

# The Most Common Sports Injuries Among The Athletes Of Judo In The South Of Jordan

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## Abstract

This study aimed at identifying the most common sports injuries among the athletes of Judo in the south of Jordan, in addition to the most anatomical sites that are exposed to injury. The study sample consisted of (100) athletes from the Judo clubs in the South of Jordan, who were selected randomly. The researcher used the descriptive approach due to its compatibility to the study nature and objectives. The questionnaire was used to collect data and (SPSS) was used to analyze the study data. The results revealed that the most commonly exposed body organs to injuries in the sport of Judo are the muscles, the most exposed site among the athletes of judo is the back, the most common type of sports injuries among the judo athletes is dislocation, and that the most common sports injuries among the athletes of judo occurred during competitions.

In the light of the results, the study recommended the necessity of the existence of a therapist who is specialized in sports injuries with the team in order to reduce the complications of sports injuries and treating them.

**Key words:** judo athletes, injuries, sports injuries, Jordan.

## Introduction:

Sports injuries are considered as the most prominent risks facing athletes, and the developed sciences related to the health and sports domain aimed at reducing sports injuries due to their negative effects on athletes and the final results of competitions, in addition to the cost of injury treatment that exceed the financial capability of most athletes and reduce their sports achievement (Al-Shatnawi, 2016).

Sports injuries are considered amongst the major factors that impedes the progress of athletes and prevents them from improving their abilities, since those injuries take athletes away from training and competition for a long period of time which, in turn, affects the development of sports in general and the sports achievement in particular; sports

injuries occur in all the individual and group sports games. However, studies vary concerning the most commonly occurring injuries in individual and group games. Also, the causes of sports injuries vary, and the degree, intensity, nature and negative effects of them also vary (Khoraibit, 2010).

Since sports injuries are considered amongst the most important factors that prevent athletes from participating in sports training and competitions, and are regarded as the most prominent problems facing those working in the sports domain, it was necessary to identify the factors that contribute to the occurrence of sports injuries and identify the causes and sites of their occurrence (Mojalli, et al, 2010).

With the increasing interest in all the sciences related to the sports domain and the various

training programs, more attention is currently directed towards the problem of sports injuries, which have been amongst the most important problems facing the individuals working in the sports domain, not just because they reduce the potential of achieving the main objectives of practicing physical activities that mainly depend on promoting the social, psychological and physical abilities as well keeping healthy, but also they could prevent athletes from being able to practice physical activities as healthy, recreational or competitive method (Mojalli, Adeeb, 2004). Those observing the sports scenery, find that it is difficult to find a certain sport whose athletes are not exposed to the different types of sports injuries. Indeed, one of the branches of medical sciences is called "sports medicine", where it aims to keep athletes healthy, protect them against injuries and treat and rehabilitate them in the advanced stages (Nouri, 2004).

The sport of Judo is considered as one of the popular sports among the various categories of the community either at the local or the international level. Judo is also regarded amongst the sports whose athletes are exposed to many injuries due to the direct contact between athletes or the nature of its technical skills that are based on performing risky movements. Therefore, the athletes of this sport are more exposed to the various types of sports injuries (Khalil, 2008).

### **The study problem:**

Sports injuries are considered as the most important problems facing those practicing the game, especially in the domain of competitive sports, where athletes compete to gain advanced positions. This context is particularly evident in the international competitions, where there is a need to promote the levels of training by increasing the number of training bouts, their intensity or duration. Also, training loads are increased in a way that suits each sports type which, in turn, imposes more loads and burdens on the athlete's body; therefore, there will be more possibility of being exposed to sports injuries (Renstorn, 2003). In the same vein, (Mostafa, et al, 2008) suggested that increasing the intensity of

practicing a certain game often results in injuries. They suggested that injuries often take occur in joints, muscles and ligaments due to the wrong performance relating to acquiring a certain skill during the sports training, or due to the irregular training. As an individual sport, athletes in this sport are exposed to many physical and psychological stressors that may result in various injuries that prevent the athletes' progress and terminate their competitive future in sports. In some cases, the injury may continue or leave effects over the rest of the athlete's lifetime. Sports injuries are double-edged weapons, where the injury could be a permanent or a temporary one that takes the athlete away from practicing the game and eliminates his sports dream. Therefore, the researcher conducted this study with the aim of identifying the most common sports injuries among the athletes of Judo in the south of Jordan during and after training and competition as well as identifying the site and nature of injury.

