

How to Cite:

Shatnawi, M. M. (2022). The most common sports injuries among footballers in the north of Jordan. *International Journal of Health Sciences*, 6(S2), 9346–9355.
<https://doi.org/10.53730/ijhs.v6nS2.7428>

The most common sports injuries among footballers in the north of Jordan

Prof. Motasim Mahmoud Shatnawi

Yarmouk University/ Jordan

Corresponding author email: Albasha1969@yahoo.com

Abstract---This study aimed at identifying the most common sports injuries among footballers in the North of Jordan as well as the most important anatomical sites that are exposed to injury among footballers and their causes. The researcher used the descriptive approach due to its compatibility to the study nature. The study sample consisted of (134) footballers, who were chosen by using the purposive way, and the questionnaire was used as the way of collecting data. The results revealed that the most important anatomical sites that are exposed to injury among footballers in the North of Jordan are ankle joints, and the most common injuries among them are myorrhexis. The results revealed that the most common causes leading to sports injuries among footballers in the North of Jordan are related to lack of gradualism in increasing exercises loads. The researcher recommended the necessity of paying attention to distributing exercises loads in the appropriate way according to the age categories of footballers in the North of Jordan.

Keywords---sports injuries, football, North Jordan.

Introduction

Sports injuries are considered amongst the most important factors that lead to excluding athletes and taking them away from regular attendance in sports activities or participation in competitions. These injuries also represent the most important problems facing those working in the sports domain. Therefore, it was necessary to identify the factors that contribute to the emergence of sports injuries as well as identifying their causes and the sites of their occurrence (Mojalli, et al, 2010).

Sports injuries are amongst the most prominent risks facing athletes, where the advanced sciences relating to health and sports domain aimed at reduce sports injuries due to their adverse effects on athletes and sports results, in addition to

the cost of medical treatment that may exceed the financial capacity of many athletes and reduce their sports achievements (Al-Sharnawi, 2016).

The occurrence of sports injuries in any part of the body either during training sessions or completions is considered as the most important barriers that face athletes and hinder their sports and practical life which, in turn, results in more suffering and loss of physical fitness; athlete's level declines and he becomes more exposed to frequent injuries even after receiving treatment (AbdulKhalik and Atiya, 2014).

Sports injuries are considered amongst the important ways for developing the athlete's ability and protecting him against injury as well as guiding the coach towards taking the early and appropriate procedures to protect the athletes against dangerous ramifications that could deprave him from continuing the practice of his sports activities (Mohammad, 2004). The one who observes the events on the sports domain would notice that it is difficult to find a certain sport whose athletes are not exposed to injuries. In this vein, a new branch of medical sciences was created, where it is concerned with maintaining the physical health of athletes in all their categories and levels, in addition to protecting them against injuries and rehabilitating them in the advanced stages of injury (Nouri, 2006).

The game of football is considered as one of the most important and popular games all over the world. During the previous decades, this game gained more attention and popularity, where there had been more individuals, who practice the game, accompanied by an increase in the number of clubs, institutions and federations that supervise the game. The increased number of athletes was accompanied by a parallel increase in motives towards winning. Also, more sports injuries were reported while practicing this game which, in turn, resulted in the emergence of medical committees and institutions that are concerned with protecting athletes against injuries (Jabali, 2016).

Footballers are exposed to different types of injuries that vary in their intensity the simple ones that do not cause harmful consequences or do not require long time or more effort for treatment to the extremely dangerous injuries that result in harmful effects that may lead to death. The most common injuries in the game of football are related to the lower limbs, with a percentage of (85%) of the total injuries. The knee joint is exposed to (33%) of injuries, followed by muscle cramps (18%), fractures (17%), ankle joint (9.5%), myorrhexis (6%) and spinal cord injuries with (5.5%), while the other body joints are exposed to only (3%) of total injuries (Al-Hasini, 1993).

The study problem

Sports injuries are considered as the major risks that athletes face, where the advanced sciences relating to health and sports domain aimed at reduce sports injuries due to their adverse effects on athletes and sports results, in addition to the cost of medical treatment that may exceed the financial capacity of many athletes and reduce their sports achievements (Al-Sharnawi, 2016). Based on the researcher's experience and knowledge about injuries and the preparation of rehabilitation programs for the injured, he noticed an increase in the number of

sports injuries among the teams of group games, especially the game of football, since it is the popular game that gains the interest of all the community categories. In this game, several injuries are common among juniors and professionals, since training units are applied to both juniors and professionals. Therefore, the researcher conducted this study to identify the most important injuries to which footballers are exposed and the ways of reducing them.

The study importance

The importance of this study lies in the following:

- 1- It contributes to identifying the most important sports injuries among footballers.
- 2- Helping players and administrative staff in identifying the common injuries in order to protect players against them.

The study objectives

This study aimed to:

- 1- Identify the most common types of sports injuries among footballers in the North of Jordan.
- 2- Identify the sites of sports injuries among the footballers in the North of Jordan.
- 3- Identify the causes of sports injuries to which footballers in the North of Jordan are exposed.

