

Common Sport Injuries Sustained by the Players of the Palestine Team for the Jujitsu

Waleed M. Shaheen

Assistant Professor

Department of Physical Education, College of Education, Birzeit University, Ramallah, Palestine.

wshaheen@birzeit.edu

Iyad A. Yousef

Assistant Professor

Department of Physical Education, College of Education, Birzeit University, Ramallah, Palestine.

Eyadh559@gmail.com

ABSTRACT

The current study aims to recognize the common sport injuries sustained by the players of the Palestinian team for the Jujitsu, the researcher has implemented the study on a sample of 21 athletes, 57.1% of them are male athletes, and 42.9 are female athletes, the questionnaire was used to collect data, and the researcher used the descriptive approach for the study. After the data were collected, the Statistical Package Program (SPSS) was used to analyze the results. The results of the study show that highest percentage of the injuries is for the shoulder joint with 20.9%, followed by thigh with 19.4%, salinity 10.4%, and ribs with 9%. There are also no statistically significant differences on the most vulnerable parts of the body in the Palestinian team for Jujitsu attributed to the gender variable. The most common cause of sports injuries in the players of the Palestine team for Jujitsu was not warm up well ((warm up is not enough)) with a percentage of 31.3% followed by practical over training 16.4%.

The study also recommended the importance of rationing training and not excessive training unit, and the need to emphasize that warm up is sufficient and good before the training unit or competition. And the establishment of a file for the players of the Palestine team for Jujitsu, and recording their injuries to know the medical history of the player.

KEYWORDS: *Sport Injuries, Jujitsu.*

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

INTRODUCTION:

Most clubs and sports associations worldwide seek providing good medical atmosphere for players and provide them with integrated treatment and that makes them stay longer in the stadiums and play for a long time.

Sports injuries are also among the biggest problems faced by players in various sports in general and the game of Jujitsu in

particular, whether during training or competitions, and therefore the low level of the

player and the inability to compete in various sports tournaments.

The severity and prevalence of sports injuries varies from one country to another, depending on the availability of existing security and safety factors, the progress of the equipment and tools used by the players, or the skill of the training staff based on the training of the players

(Shaheen, 2014). The players of Jujitsu in Palestine as other Jujitsu players worldwide are subject to injury, But as it is known that the world athletes have a much better health care and attention than our players, and the health of the athlete is more important than the achievement, and therefore our player becomes subject to injury on the one hand and the lack of attention and care required on the other hand, so a certain injury may end the career of a player or accompany him until retirement.

The attention of officials to research and study, shows that it is necessary to maintain the public health of athletes, the development of fitness, and functional and raise the level of the ability of the body to work, as well as providing security and safety for them and overcome the injuries and reduce the stadiums' injuries, as well as care and rehabilitation after injury; In less time and less effort without injury again. Mahmoud Hamdy Ahmed, (2008).

Hence the importance of this research, which is considered one of the first research papers in Palestine in the field of sports injuries to Jujitsu, as well as the scarcity or lack of research and special studies in the sports injuries to this combat game, so the researcher believes that research in the field of sports injuries in the Jujitsu sport, and analysis is to provide Sports clubs, coaches, administrators, players and therapists with information on the common injuries in the Jujitsu sport for prevention and try to prevent or reduce the severity and damage and develop appropriate solutions, in order to upgrade the players to reach the best team level in sports achievements.

The Study Problem: Sports injuries are considered to be the most difficult problems experienced by athletes in different fields of sports competitions, in terms of type and place of injury, which leads to the exclusion of many athletes on the field temporarily or permanently, which have a significant impact on the economic and psychological levels of athletes and their clubs as well. Through the experience of the researcher and his personal experience and attention to sports injuries, he noted that the majority of Jujitsu players suffer from different

injuries from one period to another and increase the spread of these injuries among the players, which reflected negatively on the level of performance and achievement. So, it is urgent and necessary to the researcher to study the most common sports injuries among the players of Palestine team of Jujitsu to reach the best levels and achievements of sports.

Objectives of the Study:

The current study sought to achieve the following objectives:

1. Identifying the most vulnerable parts of the body to the players of the Palestine team for Jujitsu depending on the gender variable.
2. To identify the types of sports injuries most prevalent among the players of the Palestine team for Jujitsu depending on the gender variable.
3. To identify the causes of sports injuries to the players of the Palestine team for the Jujitsu.