### **The study importance:**

Overlooking the investigation of sports injuries among athletes could result in more negligence to the waste that takes place in the sports abilities. When an athlete is exposed to a sport injury without knowing the actual cause of its occurrence, he may be exposed to it or to other injuries more frequently. Indeed, this may result in ceasing the practice of sports activity which, in turn, results in more waste in time and effort in the process of physical construction, and this means the lack of importance of the work performed by the athlete and the coach. The importance of this study lies in the following:

- 1- Being as one of the few studies that addressed the athletes of Judo in the south of Jordan.
- 2- Providing an obvious indicator about sports injuries among athletes, where it recognizes their diseases history, deals with injuries and reduces their prevalence.
- 3- The study paves the way in front of other researchers to address the injuries of Judo

and develop rehabilitation programs for those injuries.

### **The study objectives:**

The study aimed to:

- 1- Identify the most common types of sports injuries among the athletes of Judo in the south of Jordan.
- 2- Identify the most common sites of sports injuries among the athletes of Judo in the south of Jordan.

### **The study questions:**

The study aimed to answer the following questions:

- 1- What are the most common types of sports injuries among the athletes of Judo in the south of Jordan.
- 2- What are the most common sites of sports injuries among the athletes of Judo in the south of Jordan.

### **The study limits:**

- The temporal limits: the study was conducted during (23/5/2022 – 20/6/2022).
- The spatial limits: the study was conducted in the south of Jordan.
- The human limits: the study was applied to the athletes of Judo in the south of Jordan.

### **The study terms:**

### **The Independent variables:**

Independent Variable	Club's name	Number	Percentage
Club	Bosaira	24	24%
	Al-Khaleej	14	14%
	Wadi Mousa	20	20%
	Mu'tah	19	19%
	Petra	23	23%
	Total	100	100%

### **The study instrument:**

**Injury:** it is a Latin word which means harm or disability, where it could or couldn't be accompanied by rupture in tissues (Osama, 2010). It also refers to the body tissues' exposure to internal or external influential factors which, in turn, result in physiological and anatomical changes in the injury site as well as a dysfunction of the function of the affected tissues (Mohammad, 2004).

**Judo athletes:** They are the athletes who are registered in the federation of Judo and its clubs since they were still promising young children until they grew up to be professional athletes.  
\*procedural definition

### **The research methodology:**

The researcher used the descriptive approach with its survey image due to its compatibility to the study nature and objectives.

### **The study population:**

The study population consisted of all the Judo athletes in the south of Jordan, with a total of (267) athletes.

### **The study sample:**

The study sample was selected using the purposive way. The study sample consisted of (100) athletes. Table (1) shows the distribution of the sample individuals according to the demographic variables.

Table (1) The distribution of the study sample individuals according to the demographic variables (club) (n=100)

The researcher developed a questionnaire for the purposes of this study after reviewing several

previous studies, where they were utilized in citing the study's questionnaire. Appendix (1) shows a model of this questionnaire. The questionnaire consisted of (3) parts:

- The first part: it included an explanatory introduction for the general goal of the questionnaire.
- The second part: it was dedicated to collect the data related to the personal characteristics of the study sample individuals.
- The third part: it was dedicated to collect the data related to the study questions.

#### **The scientific coefficients:**

The validity of the study instrument: in order to verify the instrument's validity, the researcher introduced to a number of specialists, where some items were modified as suggested by the arbitrators, in a way that is compatible with the study nature and objectives.

#### **The reliability of the study instrument:**

The researcher applied the questionnaire to a number of athletes from outside the study sample individuals with a total of (5) athletes, and the test was reapplied two weeks later, where Pearson correlation coefficient was calculated between the two applications, and was (0.92), which is considered as a high value that confirms the reliability of the questionnaire and its ability to measure what it was designed to measure.

#### **The study variables:**

**The Independent variable:** the injury type, injury site.

**The dependent variable:** the response of the Judo athletes.

#### **The used statistical methods:**

The statistical analysis was performed for the data derived based on the study questions using the Statistical Package for Social Sciences (SPSS). The study employed the following statistical methods to complete the study procedures:

- 1- Percentiles: this measurement is used to divided in certain percentages, where it has been used to summarize the data related to the personal domains of the study sample individuals.
- 2- Frequencies: refer to the value which shows the frequencies of the sample individuals, i.e. the number of individuals who reached that value.
- 3- Pearson correlation coefficient.

#### **Displaying the study results:**

The results related to the main study question, which states: " what are the most common sports injuries among the athletes of Judo in the south of Jordan?