The study questions

- 1- What are the most common types of sports injuries among footballers in the North of Jordan?
- 2- What are the most common types of sports injuries among the footballers in the North of Jordan?
- 3- What are the most common causes of sports injuries to which footballers in the North of Jordan are exposed?

The study limits

The temporal limit: this study was conducted during (22/2/2022 – 22/3/2022).

The spatial limit: this study was conducted in Irbid in the North of Jordan.

The human limit: footballers in the North of Jordan.

The study terms:

Injury: it is a Latin word which means a harm or disability, where the harm is accompanied or not accompanied by a damage in tissues (Osama, 2010). It refers to the exposure of the different tissues of the body to internal or external effects that lead to anatomical or physiological changes in the site of injury which, in turn, hinder its function (Mohammad, 2004).

Footballers: they are the footballers who are enrolled in the football federation and the Asian federation since they were promising juniors until they became professional footballers. * procedural definition

The study procedures and methodology

The study 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 footballers in Irbid in the North of Jordan with a total of (300) footballers.

The study sample

The study sample was chosen purposively and consisted of (134) footballers in Irbid in the North of Jordan. Table (1) shows the distribution of the study sample individuals according to the demographic variables.

Table (1)

The distribution of the study sample individuals according to the demographic variables

Variable	Categories	Number	Percentage
The footballer's Position	Defender	54	%40.3
	Offender	51	%38.1
	Midfielder	16	%11.9
	Winger	13	%9.7
Governorate	Alsareeh	47	35.1%
	Kofirsoom	30	22.4%
	Howara	26	19.4%
	Moghair Al-Sarhan	31	23.1%

The study instrument

The researcher developed a specific questionnaire for the purposes of this study after reviewing several previous studies (Alwedian, Alotoum, Al-Khataibeh2019; Altweisi, 2015), where the questionnaires employed in these studies were used to come up with a a questionnaire that are suitable for this study and achieve its objectives. The questionnaire consisted of three parts:

- The first part: included an explanatory introduction for the general objective 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

- 1- The study instrument's validity: in order to verify the validity of the study instrument, the researcher introduced it to a number of specialists, where the arbitrators agreed upon the modification of some items in a way that is compatible with the study nature and objectives.
- 2- The reliability of the study instrument: the researcher applied the questionnaire to a number of footballers from the outside of the study sample with a total of (8) footballers, and the test was reapplied after two weeks; Pearson correlation coefficient was calculated between the two applications and was found to be (0.92). This is considered as a high reliability coefficient that verifies the study instrument's reliability and its ability to measure.

The study variables

The independent variable: the injury type, injury site, and injury cause.

The dependent variable: the response of footballers in the North of Jordan.

The used statistical methods

The researcher conducted the statistical analysis for the data that were derived from the questionnaire's items using the statistical package for social sciences (SPSS), where the following statistical methods were used to complete the study procedures:

- 1- Percentiles: this statistical element is used to divide the data in a certain percentage, where it was to summarize the data related to the personal information of the study sample individuals.
- 2- Frequencies: they represent the values which show the sample's frequencies; i.e. how many cases achieved this value.
- 3- Pearson correlation coefficient.

Displaying and discussing the results

The first question which states: What are the most common types of sports injuries among footballers in the North of Jordan ?

Table (2)

The sports injury type, frequency and occurrence percentage among the sample's individuals

Number	Injury type	Frequency	Percentage	Rank
1	Ruptures	27	4.5	11.5
2	Tendons ruptures	34	5.7	7.5
3	Spasms	86	14.4	2.5
4	Ligament ruptures	34	5.7	7.5
5	Dislocation	27	4.5	11.5
6	Bone bruises	34	5.7	7.5
7	Muscle bruises	86	14.4	2.5

8	Nerve bruises	34	5.7	7.5
9	Wounds and abrasions	31	5.2	10
10	Muscle spasms	111	18.5	1
11	Sprains	58	9.7	4
12	Other injuries and inflammations	36	6	5
	Total	598	%100	

Table (3) showed that the most common types of sports injuries among the footballers in the North of Jordan are myorrhexis, with a percentage of (18.5%), followed by muscle spasms and muscle bruises (14.4%). The researcher attributed this result to the nature of football related to too much contact between players and the long time of each half time of the match, in addition to lack of enough warming up. Therefore, players are exposed to myorrhexis and ligament rupture. This finding disagreed with (Nouri, 2004) which revealed that muscle spasms are the most common among students and with (Qadadha, 2005) and (Altweisi, 2015) which revealed that the most common sports injuries are muscle bruises and sprains.

The second question:

What are the most common types of sports injuries among the footballers in the North of Jordan?