Questions of the Study:

The current study sought to answer the following questions:

1. What are the most vulnerable parts of the body to the players of the Palestine team for Jujitsu, and are there significant differences in these injuries due to gender variable?
2. What types of sports injuries are the most prevalent among the players of the Palestine team for Jujitsu, and are there any statistical differences in these injuries due to gender variable?
3. What are the causes of sports injuries to the players of the Palestine team for the Jujitsu?

MATERIAL AND METHODS:

Study Approach:

In order to achieve the objectives of the study, the researcher used the descriptive analytical method.

The Study Society:

The study society consists of all 21 players of the Palestine team for Jujitsu.

Sample of the Study:

The sample of this study included (21) questioner forms, that is, the whole study community. Table (1) shows the distribution of the study sample.

Description of the Variables of the Study Sample:

Table (1) shows the distribution of the sample of the study by sex variable. It shows that 57.1% for males and 42.9% for females. The age variable shows that 38.1% of 17-20 years, 33.3% of 21-24 years, and 28.6% of 25-28 years. The variable of weight shows that 38.1% for 60 kg or less, 28.6% of 61-80 kg, and 33.3% to 81 kg and above. The length variable shows that 33.3% for 170 cm and below, 47.6% for 171-180 cm, and 19 % for 181 cm and above.

Table (1): Distribution of Study Sample Members by Study Variables.

Variable	Level	Number	percentage
Gender	Male	12	57.1
	Female	9	42.9
Age	17-20	8	38.1
	21-24	7	33.3
	25-28	6	28.6
Weight	60 Kg and below	8	38.1
	61-80 Kg	6	28.6
	81 and above	7	33.3
Length	170cm and below	7	33.3
	171-180cm	10	47.6
	181cm and above	4	19.0

Validation of the Tool:

The researcher used the same tool (questionnaire) in several similar studies, including the study (Majali and Attiyat, 2006), (Hamarshah and Shaheen, 2014).

Stability of the Tool:

The stability coefficient of the instrument was calculated by the test and the test-R-test was reapplied on a sample of (5) players and the scale was reapplied two weeks after the first application. The correlation coefficient was calculated between the application scale and the total stability of the instrument stability (0.76). Miller (1998) indicated that if the correlation coefficient is more than 60%, it is considered a high stability coefficient that can be trusted when conducting scientific studies.

Study Procedures:

The researcher applied the tool to the sample of the study. After the questionnaire was collected from the respondents after the correct answer, the researcher found that the number of valid questionnaires returned to the statistical analysis was (21).

Statistical Processing:

Statistical analysis of the data was done by extracting the arithmetical averages and standard deviations for each of the resolution paragraphs, the Pearson correlation coefficient, and the Cronbach Alpha stability equation using the Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSION:

Results of the Study Questions:

Results Related to the First Question:

What are the most vulnerable parts of the body in the players of the Palestine team for Jujitsu, and are there significant differences in these injuries due to gender variable?

In order to answer this question, the researcher calculated the numbers and percentages of the responses of the sample members of the study sample on the questionnaire that express the most vulnerable parts of the body in the players of the Palestine team for Jujitsu.

Table (2): The Numbers and Percentages of the Responses of the Sample Members of the Study on the most Vulnerable Parts of the Body in the Players of the Palestine Team for Jujitsu.

No.	Response	Number	Percentage
1	Ribs	6	9.0
2	Nick	2	3.0
3	The leg	3	4.5
4	Salami	7	10.4
5	The Humerus	2	3.0
6	Thigh	13	19.4
7	Ankle	4	6.0
8	Foot combs	4	6.0
9	Anterior synovial ligament	1	1.5
10	Foot Salami	5	7.5
11	Shear bone	1	1.5
12	Wrist joint	1	1.5
13	The knee joint	1	1.5
14	Shoulder joint	1	1.5
15	Elbow joint	3	4.5

It is noted from the previous table, which shows the numbers and percentages of the responses of the members of the study sample on the most vulnerable parts of the body of the players of the Palestine team for Jujitsu that (shoulder joint) got the highest percentage of

(20.9%), followed by thigh (19.4%), (10.4%) followed by ribs (9%).

The researcher calculated the coefficient (chi-square) to examine the existence of differences of statistical significance in these injuries due to gender variable.

