

# Common Sport Injuries in the Closed Basic Cycle and Causes among the New Students at Al-Istqlal University - Palestine (Analytical Study)

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The study aimed to identify the common sports injuries in the closed foundation course and their causes among new students at Al-Istiqal University. To achieve this, the researchers used the descriptive method, in its survey style, for its suitability and the nature of the study. The study population consisted of 360 male and female students, and the sample consisted of 190 students who represented 53% of the study population, and after analyzing the data, the researchers concluded that the most common injuries in males were joint pain, then fleshy nails, and muscle spasms, while in females it was muscle spasms, sprains, and bruises. According to the most important causes of injuries, represented by the failure to use immediate treatment methods (massage, cold and ice compresses, sprays), high effort and overload in training, imposing penalties upon failure to perform exercises, and the results showed statistically significant differences in sex and the academic program and in favor of diploma students. Males stated that the most common causes of injuries were due to factors related to the nature of training and the nature of the environment and capabilities, while there were no differences between males and females in the causes related to the nature of nutrition and physical health. The results also showed that there are statistically significant differences between practicing and non-practicing students and in favor of practitioners that most of the causes of injuries were due to factors related to the nature of the environment and capabilities and came due to factors related to the nature of nutrition and physical health in favor of non-practitioners. However, there were no statistically significant differences between practitioners and non-practitioners in the causes related to the nature of training. The researchers recommend the necessity of

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providing the means of hospitalization and physiotherapy (massage, cold and ice compresses, sprays) and using them immediately when injuries occur among new students.

**Key words:** *Sports Injuries, Closed Formative Course, Al-Istiqlal University*

### **Introduction and theoretical background of the study:**

Sports and practicing all its kinds and forms are the first line of defense for the body against all diseases and health problems that it may encounter, as the practice of physical activities is the best way to maintain health not only for the practicing person but its positive benefits are reflected in the whole society.

Samiaa, Muhammad( 2004) indicates that sports injuries are an important aspect of sports medicine and have evolved with the development of diagnosis and treatment methods. The science of sports injuries is the basis for developing the athlete's ability and prevention of injury because knowing the causes of injury makes the trainer aware of ways to avoid them and provide safety and safety during physical activity and appropriate prevention. when the injury occurs, the traumatology guides the coach to take early and necessary measures for first aid and transfer the injured to treatment centers in a safe manner and without complications, as well as choosing the best treatment methods that ensure complete recovery and a speedy return to sports activity practiced by the player.

Players' injuries science is concerned with studying sports movement in different times, circumstances and static and moving situations, individual and collective, to reach the ability to anticipate injury before it occurs and to identify types, shapes and patterns of injuries related to the practicing sports activity in order to work to prevent the player from injury. The more intense the spread of sports competitions, especially injuries of the musculoskeletal system, where the practice of sports puts pressure on the joints, ligaments, synovial portfolios, muscle tendons, muscles, and the bony vertebrae of the spine, which may cause chronic injuries (Zahir, 2004, Kumouna, 2002, Riyadh 1999, Rushdie 1995, Al-Saleh 2005 Al-Ma`ayta (2007)

It is known that injuries are always associated with sports physical activity and that the rate of injuries in some types of sport is higher than others, especially in sports that require players to friction with each other or collide with each other as individual collision sports. The rate of injuries increases if sports training is done in an unscientific manner Or by using sports equipment that is not appropriate for the age or physical fitness of the individual and deficiency in preparing training plans and increasing training loads (Kumouna, 2002), (Riyadh, 1999).

## **The concept of injury:**

Sports injuries: Defined by Melinda (1992) that it is an imbalance in the interconnection of one or more soft body tissues for muscles, tendons, and ligaments as a result of the influence of internal and external mechanical factors on that tissue as he defined it (Kabah, 1999) as the effect of a tissue or a group of the body's tissues is the result of an external or internal effect that disrupts the functioning or function of that tissue. Alfred (Atanda, 2010) agrees with what was indicated by the International Association of Musculoskeletal and Skin Injuries NIAMS, (2009) that sports injuries are injuries that occur during the practice of sports activity, some result from accidents, and others result from the wrong practice of activity or due to use Inappropriate tools, and injuries also occur due to insufficient warm-up.

## **Types of sports injuries:**

Nicholas et al. (Nicolaos, et, al. 2007), Anderson et al. (Anderson, et, al. 2010), and Sami'a (2004) divided sports injuries into:

### **1. Primary Injures:**

They occur on the playground or in training places as a result of violent effort or exposure to an unexpected accident and are the main type of injuries. And divided into the following:

- A. Self (personal) injuries caused by the player or coach himself.
- B. Injury due to external factors (opposing player, parts and tools).
- C. Injury due to internal factors (changes within the body tissues, continuous training).

Personal injuries are less serious and usually have a chronic cause. Most of them are the result of repeated minor injuries as a result of an error in overloading the body's tissues. As for external injuries, they are usually sudden and are more severe than self-inflicted injuries, because the cause is a large external force at high speed and examples of these causes (fracture, dislocation, cutting ligaments, head injuries, and others).

### **2. Secondary Injures**

It occurs as a result of a primary injury or because of a wrong treatment for a primary injury or as a result of incomplete treatment of the first injury and it occurs in a place other than the place of the injury and is often kinetic and complex. Congenital in the body, the effect of which appears when undertaking a violent sporting effort that causes muscle cramps and pain, for example, the presence of bony appendages in the foot causes pain in the gastrocnemius muscle, and the flatness of the foot causes pain, back cramps, and rapid fatigue.