Table (3)

The frequencies and percentages for the most commonly exposed anatomical sites to injury among the study sample individuals

Number	Site of injury	Frequency	Percentage %
1	Head	33	5.04
2	Neck	24	3.66
3	Shoulder joint	14	2.14
4	Collarbone	3	0.5
5	Upper arm	12	1.83
6	Elbow joint	44	6.72
7	Forearm	15	2.29
8	Wrist joint	26	3.97
9	Metatarsus	23	3.51
10	Phalanges	22	3.36
11	Sternum	7	1.07
12	Limbs	7	1.07
13	Abdomen	42	6.4
14	Cervical vertebrates	17	2.6
15	Thoracic vertebrate	15	2.29
16	Lumbar vertebrates	8	1.22
17	Sacral vertebrates	8	1.22
18	Pelvis	23	3.5
19	Hip joint	8	1.22
20	Ankle	76	11.6

21	Knee joint	37	5.65
22	Anterior cruciate ligament	17	2.6
23	Posterior cruciate ligament	9	1.37
24	Lateral collateral ligament	4	0.6
25	Cartilage	7	1.07
26	Leg	50	7.63
27	Thigh	69	10.53
28	Ankle's medial collateral ligament	2	0.3
29	Ankle's medial collateral ligament	5	0.76
30	Foot metatarsus	14	2.14
31	Foot phalanges	14	2.14
	Total	598	100%

Table (4) shows the most common body sites that are exposed to injuries, which is the ankle (11.6%), followed by thigh (10.53%), and legs (7.63%) in the third place. The researcher attributed this finding to the nature of team games, where the ankle is exposed to a great pressure, since it is more close to direct contact with the opponent and the ground; also, the nature of the ankle's joint function requires doing more effort. This finding agreed with (Asad, 2014) and (Al-Mosawi and Ghloum, 2022), who agreed that the lower limbs are more exposed to injuries, and agreed with (Altweisi, 2015), (Qadadha, 2005) and (Mohammad, 2002) who found that the ankle join and knee joint are more exposed to injury.

The third question:

What are the most common causes of sports injuries to which footballers in the North of Jordan are exposed?

Table (4)

The frequencies and percentages for the most common causes to injury among footballers in the North of Jordan

Number	Cause	Frequency	Percentage %
1	Lack of sufficient warm up	72	11
2	Over training	14	2.14
3	Lack of gradation in increasing the training load	124	18.96
4	Unsuitable training ground	36	5.5
5	Bad skilled training	27	4.12
6	The continuity of training when injury occurs	18	2.75
7	Invalid sports wears	36	5.5
8	lack of adherence to an obvious training program	10	1.52
9	the invalidity of employed sports devices	45	6.88
10	The lack of coach's guidance and instruction to players	13	1.98
11	Non-compliance with safety and security rules	43	6.57
12	Bad weather conditions	31	4.74

13	Bad selection of exercises for muscular groups	12	1.83
14	The coach does not observe the player and pursue him during training (general physiological manifestations)	7	1.07
15	Lack of sufficient rest between and after exercises	15	2.29
16	Allowing the player to return to training before recovery	30	4.58
17	Lack of good rest after exercise	21	3.21
18	Insufficient provision of tools and equipment for training and matches	8	1.22
19	Lack of using sports rehabilitation equipment (massage, sauna, ...etc.)	9	1.37
20	Incorrect timing for training and matches	6	0.91
21	The lack of performing comprehensive periodic medical examinations	5	0.74
22	Lack of compliance to a nutrition program	31	4.74
23	Not considering individual differences between players, and training the player based on his physical capabilities	7	1.07
24	poor psychological preparation	2	0.3
25	Lack of knowledge about sports injuries, the causes of their occurrence, and the ways of preventing them	10	1.52
26	The unsuitable type of sport for the sample individuals	11	1.68
27	Lack of good athlete's behavior (lack of attention, hastiness, violating the laws of the game)	11	1.68

Table (5) shows that the most common causes of sports injuries among footballers in the North of Jordan are related to lack of gradation in increasing the load of exercises, with (18.96%), the lack of sufficient warming up (11%), and the invalidity of employed devices (6.88%) of the total injuries.

The researcher attributed this finding to the bad planning for training and the lack of commitment to the right time of training units, in addition to the lack of gradation in training from the simple skills to the more difficult ones. However, this finding disagreed with (Ahmad, 2008) who suggested that strong contact with others is the most common cause of injury among the study sample individuals. This finding also disagreed with (Kakavelakis, et al, 2009) and (Bonza, 2003) who suggested that strong contacts with the other players, pitch's ground, and game's equipment are the most common causes of sports injuries.

Conclusions

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

- 1- The most common anatomical sites that are exposed to injuries among footballers in the North of Jordan are the ankle's joint.

- 2- The most common types of sports injuries among the footballers in the North are myorrhexis.
- 3- The most common causes of sports injuries among footballers in the North of Jordan are related to lack of gradation in increasing the training load.

Recommendations

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

- 1- The necessity of paying more attention to the distribution of training loads in the appropriate way for the various age categories among footballers in the North of Jordan.
- 2- The necessity of paying more attention to sufficient warming up before, during and after training.

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