Table (3): The Numbers and Percentages of the Responses of the Sample Members of the Study on the most Vulnerable Parts of the Body of the Players of the Palestine Team for Jujitsu is Attributed to the Gender Variable.

No.	Response	Males		Females	
		No.	percentage	No.	percentage
1	Ribs	3	50.0%	3	50%
2	nick	2	100.0%	0	0%

3	The leg	1	33.3%	2	66.7%
4	salami	0	0%	7	100%
5	The humerus	1	50%	1	50%
6	Thigh	5	38.5%	8	61.5%
7	ankle	1	25.0%	3	75.0%
8	Foot combs	3	75.0%	1	25.0%
9	Anterior synovial ligament	1	100.0%	0	0.0%
10	Foot Salami	4	80.0%	1	20.0%
11	Shear bone	1	100.0%	0	0.0%
12	Wrist joint	1	100.0%	0	0.0%
13	The knee joint	1	100.0%	0	0.0%
14	Shoulder joint	9	64.3%	5	35.7%
15	Elbow joint	2	66.7%	1	33.3%

By testing the value of chi-square it shows (19.2), and the statistical significance value (0.157), which is greater than the significance level of ($\alpha 0.05$), meaning that there are no statistically significant differences in the most parts of the body susceptible to injury in selected players of Palestine Jujitsu team related to the gender variable, (Harmar, 2008), and (Mujali and Atiat study, (2006), which concluded that the most vulnerable areas were the thigh (17.05%) followed by the ankle (13.18%). The researcher believes that the shoulder injuries were the most vulnerable parts in this study, and the reason may be due to the nature of the sport and its dependence on the large and frequent falls on the ground.

Table (4): Numbers and Percentages of the Responses of the Sample Members of the Study on the Types of Sports' Injuries most Prevalent among the Players of the Palestine Team for Jujitsu.

No.	Response	No.	percentage
1	Inflammation	1	1.5
2	Torsions	7	10.4
3	Tendons	1	1.5
4	Contractions	2	3.0
5	Ligament rupture	7	10.4
6	Tendons ruptures	6	9.0
7	Tendons rupture and bone trauma	1	1.5
8	Tendons and muscular ruptures	1	1.5
9	Tendons, ligaments and muscular ruptures	1	1.5
10	muscular ruptures	15	22.4
11	Dislocation	2	3.0
12	Bruising nerves	1	1.5
13	Bruising muscles	14	20.9

Results Related to the Second Question:

What are the most common types of sports injuries among the players of the Palestine team for Jujitsu, and are there statistically significant differences in these injuries due to gender variable?

In order to answer this question, the researcher calculated the numbers and percentages of the responses of the sample members on the questionnaire, which express the most common types of sports injuries among the players of the Palestine team for Jujitsu.

14	Bruising muscles and sprains	1	1.5
15	Bone and muscle bruises	1	1.5
16	Fractures	6	9.0

It is clear that the most common types of sports injuries among the players of the Palestine team for jujitsu are: (muscle ruptures), which has the highest percentage of (22.4%), followed by muscle trauma (20.9%), Followed by sprains and ligament rupture (10.4%), followed by tendons and fractures (9%).

The researcher calculated the factor (chi-square) to examine the existence of differences of statistical significance in the types of these injuries attributed to the gender variab

Table (5): The Numbers and Percentages of the Responses of the Sample Members of the Study on the Types of Sports' Injuries most Prevalent among the Players of the Palestine Team for Jujitsu Attributed to the Gender Variable.

No.	Response	Males		Females	
		Number	percentage	Number	Percentage
1	Inflammation	0	.0%	1	100.0%
2	Torsions	3	42.9%	4	57.1%
3	Tendons	1	100.0%	0	.0%
4	Contractions	1	50.0%	1	50.0%
5	Ligament rupture	5	71.4%	2	28.6%
6	Tendons ruptures	4	66.7%	2	33.3%
7	Tendons rupture and bone trauma	1	100.0%	0	.0%
8	Tendons and muscular ruptures	1	100.0%	0	.0%
9	Tendons, ligaments and muscular ruptures	1	100.0%	0	.0%
10	muscular ruptures	6	40.0%	9	60.0%
11	Dislocation	2	100.0%	0	.0%
12	Bruising nerves	1	100.0%	0	.0%
13	Bruising muscles	4	28.6%	10	71.4%
14	Bruising muscles and sprains	1	100.0%	0	.0%
15	Bone and muscle bruises	0	.0%	1	100.0%
16	Fractures	4	66.7%	2	33.3%

The test shows the value of chi-square (15.83) and statistical significance (0.393), which is greater than the significance level (≥ 0.05), is statistically significant. There are no statistically significant differences in the types of sports injuries most common among Palestine national team players of Jujitsu is attributed to the gender variable.