## General causes of sports injuries

Sports injuries differ according to the type of activity practitioner, the nature of performance, and the level of competition, as well as the psychological aspect, skill readiness, physical fitness, awareness of individuals and their awareness of the seriousness and nature of the training or movement performed and the possibility of causing injury, as well as their knowledge of how to avoid and reduce their occurrence. Nielsen, 2005), Hamarcha and Shaheen (2015), and Majali, Bakir and Al Hindi (2010), and Sami'a (2004) that among the most important causes of sports injuries are the following:

1. Wrong training (overloading the trainee with more effort than his energy, lack of integration of the types of fitness elements in training, lack of coordination of work and compatibility in muscle groups that lead to physical effort, insufficient warm-up and lack of gradual training in the training load, and poor organization of exercises in the distribution of effort and rest).
2. Neglecting the health aspect (not subjecting athletes and trainees, especially new ones, to regular medical examinations, neglecting the proper health requirements of food, housing, lighting, ventilation, etc.).
3. Lack of sports equipment and supplies (playgrounds and training places, sports clothes, and appropriate shoes).
4. Failure to take into account whether factors and conditions during the practice of sports activities and exercises (extreme heat, extreme cold, rain, winds, and high places).
5. Poor psychological state and the pressures that individuals are exposed to and distancing themselves from morale and energy.
6. The individual differences between the trainees and the players in terms of the level of physical readiness and the disparity through gender or other factors.
7. Individuals' unfamiliarity with the necessary preventive and remedial measures.

Where the researchers in this study shed the light on the most prominent causes of injuries to new students in the foundation course through a questionnaire that contains a set of factors that cause injuries that students enrolled in the closed session may be exposed to, as it contains most of the aforementioned main reasons for the occurrence of Sports injuries.

After completing the initial admission procedures at the university, students admitted to Al-Istiqlal University (freshmen) are enrolled in the closed training course, during which they

undergo a training program prepared by the Military Training Authority for the Palestinian Security Forces, which is the body responsible for preparing the training program that is commensurate with the nature of military life through which it is transmitted. Students from civilian life to military life, carried out by a group of specialized military trainers, and the duration of the closed session is (45) days, with two training units per day (morning and evening) continuously, and the students are cut off from the outside world and all undergo the same conditions in terms of food, drink, housing and special training.

Study and enrollment at Al-Istiqlal University are different from other universities in terms of the daily program and the system of life for students from the regular civil universities due to the fact that the study at the university is closed, and it has special regulations and instructions according to a specific daily program in which all students are committed without exception, and accordingly, the curricula. The study, training, and duties at the university focus on preparing an integrated Palestinian officer and non-commissioned officer in three dimensions: academic, military and security, and focusing on the skills needed for students after graduation (2018). AL- isteqlal University.

### **The study Problem:**

Sports injuries add to the reluctance and exclusion of many players and practitioners of sports activities and games permanently or temporarily. Sports injuries are among the most serious problems faced by athletes in various fields of physical education, in terms of their type and location, and leave an impact on the health and psychological levels of injured individuals on the one hand, and leave an economic and financial impact on the educational institution on the other hand. Throughout the work of the researchers, collecting data and notes about the training environment at the university and their experience in the field of sports injuries, rehabilitation and training experience in the environment of Al-Istiqlal University and its embrace of the closed foundation course for new students, they noticed an increase in the number of students who are exposed to multiple and different injuries during the closed session, and since the injury is a problem for athletes. For the trainees, researchers needed to delve into this problem to limit its spread and identify the most important causes that expose individuals to infection, to improve and improve the level of the training process with all its components.

### **The importance of study:**

The importance of the study lies in the following:

- 1- It sheds light on the category of (new) military students enrolled at Al-Istiqlal University.

2- It discovers the most sports injuries that students enrolled in the closed foundation course are exposed to, their causes, and ways to prevent them in the future through correction and the development of appropriate programs.

3- The study will contribute to shedding light on raising the level of health awareness, raising the level of sports and training awareness in all components of the training process, and correcting conditions and defects wherever they are found.

4- A scientific attempt by researchers to present the necessary proposals to limit the aggravation of the problem, find appropriate solutions to it, and try to address it with the correct scientific methods, which helps to raise the athletic, health, awareness, and cultural level among the new students.

5- Knowing about the reality of sports training in the closed foundation course in terms of sports capabilities and means, the nature and environment of training, and all conditions and factors related to the training process.

### **Objectives of the study:**

This study aimed to identify:

1- Identifying the most common types of sports injuries among freshmen enrolled in the closed foundation course, depending on the gender variable.

2- Identifying the parts of the body that are most vulnerable to infection among freshmen enrolled in the closed foundation course according to the gender variable.

3- Identifying the differences in the causes of sports injuries among new students enrolled in the closed foundation course, depending on the variable (gender, academic program, practicing sports before joining the university).

### **Study questions:**

This study came to answer the following questions:

1- What are the most common types of sports injuries among new students enrolled in the closed foundation course and are there statistically significant differences in these injuries due to the variable of gender?

2- Are there statistically significant differences in the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University due to a variable (gender, academic program, exercise before joining the university)?

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### **Fields of study:**

The study was limited to:

- The human field: students of Al-Istiqlal University (freshmen).
- Time domain: The academic year 2019/2020 (first semester). Data were collected and the questionnaire was distributed in the period from 12/20/2020 to 10/3/2020.
- Spatial domain: Al-Istiqlal University for Security Sciences - Jericho - Palestine.

### **The terminology of study:**

#### **Sport Injuries:**

Ahmed (2008) defines it as a disruption or obstruction of an external stimulus to the functioning of the various tissues and organs of the athlete's body, and this effect is often sudden and severe, which may often result in functional (physiological) changes such as bruising and swelling at the site of the injury with a change in the color of the skin, and anatomical changes that challenge From the motor action of a muscle or joint.

