we observe that 46.66% of the sample members confirm experiencing feelings of helplessness and loss of energy, while 40% of the sample fall between agreement and disagreement. In contrast, a small percentage of athletes deny this feeling, estimated at 13.33%.

Accordingly, we conclude that most injured athletes experienced feelings of helplessness and loss of energy prior to their injury, which made them feel incapable of competing, facing opponents, and achieving the intended goals of participation in sports activities.

6.3. The Third Sub-Hypothesis of the Study States:

Aggression plays a role in the occurrence of sports injuries among secondary school student-athletes.

Table No. (10): Shows student-athletes' responses regarding the desire to harm others.

Desire to Harm Others	Number	Percentage
Always	10	16.66%
Rarely	45	75%
Sometimes	05	8.33%
Total	60	100%

From the table, we observe that 16.66% of the sample members confirm experiencing a desire to harm others, while 8.33% fall between agreement and disagreement. In contrast, a strong proportion of athletes deny this feeling, estimated at 75%.

Accordingly, we conclude based on the table that most athletes deny the idea of harming others or harboring hostility without a strong reason that would drive such behavior, which could otherwise lead to psychological and performance-related problems before and during play.

Table No. (11): Shows student-athletes' responses regarding the inability to control anger.

Inability to Control Anger	Number	Percentage
Always	38	63.33%
Rarely	08	13.33%
Sometimes	14	23.33%
Total	60	100%

From the table, we observe that 63.33% of the sample members confirm their inability to control anger, while 23.33% fall between agreement and disagreement. In contrast, a small percentage of athletes deny this, estimated at 13.33%.

Accordingly, we conclude that most athletes agreed with this statement. Therefore, it can be said that emotions of anger, agitation, and hostility toward the opponent may lead to aggressive and rough behaviors between both parties on the playing field. This, in turn, causes the occurrence of physical injuries either to the athlete or to the opponent.

Table No. (12): Shows student-athletes' responses regarding shouting and throwing objects.

Screaming and Throwing Objects	Number	Percentage
Always	25	41.66%
Rarely	07	11.66%
Sometimes	28	46.66%
Total	60	100%

From the table, we observe that 41.66% of the sample members confirm their agreement with shouting and throwing objects, while 46.66% fall between agreement and disagreement. In contrast, a small percentage of athletes deny this behavior, estimated at 11.66%.



Accordingly, we conclude that shouting and throwing objects are among the psychological factors and stressors that may lead to the occurrence of many injuries, especially affecting the musculoskeletal system of players in various sports activities, which negatively affects players' emotional behavior.

7. Results and Discussion:

Through presenting and analyzing these data, we proceed to discuss the results.

First, we started from the first hypothesis, which stated that anxiety plays a role in the occurrence of sports injuries among secondary school student-athletes. We observed that the first hypothesis was confirmed through students' responses regarding the appearance of anxiety symptoms, which cause functional impairment of the body. This inevitably affects athletic performance and makes the athlete more vulnerable to injury, potentially leading to exclusion from the sports team.

As for the second hypothesis, which stated that depression plays a role in the occurrence of sports injuries among secondary school student-athletes, the results of the field study showed that the second sub-hypothesis was confirmed. Nervousness, anger, and frustration are states that reflect the phenomenon of depression in adolescents, exposing them to sports injuries before or after engaging in play. When athletes experience anger and nervousness, they lose concentration and their attention becomes scattered during play, making them prone to various maladaptive behaviors that may lead to injuring others or injuring themselves.

Regarding the third hypothesis, which stated that hostility plays a role in the occurrence of sports injuries among secondary school student-athletes, the results of the field study indicated that the third sub-hypothesis was confirmed. Aggressive behavior results from intense anger in response to minor stimuli, driving the athlete to engage in various aggressive behaviors toward the opponent, which may lead to rough and violent conduct between both parties on the playing field. This, in turn, causes physical injuries either to the athlete or to the opponent.

Based on the results of the three hypotheses, it can be stated that the main hypothesis psychological stress surrounding athletes plays a role in the occurrence of sports injuries among secondary school students is confirmed.

8. Conclusion of the Study:

Psychological stress is considered one of the psychological phenomena that affect an individual's mental health. The intensity of psychological stress and repeated exposure to it may lead to negative effects on personality and disturbances in mental health, which may affect physical health and may even result in muscular exhaustion, psychological and mental fatigue, and certain negative psychological problems that individuals cannot easily ignore or adapt to. Consequently, such stressful situations can trigger acute behavioral disorders that may persist for long periods, varying according to the individual's psychological structure.

Stressful situations may lead to negative physiological changes, including reduced health efficiency, increased fatigue with minimal effort, difficulty breathing, back pain, muscle tension, etc. Stress may also lead to emotional manifestations such as unpleasant emotions and early stages of depression (anxiety, anger, lack of emotional control, aggression, jealousy).



Life stress imposes demands on individuals that may be physiological, psychological, or social, or a combination of two or more of these aspects. Confronting and coping with these stresses results in many burdens borne by the individual, affecting personal and professional life.

Physical education and sports represent one of the professions exposed to psychological stress due to manifestations of modern civilizational progress. Physical education and sports are continuous dynamic processes whose aim is not merely the acquisition of knowledge and meanings or physical-motor advancement, but also the development of individuals to become good citizens who are beneficial to their society.

9. References:

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