The researcher saw that the increase injuries and muscle injuries in the Jujitsu sport is due to the nature of the game and dependence on the individual strength of the player as it shows, the capabilities of the individual player and therefore find that the player in individual games or game Jujitsu double effort, especially on the lower limbs that bear the weight of the player in addition to Typists, sudden falls and others. The present study was agreed with Robert B. Anderson, et al. (2010) and Nicolaos et al. (2007).

Results related to the Third Question:

What are the leading causes of sports injuries to the players of the Palestine team for Jujitsu?

responses of the sample members of the sample on the questionnaire, which express the reasons for the occurrence of sports injuries among the players of the Palestine team for Jujitsu.

In order to answer this question, the researcher calculated the numbers and percentages of the

Table (6): Numbers and Percentages of the Responses of the Sample Members of the Study on the Reasons Leading to the Occurrence of Sports Injuries in the Players of the Palestine Team for Jujitsu.

No.	Answer	Number	Percentage
1	Do not warm up well (warm up is not enough)	21	31.3
2	Over-practice (over-training)	11	16.4
3	Lack of good behavior for players (lack of attention, haste, violation of the rules of the game)	2	3.0
4	Continuity in training when an injury occurs	1	1.5
5	Lack of good warm-up (warm-up is inadequate)	8	11.9
6	Not warm up well (warm up is not enough) and lack of good behavior of players (lack of attention,	2	3.0
7	Lack of good warm-up (warm-up is inadequate) and poor skill setting (technique)	1	1.5
8	Do not relax well after exercise	1	1.5
9	Stop training or practice intermittently	1	1.5
10	Malnutrition	1	1.5
11	Do not take into consideration individual differences between players	1	1.5
12	Over-training (over-training) and new skill	4	6.0
13	No gradual increase in training load for players	1	1.5
14	Excessive training (over-training) and continuity in training when an injury occurs	2	3.0
15	Lack of good warm-up (warm-up is inadequate) and non-compliance with safety and security rules	1	1.5
16	Do not warm up well (warm up is not enough) and do not perform comprehensive periodic medical examinations	1	1.5
17	Lack of good warm-up (warm-up is inadequate), over-training (over-training) and poor physical fitness	5	7.5
18	Lack of good warm-up (warm-up is not enough) and lack of good behavior of players (lack of attention, rush, violation of the rules of the game) and poor preparation skills (technical)	1	1.5
19	Lack of good warm-up (warm-up is inadequate), over-training (over-training) and no gradual increase in training load for players	1	1.5
20	Lack of good warm-up (warm-up is inadequate), over-training (over-training), poor technical preparation and continuity in training when injury occurs	1	1.5

It is clear from the previous table, that it shows the numbers and percentages of the responses of the members of the study sample on the causes of the injuries caused by the sport of the players of the Palestine team for Jujitsu that, (not warm up the good (warm up is not enough), got the highest percentage of support (31.3%), followed by (practical Over-training)with (16.4%), followed by a lack of good warm-up , and (over-training)with 11.9%, followed by not warm up , warm up is not enough , and over training, and poor physical fitness with ,(7.5%), followed by over training, with new skills with 6%. This result is in line with Alfred Atanda (2010) and the study of Hamrsha and Shaheen (2014) and Majali and Al-Attiyyat and study (2006), which concluded that the most common cause of injury is not warm-up good.

The researcher shows that the lack of warm-up or that the warm-up time is not enough causes many injuries as some players deliberately finish warm up as soon as possible to go to play early, which has had a major impact on the health and injury of players Jujitsu, and direct competition between the players creates friction between them and break the rules and familiarity in order to win and challenge.