#### **Closed Foundation Course:**

After completing the initial admission procedures at the university, students admitted to Al-Istiqlal University (freshmen) are enrolled in the closed training course, during which they undergo a training program prepared by the Palestinian Military Training Authority responsible for preparing a training program commensurate with the nature of military life through which students move from civilian life to military life, which is performed by a group of specialized military trainers, and the duration of the closed session is (45) continuous days during which students are cut off from the outside world and are all subjected to the same conditions in terms of food, drink, housing and special training (Palestinian Military Training Corporation, 2018). sec.ps

#### **Al-Estiqlal University (procedural definition) \*:**

It is the first security university in Palestine and was previously called "the Palestinian Academy for Security Sciences". It is located in Jericho, near Hisham's Palace, and is concerned with security and civil sciences.

#### **Associated studies:**

Al-Rashed et al. (2020) conducted a study aimed at identifying the most common types of sports injuries among students of the College of Physical Education at An-Najah National

University, in addition to identifying the sites of the body most vulnerable to sports injuries and the most common causes of sports injuries to them, and to identify the differences in the number of injuries that students are exposed to. It has students according to the variable of the level of practical courses and gender, and the researcher used the descriptive approach in the study, and used the questionnaire as a tool to collect data, and the study sample consisted of (475) students, who were randomly selected, and the statistical package program (SPSS) was used to analyze the results. The results showed that the most common injuries that students suffered was a muscle strain injury, and that the anatomical sites most exposed to sports injuries among students were the area of the hand combs, followed by the knee joint. Another reason for sports injuries is bad weather. The results also showed that there are statistically significant differences at the level of significance ( $0.05 \leq \alpha$ ) for the causes of sports injuries in the College of Physical Education at An-Najah University on the academic years variable, between first and second year students and in favor of first year students.

There are also statistically significant differences at the level of significance ( $0.05 \alpha$ ) between third and second-year students and in favor of third-year students. As well as, there are also statistically significant differences at the significance level ( $0.05 \alpha$ ) between second and fourth year students and in favor of one-year students Second, and there are statistically significant differences at the level of significance ( $0.05 \geq \alpha$ ) for the causes of sports injuries in the College of Physical Education - An-Najah University according to the gender variable and in favor of males, and in light of the results of the study, the researcher recommended the need to pay attention to a good and appropriate warm-up for all working muscles, and follow-up of students during Practical lessons by the teacher and directing them so as to avoid the occurrence of injury.

Al-Zaghoul (2018) also conducted a study aimed at identifying the most common types of sports injuries among students of swimming courses in the Faculties of Physical Education in Jordanian universities, the most vulnerable sites of the body to sports injuries among students, and the most common causes of sports injuries among students of swimming courses in the Faculties of Physical Education In Jordanian universities, and the statistical differences in the number of injuries that students face in swimming courses in the Faculties of Physical Education in Jordanian universities according to the variable (university, course level), and the researcher used the descriptive approach to suit the nature of the study, and also used the questionnaire as a tool to collect data

The sample of the study was (222) students who were deliberately selected.

The statistical packages program (SPSS) was used to analyze the results, and the results showed that the most common types of sports injuries among students were cramps, followed by rupture of ligaments, and that the most anatomical sites exposed to sports injuries among students were the humerus joint, followed by the thigh joint, and that the most common causes for the occurrence of Sports injuries among students are the result of insufficient

warm-up, followed by exaggeration in performance, in addition to the absence of statistical differences in the number of injuries that students are exposed to according to study variables (university, course level), and the researcher recommends the need to pay attention to a good warm-up within the swimming lecture in universities And focus on physical exercises that work to prepare the muscle groups that serve the applied skill.

In the study of Hamarsha and Shaheen (2015), which aimed to identify common sports injuries among students of the Department of Physical Education at Al-Quds University, where the researchers conducted on their own sample (100) male and female students with a percentage of (34%) of the department's students, and used the questionnaire as a tool to collect data, as well. The descriptive approach was used in order to suit the nature of the study, and after collecting the data, the Statistical Packages Program (SPSS) was used to analyze the results, and the most important results of this study were that the parts of the body most susceptible to injury in males are the ankle joint, while the parts of the body most vulnerable to injury in females were forearm injuries. The most common types of injuries in males are muscle tears and cramps, and for females, they are characterized by muscle trauma, and the most common causes of injury are a poor training ground, and the most types of injuries for the individual games category are the thigh, and the most common injury sites for the group games category were ankle injury, and the researchers recommended the need to pay attention to and maintain the stadium floor during training or sports competitions, to ensure that it is free from any obstacles that may cause injury, to pay attention to the comprehensive periodic medical examination for students of the Sports Department at Al-Quds University, and to spread health awareness to prevent sports injuries and how to deal with them through lectures.

Nada (2014) conducted a study aimed at identifying sports injuries among students of the Physical Education major in Palestinian universities, in terms of the most common injuries, the most vulnerable members of the body, the degree of causes of the prevalence of injuries, the difference in the prevalence of injuries, and the most vulnerable members of the body based on the gender variable, the academic level, the type of game, and the university . The study was conducted on a sample consisting of (274) male and female students from a bachelor's degree in Physical Education at An-Najah University, Palestine, Jerusalem. The researcher used the descriptive method. The questionnaire was used as a tool to collect data, and the results showed that the most common injuries among students were cramping, and that the most vulnerable members of the students were the ankle joint, and that the most common cause of injury among students was lack of warm-up, and the results also showed that there were no differences in injuries concerning For the variable gender and school level. There are differences in sports injuries among students according to the type of game, and the differences are in favor of group games, and there is a difference in injuries depending on the university variable, There is no difference in the body parts most vulnerable to infection among students according to the variable of sex and academic level, and there are differences in the causes of injuries among students according to the university variable. The researcher

recommended that the faculty should pay attention to the good warm-up of students when teaching practical courses, ensure the safety of the playgrounds, and take into account the differences between students.