In order to answer this question, the researcher used the frequencies and percentages for the sports injuries according to (the nature of injury, the injury site, injury type, time of injury occurrence), and the results are shown in tables (2-5). The researcher also used means, standard deviations and percentages to determine the period for the occurrence of sports injuries, taking into consideration that the least mean that approaches (1), indicates the time for the occurrence of injury and the most important causes for that and vice versa. The results in the tables shows that.

#### **I- The nature of injury:**

Table (2) The frequencies and percentages for the number of being exposed to sports injuries among the athletes of Judo in the south of Jordan according to the nature of injury (n=100)

<b>Injury nature</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Muscles</b>	250	25.4
Joints	175	17.7

Bones	166	16.8
Ligaments	187	19
Tendons	208	21.1
Total	986	100%

The results in table (2) revealed that the total number of sports injuries to which the athletes of Judo were exposed in the south of Jordan according to the injury nature was (986) injuries, where the most common types of injuries were related to muscles with a frequency of (250) and a percentage of (25.4%), while the least common types of injuries were related to bones with a frequency of (166) and a percentage of (16.8%).

The researcher attributed this result to the fact that muscles represent a major part of the body mass, where the injury differ based on the muscle's site, nature, function and performance accuracy; therefore, muscles are more exposed to injury since they protect all the parts of the body. The low score of bones is attributed to the nature of bones' function and thickness, and bones are the last parts that are affected by injury; the first affected part is the muscles after which harm is transmitted to joints and bones. This case is particularly true in the sport of Judo, since large sets of muscles work in a standard time and a very rapid performance; therefore, muscles are exposed

to injury. This finding was confirmed by (Al-Thiabat, 2016) which revealed that muscle contractions are mainly caused by the lack of sufficient warm up before starting the competition or training, in addition to the great physical movement, the wrong performance and the sudden movements. (Nouri, 2004) suggested that the most prominent causes of muscle injuries are related to the inappropriate performance of the skill. Also, (Sayid, 2003) suggested that the most important causes for muscle contraction are related to the activity of the blood circulation that supplies the muscles as well as fatigue during training or competition due to losing water and minerals as well as the accumulation of acids in the muscles. The results revealed that there is a rise in the percentage of muscle rupture and muscle bruises, where ruptures represent an advanced phase of contractions that occur when muscles are not given sufficient rest.

## 2- Site of injury:

Table (3) The frequencies and percentages for the number of being exposed to sports injuries among the athletes of Judo in the south of Jordan according to the site of injury (n=100)

Number	Site of injury	Frequency	Percentage %
1	Hand	100	6.3
2	Shoulder	170	10.7
3	Elbow	154	9.7
4	Wrist	200	12.6
5	Pelvis	250	15.8
6	Head	80	5
7	Knee	178	11.2
8	Back	288	18.1
9	Foot	167	10.6
	Total	1587	100%

The results in table (3) revealed that the overall level for the number of times of sports injuries to which the athletes of Judo are exposed in the south of Jordan according to the site of injury was (1587) injuries. The most common sites of sports injuries were related to the back with a frequency of (288) injuries and a percentage of (18.1%), whereas the least common sites of sports injuries were related to the head with a frequency of (80) injuries and a percentage of (5%).

The researcher attributed this finding to the fact that the site of the back is a central one that encompasses the interrelated combination of several muscles, bones and tendons, in addition to the internal parts. Therefore, it is considered as the commonly exposed body part to injury among the athletes of Judo. As for the head, it is a part with low muscle intensity and is protected by a helmet, and thus it is not always exposed to injury.

### 3- The injury type:

Table (4) The frequencies and percentages for the number of being exposed to sports injuries among the athletes of Judo in the south of Jordan according to the type of injury (n=100)

Number	Injury type	Frequency	Percentage
1	Disjoint	178	18.64
2	Sprains	100	10.57
3	Bruises	197	20.63
4	Cutting	90	9.42
5	Dislocation	207	21.68
6	Ruptures	182	19.08
	Total	954	100%

The results in table (4) revealed that the overall level for the number of times of sports injuries to which the athletes of Judo are exposed in the south of Jordan according to the type of injury was (954) injuries. The most common types of sports injuries were related to "dislocation" with a frequency of (207) injuries and a percentage of (21.68%), whereas the least common types of sports injuries were related to "cutting" with a frequency of (90) injuries and a percentage of (9.42%).

The researcher attributed this finding to the nature of practicing the game, where too many contacts occur, in addition to frequent rotations to the larger and smaller joints, especially the thigh, wrist and shoulder joints, since these joints are considered as the largest joints and the most easily affected with dislocation. As for the injury of cutting, injuries hardly reach the state of cutting in these individual sports.