CONCLUSIONS:

In light of the results of this study, the researcher came out with the following results:

1. The most common parts of the body were exposed to the injury of the Palestinian team for Jujitsu. It was the shoulder joint and the highest percentage was (20.9%), followed by the thigh (19.4%). then salami with (10.4% then ribs with (9%).
2. There are no statistically significant differences in the most vulnerable parts of the body of the players of the Palestine team for Jujitsu attributed to the gender variable.
3. The most common types of sports injuries among the players of the Palestine team for Jujitsu were (muscle ruptures). The highest percentage of injuries was (22.4%) followed by Muscle bruising (20.9%). And then twisting and

ligament ruptures with 10.4%. Followed by tendons and fractures (9%).

4. There are no statistically significant differences in the types of sports injuries most prevalent among the players of the Palestine team for Jujitsu attributed to the gender variable.

5. The most common causes of sports injuries among the players of the Palestine team for Jujitsu were the lack of good warm-up (31.3%), followed by over-training (excessive training) with (16.4%).

Recommendations:

In the light of the research findings and conclusions, the researcher recommends the following:

1. Emphasize the importance of rationing training and not over-training.
2. It is necessary to emphasize the importance of warm-up before the training module or competition.
3. To create a file or record for the players of the Palestine team for Jujitsu, and to record their injuries to find out the date of the medical player.
4. Taking care of the security and safety factors on the floor of the stadiums and maintenance during the training or sports competitions periodically.
5. Spreading a healthy culture among players and ways of preventing sports injuries.

ACKNOWLEDGMENTS:

The author would like to thank the Higher Council for Youth and Sports and the Palestinian Olympic Committee for their dedicated support. He would also like to thank all the players who participated in this study.

REFERENCES:

Abdul Khaleq, Mohammad. "Enhancing the Preventative and Rehabilitative Measures for Injuries in Military Schools of Sports". Diss.

Faculty of Boys Physical Education, Alexandria, 2007.

Al-‘Alem, Zainab. *Sport Massage and Playground Injuries*. 1st ed. Cairo: Dar Al-Fikr Al-‘Arabi, 1983.

Almeid, S. A., Trone, D. W., & Leone, D. M. (1999). Gender differences in musculoskeletal injury rate: a function of symptom reporting. *Med Sco sport Exc*, (12), 1807-1812. PMID 10613432.

American Academy of Pediatrics. (2015). Sports Injury Prevention Tip Sheet. Retrieved from <https://www.aap.org/en-us>

Anderson, Robert and et al. *Journal of the American Academy of Orthopedic* (2010).Print.Atanda, Alfred. Dealing With Sports Injuries. http://kidshealth.org/teen/food_fitness/sports/sports_injuries.html#. August 2010

Atanda, Alfred. (2010). Dealing with Sports Injuries. http://kidshealth.org/teen/food_fitness/sports/sports_injuries.html#.

Brenner Joel, M. D. (2015). Epidemiology of overuse injuries in collegiate and high school athletics in United States. *Am. J. sport med.*

Carolyn, E. A., & Meeuwiss, W. (2005). Survey of sport Participation and sport injury in Calgary and area high schools. *Br. J. Sports Med.*, 39, 324-329.

Categorisation (SIC) model to address multiple, recurrent and exacerbation of injuries. *British journal of sports medicine*. <http://dx.doi.org/10.1136/bjsports-2012-091729>

Decker, J. M., Torry, M., & Douglas, S. (2003). Gender differences in lower extremity kinematics, kinetics and energy absorption during landing. [http://dx.doi.org/10.1016/S0268-0033\(03\)00090-1](http://dx.doi.org/10.1016/S0268-0033(03)00090-1)

DeHaven, K. E., & Lintner, D. M. (1986). Athletic injuries: comparison by age, sport, and gender. *Am. J. Sport Med.*, 14(3), 218-224. <http://dx.doi.org/10.1177/036354658601400307>

Dobrovski, V. E. (2002). *Sport Medicine*. Vlados, Moscow.

Doral, M. N., & Karlosson, J. (2015). *Sports injuties: prevention, diagnosis, treatment and rehabilitation (2nded.)*. New York, NY. Erric, S., & Jennifer, S. (2001). *Sports Injury: Prevention and Rehabilaty*. Medical Publishing Division, New York.