Marshall et al. (Marshall et al, 2007) conducted a study aimed at reviewing injury supervision data in the International Association of Colleges Athletes for Colleges with gymnasts and to identify potential areas for injury prevention, as this study revealed that from 1988 to 1988, 112 schools provided gymnastic teams from Women with 1550 female participants, and from 2003 - 2004, the number of teams decreased to 23%, and the observed participation decreased to 1380 female participants. The results of the study indicated that there was a significant average decrease observed in the number of participating players, but not in the infection rate. During 16 years, it was found that the rate of injuries was constantly increasing among the participating players, and the most frequent injuries were internal wounds in the knee joint, followed by repeated sprains in the ankle joint, and that most injuries were caused by landing during floor exercises. The study recommended that gymnasts who they have experience of a sprained ankle joint by wearing a bracelet on the ankle or what is known as a (protective band) to reduce the risk of possible injury to this joint.

Jude and Nielson (2005) conducted a study aimed at analyzing the causes of sports injuries in adolescent soccer games (soccer, handball, and basketball) at the Arhamus Hospital District Center in Denmark, where the study included 302 adolescents in three games ( Football, handball, and basketball), and the results of the study showed 119 injuries where the percentage of ankle sprains reached (25%), toe sprains (32%), and stress in the thigh and leg (10%). The results showed that most injuries were in football and the most common causes of injuries were violent interference and direct contact, while the most causes of injuries were in basketball and handball. The ball is then friction with the opponent.

Robert B. Anderson, et, al( 2010) conducted a study entitled "Dealing with common sports injuries related to the foot and ankle, as it aimed to find out how to deal with common sports injuries related to the foot and ankle. The descriptive approach was used." Of the (108) injured, the number of males was (58) injured and the number of females (50) were injured. The results of the study showed that foot and ankle injuries are common injuries in sports competitions. And the remarkable improvement in the condition of the injured was thanks to the accurate diagnosis of the injured and the rehabilitation and psychological programs that led to the rapid response of the injured and their rapid recovery, and thus their quick and safe return to the playing field to participate very effectively in sports activities, with great care and awareness of the concept of sports injuries.

Mujalli et al (et al, 2016 Mujalli) conducted a study aimed at investigating sports injuries common among practitioners of physical activities in fitness centers in Jordan. The study sample consisted of (272) male volunteers (n = 221) and female (n = 51) (age  $30 \pm 3$ ). The



researchers used a special form used to assess sports injuries. After data is collected and analyzed. The results showed that the most common sports injuries among the study sample were muscle tears 27.7%, muscle spasm 20.7%, and lacrimal ligament 20.2%. The most vulnerable body parts are the lower back 26.8%, the elbows 16.9%, followed by the shoulders 8.9%. The results of the study also revealed that the most common causes of injuries were the result of overtraining, 24.14%. Poor warm-up of 22.1% and faulty technique 11.3%. Bodybuilding was the most likely type of activity, at 18.8%. Fitness 6.6% and weight loss 27.7. The results showed that physiotherapy was the most common method of treating injuries 54.14%, drug treatment 33.3%, and surgical intervention 4.2%. The study also showed that males are more susceptible to injuries than females. The researchers recommended the need for a physical and medical examination before participating in physical activity in fitness centers.

### **Study procedures:**

#### **Study Approach**

The researchers used the descriptive method in its survey form due to its suitability and the nature of the study.

#### **Study population**

The study population consists of all new students enrolled in the closed foundation course at Al-Istiqlal University / Jericho for Bachelor and Diploma programs, which number (360) students according to the records of the Deanship of Admission and Registration at Al-Istiqlal University for the 2019/2020 academic year.

#### **The study sample**

The study sample was deliberately chosen, which numbered (190) male and female students, who were injured during the closed foundation course, and their percentage reached (53%) from the original study community, and Table No. (1) shows the description of the sample members according to the variable of age, height, and mass.

Table (1): Description of the study sample according to (age, height, mass) (190n =)

Sex Variable	Male(110=n)			Female (80=n)		
	Average	Deviation	Sprain	Average	Deviation	Sprain
Age ( year)	18.12	0.33	2.35	18	0.32	2.35
Height(m)	1.77	0.06	0.69	1.65	0.03	0.51
Mass(Kg)	72.34	10.29	1.19	59.65	12.03	1.60

The results of Table No. (1) indicate that the value of the arithmetic means of the age variable is for males (18.12) years and for females (18) years, and the value of the arithmetic mean of the variable height for males is (1.77) cm and for females (1.65) cm, and the value of the arithmetic average of body mass for males (72.34) kg, and for females (59.65) kg, which indicates the achievement of homogeneity between the study sample members and their submission to a moderate normal distribution, where the values of the coefficient of torsion of the variables ranged between ( $\pm 3$ ).

Table No. (2): Description of the study sample according to the variables of the independent study (n = 190).