### 4- The time of injury occurrence:

Table (5) The frequencies and percentages for the time of the occurrence of sports injuries among the athletes of Judo in the south of Jordan (n=100)

Number	The time of injury occurrence	Frequency	Percentage
1	During training or competition	35	35

2	During competition	40	40
3	During training	25	25
	Total	100	100%

The results in table (5) revealed that the most commonly injury types to which judo athletes are exposed in the south of Jordan were during competitions, with a frequency of (40) injuries and a percentage of (40%), while the least occurring injuries were during training, with a frequency of (25) injuries and a percentage of (25%).

The researcher attributed this finding to the nature of competition and the nature of the sport itself, where too much contact occurs during competition, in addition to the competition environment and increased stress that result in more injuries among athletes. The researcher suggested that the reason of that could be attributed to using power since the beginning and being committed to the principles of sports training since the beginning, where the athlete should gradually progress in increasing the load while training or during the fight with his opponent, in addition to the low physical preparation, lack of using resistance exercises to prepare the muscles to do the physical activities, neglecting stretching exercises for muscles before the athlete starts training as well as the low physical fitness. These findings were confirmed by (Shawka and Khasawneh, 2005) which suggested that the low physical preparation and unintended tough contact are the main causes of injuries. These findings also agreed with (Yousef and Sayyid, 2010), (Jabali, 2016) and (Nicholas, et al, 2007), which revealed that the highest percentage of injuries occurred during competitions.

### Conclusions:

In the light of the study objectives and results, the study concluded the following:

- 1- The most exposed body organs to injury in the sport of Judo are the muscles.
- 2- The most exposed body site to injury among the athletes of Judo is the back.

3- The most common types of sports injuries in the sport of Judo are the dislocation injuries.

4- The most common sports injuries among the athletes of Judo occur during competition.

### Recommendations:

In the light of the study results and conclusions, the study recommended the following:

- 1- The necessity of not involving the injured athlete in training or competition before verifying the complete recovery of injury.
- 2- The necessity of urging coaches to pay more attention to the process of warming up during training and competitions.
- 3- The necessity of the existence of a specialized therapist in sports injuries in order to reduce the complications of injuries and treat them.
- 4- The necessity of conducting further studies about the injuries in the sport of Judo, that address each skill individually.

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### Appendix (I)

#### Questionnaire:

The \_\_\_\_\_ appreciated athlete.....

Greetings:

The researcher conducts a study entitled " **The Most Common Sports Injuries among the Athletes of Judo in the South of Jordan** " in order to identify the most common sports injuries, their causes, occurrence time and the way of reducing them. In order to achieve the study objectives, researcher developed a questionnaire a questionnaire based on the literature and previous studies relevant to the study topic.



Accordingly, please complete the enclosed questionnaire, knowing that the included data will be confidential and will only be used for the purposes of scientific research.

With my all respect and appreciation

The researcher

### **The first part: personal data**

Please tick (✓) in the box that matches with your opinion for each item

### **The second part:**

Please, read the following items and answer them based on the notes of each item.

The first question: injury nature

- A- The number of times of being exposed to muscle injuries.....
- B- The number of times of being exposed to tendon injuries.....
- C- The number of times of being exposed to bone injuries.....
- D- The number of times of being exposed to joints injuries.....
- E- The number of times of being exposed to ligaments injuries.....

### **The second question: the site of injury**

- A- The number of times of being exposed to injuries in the head .....
- B- The number of times of being exposed to injuries in the shoulder.....

- C- The number of times of being exposed to injuries in the elbow.....
- D- The number of times of being exposed to injuries in the wrist.....
- E- The number of times of being exposed to injuries in the hand .....
- F- The number of times of being exposed to injuries in the pelvis.....
- G- The number of times of being exposed to injuries in the knee.....
- H- The number of times of being exposed to injuries in the foot.....
- I- The number of times of being exposed to injuries in the back.....

### **The third question: injury type**

- A- How many times were you exposed to sprains injuries and were repeated?.....
- B- How many times were you exposed to disjoint injuries and were repeated?.....
- C- How many times were you exposed to cutting sprains injuries and were repeated?.....
- D- How many times were you exposed to bruises and were repeated?.....
- E- How many times were you exposed to muscles injuries and were repeated? .....
- F- How many times were you exposed to rupture injuries and were repeated?.....

### **The fourth question: time of injury**

When did he injury take place?

- 1- During training      2- during competition.
- 3- during training and competition