Engebretsen,L., Soligard,T., Steffen,K., Alonso,J :Sports injuries and illnesses during the London Summer Olympic Games 2012, the American: *Br J Sports Med*. 2013;47:407-414 . doi: 10.1136/bjsports-2013-092380 pmid: 23515712

Finch, C. F., & Cook, J. (2012). Categorising sports injuries in epidemiological studies: the subsequent injury

Harmer, P. Incidence and Characteristics of Time-Loss Injuries in Competitive Fencing: A Prospective, 5-Year Study of National Competitions,*Clinical Journal of Sport Medicine*. 2008; 18(2): 137-142. doi: 10.1097/jsm.0b013e318161548d pmid: 18332688

Harmon, K. G., & Mary, L. I. (2000). Gender differences in noncontact anterior cruciate ligament injuries. *Clinics in sport Med.*, 19, 287-302.

Hergenroder, A. C. (2001). *Prevention of Sports Injuries* College of Medicine, Houston. *Texas Pediatrics*, 101(6),1057-1063.

Jayanthia, N. A., & Labella, D. A. (2015). Sport-Specialized intensive Training and the risk of injury in young athletes: A clinical case control study. *Am J Sport Med.*, (4), 794-801. <http://dx.doi.org/10.1177/03635436514567298>

Jordan, D., & Metzl, M. D. (2012). *The athletes book of home remedies*. New York, NY 10017: Rodale.

Khleif, K. (2007). *Effect of Preventive Training Programs to Limit Spreading Sport Injuries Amongst Players of Land-Tennis (Master Degree Dissertation)*. University of Jordan, Amman, Jordan.

- Khreibet, F. (2008). *The Common Sport Injuries Amongst Football Players in the State of Kuwait (A Comparative Study)* (Published Master Degree Dissertation). University of Jordan, Amman, Jordan.
- Kubba', 'Abdul Rahman. *Sports Medicine*. Mousel: Al-Kuttub Printing and Publication House, 1999. Print.
- Larry, E. (1995). Basketball injuries in the database of the candian hospital injury reporting and prevention program (chirp). *PHAC*, 16(4), 1-44.
- Lauersen, J. B., Bertelsen, D. M., & Andersen, L. B. (2014). The Effectiveness of Exercise Interventions to Prevent Sports Injuries. *British Journal of Sports Medicine*, 48(11), 871-877. <http://dx.doi.org/10.1136/bjsports-2013-092538>
- Less, P., & Bary, D. (2006). Is Injury the Major Cause of Elite (Soccer) Players Being available to train & play during the competitive season. *Physical therapy in sport*, (7). 58-64. <http://dx.doi.org/10.1016/j.ptsp.2006.03.003>
- Maghayra, Iyad. "Sports Injuries Common to Swordplay in Jordan based on Training Age Variable". *The First International Scientific Conference for Sports: Toward an Active Society and the Enhancement of Health and Performance*. 1. (2008). 115-127. Print.
- Mahmoud, Ahmad. *Scientific Strategy of Therapeutic Rehabilitation of Sports Injuries*. Cairo: Academic Library, 2008. Print.
- Mahmoud, Ahmad. *Scientific Strategy of Therapeutic Rehabilitation of Sports Injuries*. Cairo: Academic Library, 2008. Print.
- Makarov, J. (2004). *Sport Medicine*. Moscow. Meliokova, I. V., & Evdakimova, T. A. (2003). *Remedial Gymnastic*. Moscow.
- Melinda, J. and M. Flegel. *Sport First Aid*. Champaign Illinois, 1992.
- Miller.D. (1998). *Measurement by the Physical Educator: Why and How* (3rd.ed).Indianapolis,Indiana:Wm.C.Brown Communication, Inc.
- Mjali, Majed and Marwan Al-Ghazawi. "Sports Injuries Common to Gymnastics Players in Jordan". *The Sixth Scientific Conference on Sports and Development: An Outlook into the Third Millennium*. 2. (2009). 160-186. Print.
- Mjali, Majed, Mohammad Bakir, and Mohammad Al-Hindi. "An Analytical Study of Sports Injuries Sustained by Goalkeepers in Jordan". *An-Najah National University Journal of Human Science Research*. 24. (2010). 1153-1171. Print.
- Muhr P, Rasmussen F, Rosenhall U. Prevalence of hearing loss among 18-year-old Swedish men during the period 1971-1995. *Scand J Public Health*. 2007; 35(5):524-532. doi: 10.1080/14034940701281477 pmid: 17852986.
- Mujalli, M. (2007). Sport Injuries Amongst Practitioners of Sport Activities at the Physical Fitness Centers. *Dirasat Journal, Educational Sciences*, 24(2).
- Mujalli, M., & Al-saleh, M. (2007). Analytical Study of Sport Injuries Amongst National Teams Due to Periods of Sport Time. *Dirasat Journal, Educational Sciences*, 34(2).
- Mujalli, M., & Atiyat, K. (2006). Analytical Study of Sport Injuries Amongst Players of Competition in Jordan, Episodes of the Fifth International Scientific Conference. *Journal of Sport Education Researches*, 1.
- Mujalli, M., Bakeer, M., & Al-Hindawi, M. (2010). Analytical Study of Sport Injuries Amongst Goalkeepers in Jordan. *Journal of An-Najah University for Researches (Humanities)*, 4.
- Mukhtar, Salem. *Playground Injuries*. Riyadh: Mars Publishing House, 1987. Print.
- National Institute of Arthritis, Musculoskeletal and Skin Diseases. "What are Sports Injuries? Fast Facts: An Easy-to-Read Series of publications for the Public". National Institute of Health. http://www.niams.nih.gov/health_info/sport_injuries/