Variable	Classification	Recurrence	Percentage %
Gender	Male	110	57.9
	Female	80	42.1
Academic Program	Bachelor	116	61.1
	diploma	74	38.9
Doing physical exercises	practitioner	105	55.3
	Non-practitioner	85	44.7
<b>Total</b>		<b>190</b>	<b>100.0</b>

### Scientific transactions:

#### A- Validity of the questionnaire:

The researchers designed the study tool and then presented it to a group of referees and experts specialized in the field of sports injuries and training with a doctorate, to express an opinion on the suitability of the paragraphs for the fields of study, and to choose the appropriate paragraphs, and delete the inappropriate paragraphs. The opinions of the referees

and experts represented the sincerity of the content of the study tool, and the amendments referred to by (75%) of the arbitrators or more were taken into account. After making the amendments, the questionnaire was built in its final form from (30) paragraphs distributed into three areas, and Appendix No. (1) shows the questionnaire in its final form, and it was distributed to students who were injured after the end of the closed foundation course, and the following standard was adopted for Interpretation of results:

- Less than 2.34, (46.8%) a low grade.
- From 2.34 - 3.67, (46.8 - 73.2%) a medium degree.
- Higher than 3.67, (73.4%) a large degree.

### **B- The stability of the questionnaire:**

Reliability is defined as accuracy in estimating an individual's true mark on the characteristic the test measures, and the reliability of the study tool used by the researchers is the calculation of the reliability coefficient using the Alpha Chronbach equation.

Table No. (3): Stability coefficients for the study tool and their fields.

<b>NO.</b>	<b>Domain</b>	<b>Number of paragraphs</b>	<b>Invariance coefficient of the Cronbach-alpha method</b>
1	Reasons related to the nature of the training	10	0.654
2	Reasons related to the nature of nutrition and physical health	10	0.804
3	Reasons related to the nature of the environment and potentials	10	0.845
<b>Total Stability</b>		<b>30</b>	<b>0.770</b>

It is clear from table No. (3) that the stability coefficients for the fields of the resolution ranged between (0.654-0.845) for all fields, while the overall stability reached (0.770). The greatest degree of stability value is the correct one.

### **Study variables:**

This study included the following variables:

#### **1. Independent variables:**

- Sex and has two characteristics (male, female).
- The academic program has two levels (Bachelor, Diploma).
- Doing sports and has two levels (practitioner and non-practitioner).



2. **Dependent variables:** the degree of response to the factors that cause sports injuries common in the closed foundation course, represented in areas (reasons related to the nature of training, reasons related to the nature of nutrition and physical health, reasons related to the nature of the environment and potentials).

### **Statistical Treatments:**

After completing the data collection process, it was deflated, entered into the computer, and processed using the SPSS statistical packages program using the following statistical treatments:

1. Arithmetic means, standard deviations, percentages, and frequencies.
2. Results of (T) test for two independent groups to indicate the differences between the variables.
3. Alfa Cronbach equation to verify the validity and reliability of the study measures.

### **Presentation and discussion of study results:**

**First: The results related to the first question,** which reads: What are the most common types of sports injuries among new students enrolled in the closed foundation course, and are there statistically significant differences in these injuries due to the variable of sex?

To answer the first question, frequencies and percentages were used, according to the statements of the Medical Services Department at Al-Istiqlal University and the Military Training Authority for the Palestinian Security Forces, and Table No. (4) illustrates this.

Table (4) Frequencies and percentages of the most common types of sports injuries among new students enrolled in the closed foundation course according to the gender variable.

Number	Type of injury	Males 110=n	Females 80=n	Total			
		Percentage %	Frequency	Percentage %	frequency	Percentage	Frequency
1	Muscle spasms	5	11	15.6	34	20.6	45
2	Bruises	4.6	10	8.7	19	13.3	29
3	Fractures	4.6	10	0.9	2	5.5	12
4	Blood Pressure	0	-	3.3	7	3.3	7
5	Low blood pressure	0	-	1.3	3	1.3	3
6	Foot Corn	8.7	19	7.3	16	16	35
7	Contusions	2.3	5	6.8	15	9.1	20
8	Sprains	2.3	5	12.4	27	14.7	32
9	Rheumatoid arthritis	11.7	25	4.5	10	16.2	35
<b>Total</b>	<b>39.2</b>	<b>85</b>	<b>60.8</b>	<b>133</b>	<b>100</b>	<b>218</b>	

Table No. (4) shows the values of the frequency and percentages of the most common types of injuries among new students enrolled in the closed foundation course according to the gender variable as it is shown in the table that the most common types of injuries among males are joint pain, as it was achieved by (11.7%) , followed by foot corns by (8.7%) then muscle spasms by (5%), while the least types of injuries were hypoglycemia and blood pressure, which were achieved by (0%). As for female injuries, the most common injuries during the session were muscle spasms, which were achieved by (15.6%), followed by sprains (12.4%), then bruises by (8.7%). As for the least injuries in this group, they were represented by low blood pressure by (1.3%), and in general, the total number of injuries for males reached (85), representing (39.2%) of the total injuries, while the total number of injuries among females was (133) injuries, representing (60.8%) of the total injuries. The researchers believe that the high sports injuries in males, such as joint pain and foot corns, are due to several important reasons, including the nature of military exercises and the ten formative exercises for military training, where most of these exercises are performed incorrectly, which leads to pressure on the body's sliding joints, and also the lack of adequate warm-up, preparation and stretching exercises and special flexibility exercises before the start of the main training dose, in addition to the lack of adequate rest periods and hospitalization by various means, and the quality of inappropriate military shoes for sports training, especially with the length of the training period.

When it comes to the high incidence of muscle spasms and sprains in females due to the nature of the physical and muscle structure of females over males, as well as the nature of military exercises that focus on special exercises for muscle and explosive strength with great physical effort, in addition to crawling, jumping and various running exercises for a long period that leads to The occurrence of muscle spasms and also because of the pressure of military training and the double effort and the lack. As for the sprains in females due to lack of experience and poor performance and the nature of the physical structure, the results of the study agreed with the most common female injuries with the study of the Zaghoul (2018), the Hamarsha and Shaheen study (2015), the Nada study (2014), the Marshall study and others Marshel et al, 2007), while the results of the study differed regarding the most common male injuries with the results of previous studies. As for the sprains in females due to lack of experience and poor performance and the nature of the physical structure, the results of the study agreed with the most common female injuries with the study of the Zaghoul (2018), the Hamarsha and Shaheen study (2015), the Nada study (2014), Marshel et al, 2007), while the results of the study differed regarding the most common male injuries with the results of previous studies.

**Second: The results related to the second question,** which reads: Are there statistically significant differences in the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqal University due to a variable (gender, academic program, practicing sports before joining the university)?

To answer this question, the researchers used the arithmetic averages, standard deviations, and percentages for each paragraph, and each field and the total degree of causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University, and the results of tables (5), (6), (7), show that. However, the results of Table (8) show a summary of the results related to the first question.

### 1- The first field (reasons related to the nature of training):

Table No. (5): Arithmetic averages, standard deviations, and the relative importance of the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University ((n = 190).

The number of paragraph	The paragraphs	Arithmetic average	Standard deviation	Relative importance	Degree
1	Not warming up before training (warm-up is not enough)	3.29	1.01	65.8%	medium
2	High voltage and overload in training	4.44	0.79	88.8%	High
3	Failure to adhere to a clear training program	2.09	1.10	41.8%	Low
4	Continuity of training when an injury occurs	2.51	1.42	50.2%	medium
5	Lack of adequate rest (hospitalization) during training	3.73	0.82	74.6%	High
6	Poor choice of exercise for muscle groups	1.92	1.31	38.4%	Low
7	Lack of guidance and awareness by trainers	1.84	1.13	36.8%	Low
8	Failure to take into account individual differences between trainees	3.57	0.99	71.4%	medium
9	Failure to gradually increase the load of training during the closed session	3.72	0.98	74.4%	High
10	Not giving enough rest between exercises and	3.72	1.21	74.4%	High

	then				
<b>Total grade of the first field (reasons for the nature of training)</b>		<b>3.08</b>	<b>0.45</b>	<b>61.6%</b>	<b>Medium</b>

\* The maximum degree of response (5) degrees.

It is evident from Table No. (5) that the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University came with a medium degree in the field of causes related to the nature of training, where the relative importance of the response ranged between (36.8% - 88.8%), and it reached the overall score (61.6%), and the "high effort and overload in training" section came in first place with an arithmetic mean of (4.44), with a large degree and relative importance of (88.8%), while the item "lack of guidance and awareness by trainers" came in the last place, with an arithmetic mean of (1.84), with a low degree and relative importance of (36.8%). The researchers attribute this to the nature of harsh military training, where the individual's transition from civilian life to military life is required to pass the closed foundation course in all its details under high physical effort in terms of heavy training with a high training load, which is one of the main causes of injuries of various forms and types, and also the result indicated that members of the military training apparatus have a high degree of awareness and provide excellent guidance to students. This indicates the high competence and deep knowledge of the details of the training process and is properly and scientifically qualified by the Military Training Authority for the Palestinian Security Forces.

**The second field (reasons related to the nature of nutrition and physical health):**

Table No. (6): Arithmetic averages, standard deviations, and the relative importance of the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University ((n = 190).

The number of paragraphs	paragraphs	Arithmetic average	Standard deviation	Relative importance	Degree
11	Malnutrition	2.02	1.24	40.4%	Low
12	It is not allowed for liquids to be drunk between exercises and during rest	1.72	1.22	34.4%	Low
13	Go to training shortly after lunch.	3.26	1.26	65.2%	Medium
14	Lack of essential nutrients in meals.	2.46	1.19	49.2%	Medium
15	Not using immediate means (massage, cold and ice compresses, sprays)	4.57	0.77	91.4%	High
16	Lack of knowledge and knowledge of sports injuries, their causes, and prevention.	2.91	1.05	58.2%	Medium
17	Poor physical fitness associated with health	3.51	1.49	70.2%	Medium
18	Inappropriateness of clothing for training	3.16	1.44	63.2%	Medium
19	Training with military shoes, not sports shoes	4.16	1.26	83.2%	High
20	Failure to perform comprehensive periodic medical examinations	3.85	1.00	77%	High
<b>Total grade of the first field (reasons for the nature of training)</b>		<b>3.16</b>	<b>0.45</b>	<b>63.2%</b>	<b>Medium</b>

\* The maximum degree of response (5) degrees.

It is observed in the table No. (6) that the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University came with a medium degree in the field of causes related to the nature of nutrition and physical health, where the relative importance of the response ranged between (34.4% - 91.4%), the relative importance of the total score (63.2%), and the paragraph “Not using immediate treatment methods (massage,



cold compresses, and ice, sprays)” came first with a mean of (4.57), with a large degree and relative importance of (91.4%), while it came in the first place. The last paragraph, "It is not allowed for liquids to be drunk among exercises and during rest time," with an arithmetic average (1.72), with a low degree and relative importance of (34.4%).

The researchers believe that the failure to use treatment methods and immediate hospitalization is the cause of the most common injuries among males and females from muscle spasms, sprains, muscle contusions, and joint pain while allowing drinking water during training and its interval had a prominent role in not having blood pressure diseases and diabetes and indicates adequate awareness of the course trainers. Closed to the importance of drinking fluids continuously and regularly in reducing the occurrence of various injuries among students.