Natural Therapy: Means and Techniques. Cairo: Tas Publication Company, 2010.

Nielsen, Jyde and A.B. "Sport Injuries in Adolescents Ball Games: Soccer, Handball and Basketball." *British Journal of Sports Medicine*, 24. (2005).

Nikolaos, D., Kofatolis, E. K., & Symeom, P. V. V. (2007). Ankle Sprain injuries & risk Factors in Amaterue soccer players during a (2) year period. *The American Journal of Sport Medicine*, (35), 458-466. <http://dx.doi.org/10.1177/0363546506294857>

Nikolaose, D. Kofotolis eletherios, Killis and Symeon, and P. Vlachopouls. "Ankle Sprain Injuries and Risk Factors in Amateur Soccer Players during a 2-Year Period". *The American journal of sports medicine*. 35. (2007): 458-466. Print.

Pescatello, L. S. et al. (2014). Guidelines for exercise testing and prescription (9th ed.). American collage of sports medicine. Philadelphia, PA 19103.

Prodromos Chadwick, C., Yung Ham, J. R., & Briam. J. (2007). Ameta-analysis of the Incidence of anteriorcruciate ligament tears as a function of gender, sport, and a knee injury-reduction regiment. <http://dx.doi.org/10.1016/j.arthro.2007.07.003>

Renstrom, P. (2003). *Clinical Practice of Sports injury prevention and care*. Keiv.

Rosa, B. B. et al. (2014). Epidemiology of sport injuries on collegiate athletes at single center. *Injury epidemiology a springer open journal*. <http://dx.doi.org/10.1590/1413-78522014220601007>.

Sallis, R. E., Jones, K., Sunshine, S., Smith, G., & Simon, L. (2001). Comparing Sports Injuries *jsm*.2004.015511

in Men and Women. *International Journal of Sports Medicine*, 22(6), 420-423. <http://dx.doi.org/10.1055/s-2001-16246>

Sallis, R. E., Jones, K., Sunshine, S., Smith, G., & Simon, L. (2001). Comparing sports injuries in women and men.

Sami'a, Khalil. "An Analysis Study of Sport of Injuries Sustained by Students of Physical Education Faculty". *Journal of Physical Education*. 11. (2002). Print.

Shaheen, Waleed "Common sports injuries of the Palestinian fencing players age group18-25". *Journal of AL Muhtarif*. 04. (2014) Print.

Shantawi, Mu'tasem. "An Analysis Study of Injuries of the Scientific Program of Physical Science Faculty in Mu'ta University". *Journal of Physical Education Researches*. 50. (2004). Print.

Twomey, D. M. et al. (2014). Ground condition as a risk factor in sports injury aetiology studies: the level of concordance between objective and subjective measures. *Injury Epidemiology a Springer Open Journal*. <http://dx.doi.org/10.1186/s40621-014-0027-y>

Walker, N., & Barrow, M. (2013). *The psychology of sport injury and rehabilitation*. New York, NY 10017.

Weisenthal, B. M. et al. (2014). Injury Rate and Patterns Among CrossFit Athletes. *Orthopaedic Journal of Sport Medicine*. <http://dx.doi.org/10.1177/2325967114531177>

Wong, P., & Mong, Y. (2005). Soccer Injury in the Lower extremities. *British Journal of Sport Medicine*, (39), 473-482. <http://dx.doi.org/10.1136/b>