**The third field (reasons related to the nature of the environment and potentials):**

Table No. (7): Arithmetic means, standard deviations, and the relative importance of the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University ((n = 190)

The number of paragraph	The paragraphs	Arithmetic average	Standard deviation	Importance Relativity	Degree
11	The training ground is not good	2.68	1.46	53.6%	medium
12	The psychological stress in the training environment is great	4.07	1.19	81.4%	high
13	The equipment and tools used in the training are not valid	2.29	1.21	45.8%	Low
14	Failure to observe bad weather conditions	3.01	1.41	60.2%	medium
15	The lack of capabilities and tools needed for training	2.90	1.44	58%	medium
16	Reduced sleep hours	4.31	0.89	86.2%	high
17	Non-compliance with security and safety factors in the training environment	1.94	1.15	38.8%	Low
18	Imposing penalties for failure to perform training exercises	4.37	0.76	87.4%	high
19	Constant fear and anxiety within the training environment	3.68	1.08	73.6%	high
20	The danger of some unfamiliar exercises	3.03	1.24	60.6%	medium
The degree of the second field (reasons related to the nature of the environment and potentials)		<b>3.25</b>	<b>0.66</b>	<b>65%</b>	<b>medium</b>

\* The maximum degree of response (5) degrees.

It is clear from Table No. (7) that the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University came with a medium degree in the field of causes related to the nature of the environment and potentials, where the relative importance of the response ranged between (38.8% - 87.4%), The relative importance of the

overall score reached (65%), and the paragraph “Imposing penalties upon failure to perform training” came first with an arithmetic mean of (4.37), with a large degree and relative importance of (87.4%). Whereas, the paragraph "non-compliance with security and safety factors in the training environment" ranked last, with a mean of (1.94), with a low degree and relative importance of (38.8%). The researchers attribute that the imposition of penalties as a result of failure to perform the training largely due to the state of fear and psychological and nervous pressure that students are subjected to in military training leads to a state of confusion and double physical effort to avoid punishment and this has a major and main role in the occurrence of injuries, also because of the penalties The punishment is not to sleep for long hours or that the punished students be assigned other work, and they are forced by the coaches on the next day to join the training despite the lack of rest and sleep in a way that leads to the occurrence of injuries.

Failure to adhere to security and safety factors in the training environment came last because of the sufficient awareness and high knowledge of the trainers of the importance of security and safety methods and factors as an important and main element in military training and for all Palestinian security forces, and the fact that the training that students are subjected to is special and dangerous, such as climbing and jumping from various obstacles. The crawl and various methods and tools take into account the trainers and the competent authorities the utmost caution and the safety and security factors in the training environment.

Table No. (8): Arithmetic averages, standard deviations, and the relative importance of the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University for the fields of study and the total degree arranged in descending order according to the arithmetic average.

Domain number	Domain	Arithmetic Average	Percentage	Degree	Order
1	Reasons related to the nature of the training	3.08	61.6%	Medium	Third
2	Reasons related to the nature of nutrition and physical health	3.16	63.2%	Medium	Second
3	Reasons related to the nature of the environment and potentials	3.25	65%	Medium	First
<b>The Total Degree</b>		<b>3.16</b>	<b>63.2%</b>	<b>Medium</b>	

It is evident from Table No. (8) that the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University have an intermediate degree, with the percentage of response reaching (63.2). Regarding the arrangement of fields, a field of causes related to the nature of the environment and capabilities has been ranked first. With relative importance of (65%), followed by a field of causes related to the nature of nutrition and

physical health in second place with a relative importance of (63.2%), followed by a field of reasons related to the nature of training in the third and last place with a relative importance of (61.6%)

The researchers attribute this result to the military training environment in all its details that differ from any other training environment and the psychological pressures it contains and the military sanctions imposed as a result of students' failure to train and the military system and because of fear, anxiety, constant tension, lack of sleep hours, and the seriousness of some exercises unfamiliar to students. The field of the nature of training came in the last order because adherence to a clear training program throughout the closed foundation course is based on scientific foundations and special and selected training that takes into account individual differences as well through awareness and guidance of the special training staff to achieve physical and health integration of the trainees.

The researchers also used the (T) test for two independent groups (Independent-Samples T-Test), to indicate the differences in the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University due to the variable of sex, academic program, and exercise before joining the university, and the results of Tables No. (9, 10,11) show this.

Table No. (9): T-test for two independent groups to indicate the differences for the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University for fields of study and the overall degree attributable to the gender variable (n = 190).

Domains	female n=80		Male n=110		Rate (T)	Significance level	F
	Average	deviation	Average	deviation			
Reasons related to the nature of the training	3.24	0.36	2.87	.480	6.03	0.00*	1.95
Reasons related to the nature of nutrition and physical health	3.21	0.41	3.10	0.50	1.56	0.12	0.62
Reasons related to the nature of the environment and potentials	3.66	0.35	2.69	0.58	14.21	0.00*	5.41
Total Degree	3.37	0.20	2.89	0.40	10.73	0.00*	1.13

Significance level ( $0.05 \geq \alpha$ )

It is clear from Table No. (9) that there are statistically significant differences in the most common causes of injuries during the closed foundation session between males and females on the total degree, and on the field of causes and factors related to the nature of training, related to the nature of the environment and potentials in favor of males, while there are no significant differences in the field of causes related to the nature of nutrition and physical health. The researcher attributes this to the quality of training that males are subjected to, the high and excessive physical load, the lack of comfort and hospitalization facilities, the lack of consideration for individual differences in male training, and psychological pressures on males more than females. While there were no differences between males and females in the field of the nature of nutrition and physical health due to the quality of standardized diets for everyone, the nature of comfort, gender, uniform clothes, and military shoes, especially in the military queue training, and also because of the convergence of physical fitness elements related to their health, and a unified environmental and living pattern within the training environment.

Table No. (10): Test (T) for two independent groups to indicate the differences for the causes of sports injuries. Among the new students enrolled in the closed foundation course at Al-Istiqlal University for fields of study and for the total degree attributable to the academic program variable( n=190)

Domains	Diploma n=74		bachelor n=116		Rate (T)	Significance level	F
	Average	deviation	Average	deviation			
Reasons related to the nature of the training	2.97	0.40	3.26	.480	-4.35	0.00*	4.09
Reasons related to the nature of nutrition and physical health	3.18	0.50	3.13	0.36	0.79	0.43	9.02
Reasons related to the nature of the environment and potentials	3.15	0.35	3.40	0.58	-2.58	0.01*	0.00
Total Degree	3.10	0.34	3.26	0.42	-2.84	0.00*	5.70

Significance level ( $0.05 \geq \alpha$ )

It is clear from Table No. (10) that there are statistically significant differences in the most common causes of injuries during the closed foundation course between students of the bachelor's and diploma on the total degree, and on the field of causes and factors related to the nature of training, related to the nature of the environment and potentials and in favor of

the diploma, while there are no differences Indicated in the field of causes related to the nature of nutrition and physical health. And that is to the distribution of personnel in military training to the ranks of bachelor's students and diploma students, Also training for males and another for females is different in the place and this indicates that diploma students, especially males, suffer from a burden and high pressure in terms of the nature of training and overloads, lack of comfort and psychological and moral pressure, and this constitutes a defect in the environment and the nature of the exercises that must be uniform for all male students alike. Bachelor and diploma without discrimination, while the results were close due to the similarity of nutritional, health, living, and sleeping conditions for everyone without exception.

Table No. (11): T-test for two independent groups to indicate the differences for the causes of sports injuries among new students enrolled in the closed foundation course at Al-Istiqlal University for fields of study and the overall degree attributable to the variable of exercise before joining the university (n = 190).

Domains	Practitioner of sports n=105		Non-Practitioner of sports n=85		Rate (T)	Significance level	F
	Average	Deviation	Average	Deviation			
Reasons related to the nature of the training	3.05	0.39	3.13	0.52	-1.25	0.21	2.88
Reasons related to the nature of nutrition and physical health	3.07	0.34	3.27	0.54	-3.08	*0.002	1.32
Reasons related to the nature of the environment and potentials	3.53	0.64	2.91	0.51	7.15	0.00*	4.82
<b>Total Degree</b>	3.21	0.34	3.10	0.42	1.99	0.04*	2.07

Significance level ( $0.05 \geq \alpha$ )

It is evident from Table No. (11) that there are statistically significant differences in the most common causes of injuries during the closed foundation session between students who practice sports before joining the university and non-practitioners on the total degree and the field of causes and factors related to the nature of the environment and the potential and for the benefit of the practitioners and in the field of related causes Nature of nutrition and physical health and for the benefit of non-practitioners. While there were no statistically significant differences between practitioners and non-practitioners in the field of reasons related to the nature of training. The researchers attribute this as a result of the intellectual

and cognitive awareness, as well as because of the previous experiences of students practicing sports about the types of sports injuries and their knowledge of a good amount of information about injuries and how to avoid various sports injuries and their causes, as they have previous experiences and experiences because they practice sports activities, whether in school teams or clubs Their residential areas.

### **Conclusions:**

Considering the results of the study and its discussion, the researchers conclude the following:

- 1- The most common types of injuries in males are joint pain followed by fleshy nails. As for females, it is represented by muscle spasms followed by sprains.
- 2- The nature of military training in the closed foundation course with high load and physical effort, the lack of immediate treatment and healing methods such as massages, cold compresses and sprays, and the imposition of penalties for students as a result of failure to perform the exercises.
- 3- Increasing awareness and guidance among trainers, and ensuring compliance with security and safety factors in the training environment
- 4- Penalties imposed on students as a result of their failure to perform training and psychological pressures are among the most common causes of sports injuries.
- 5- The similarity of the living, nutritional and health conditions of all new students in the closed foundation course
- 6- There are differences between males and females and diploma and bachelor students in the most common causes of injuries according to the fields of training nature, nature of the environment, and capabilities, and it came in favor of males and diploma students, who are the most vulnerable to infection.
- 7- New students and practitioners of sports before joining the course have experience, knowledge, and good information about sports injuries, how to avoid them, and the most important causes that lead to their occurrence, and they are the least likely to be injured.

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### **Recommendations:**

Considering the objectives and results of the study, the researchers recommend the following:

- 1- The necessity of setting the practice of sport as a prerequisite for accepting students applying to the university
- 2- The necessity of the availability of specialized teams in the field with medical expertise to deal immediately with injuries to limit their aggravation.
- 3- The need to pay attention to a good warm-up before starting exercises by coaches and trained personnel, especially for the lower body.
- 4- The necessity of preparing students before starting the foundation course from the psychological point of view through the psychological counseling department at the university
- 5- The necessity to provide means of hospitalization and immediate physical therapy (massage, cold and ice compress, sprays) and to use them immediately when injuries occur among the new students.
- 6- The necessity of applying the principles of sports training with their scientific foundations, especially the principle of gradual pregnancy and the principle of individual differences
- 7- Preventing the practice of military exercises, especially physical fitness in military clothes and shoes, while adhering to the use of protective tools and wearing clothes and shoes that suit the training environment and climatic conditions.
- 8- The necessity to take into account the students' transition from civilian life to military life in a thoughtful manner in all psychological, environmental, and health aspects, and to adapt to the military training environment.
- 9- The necessity to create a record for every student enrolled in the course, and record his injuries to know the student's medical history.
- 10- Disseminating the results of this study to the military department, the military training authority for security forces, and military training centers in the country.



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