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NEAR EAST UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

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PHYSICAL EDUCATION AND SPORTS

MASTER THESIS

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DEDICATION

TO MY FAMILY …

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ABSTRACT

KARWAN AHMED KARIM. Types and causes of sports injuries in some athletes in Suleimaniah- North of Iraq. Near East University, Institute of Health Sciences, School of Physical Education and Sports, Master Thesis, Nicosia, 2017.

The purpose of this study is to determine the types and causes of sports injuries in some athletes in Suleimaniah city in Northern Iraq. The scope of the study is to show that the type of injuries will be different for team, combat and individual sports as well as the cause of the injuries. Athletes were divided into three main groups which are combat sports Boxing, Wrestling, Kung Fu and Karate, individual sports swimming, tennis, track and field and team sports football, volleyball, basketball, and handball. A total of 304 athletes from combat sports (80), individual sports (96) and team sports (128) participated to this study. Mean age of the athletes was 26.2±0.9.Moreover, the research data were collected by means of questionnaire with numbering eight questions, that asset the different aspects of sports injuries experienced by the athletes.

The questionnaire consisted of two sections; the first section consisted of personal information regarding of participants such as age, gender, and the second section consisted of nine items and distributed to participants who are practicing sports.

The results showed that the most common injuries were overuse injuries in individual (28.1%) and team sport athletes (35.9%) while dislocations were seen as the most common injuries in combat sports (28.8%). Incorrect practice was the most common cause of injury for combat (22.5%) and individual sports (21.9%) while opponents contact was the most common cause of injury in team sports (%25). The results mostly showed similar results with the related literature.

These are the first data about sports injuries in Suleimaniah city in Northern Iraq. It is very important to understand the common causes and types of injuries to prevent the future injuries. This study is going to be a reference point for the further research.

Keywords: Combat sports, team sports, individual sports, injury

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CHAPTER 1

INTRODUCTION

1.1 Types and Causes of Sport Injuries in Some Athletes in Suleimaniah

Sports can be classified into distinctive categories, such as team or individual sports, contact or noncontact sports. There are several exceptions, however, such as gymnastics, in which the athlete competes individually against other gymnasts, but a team score is calculated. Additionally, there are many sports, in which rules govern against physical contact, but serious injuries from collisions are routine and accepted. An understanding of how sports differ based on these classifications is necessary prior to a consideration of their possible benefits and inherent problems (Hong and Bartlett, 2008). Team sports are those in which a set of two or more people work together to defeat the challenger (Paffenbarger et al., 1986). The outcome of the competition is most often the result of the collective effort of the group as opposed to the individual effort of a single individual. In the United States, the most commonly recognized team sports are baseball, softball, basketball, football, lacrosse, rugby, soccer, team handball, volleyball, water polo, rowing, ice hockey, and field hockey. Unique team sport issues include group or team dynamics, position play, cooperation, jealousy, camaraderie, and conflict between individual and group motivation (Slobounov, 2008)**.**

An individual sport is one in which a single person participates, most often to perform to the best of their ability, and receives a score or time to reflect the level of performance. In the United States, the most commonly recognized individual sports of this nature are swimming, gymnastics, rhythmic gymnastics, running, skiing, field events, golf, archery, figure skating, speed skating, and bowling (Davis and Sheppard, 1988).

Combat sports are for the most part in which athletes battle or fight each other, typically one-on-one. An aggressive physical game where two combatants battle against each other utilizing certain principles of engagement. Boxing, amateur wrestling, blended hand to hand fighting and fencing are cases of combat sports. The methods can be classified into three spaces: striking, catching, and weapon utilization. Some rule sets have some expertise in one territory, while some others permit cover (Cynarski, 2008).

Many sports require a degree of physical contact. These sports, considered as contact sports, are American football, ice hockey, boxing, wrestling, rugby and martial arts. Significant physical contact is required during competition; however, rules are provided to help minimizing inappropriate contact that would escalate the risk of injury to a player. These rules are in place to attempt to control the physical contact and minimize injuries. Serious injuries are known risks of participating in these contact sports (Guermazi et al., 2015). Among so-called noncontact sports, the risk of injury from contact varies considerably. Soccer and basketball are two sports considered as noncontact. They have rules that penalize inappropriate physical contact. During competition, a minimal level of physical contact is unavoidable; primarily the result of defending against an opponent is offensive manoeuvring. Accidental contact, which still results in a penalty, can lead to serious injury (Foster et al., 1989). Flying elbows in the lane of a basketball game and head blows in a soccer game are two common concerns in these noncontact sports. Noncontact sports in which opponents are separated from the other team, such as volleyball, badminton, tennis, and, to some degree, baseball, do include injuries because of collisions between teammates or with objects or equipment used during the competition. The remaining category of noncontact sports include those that either prohibit any contact, such as running and biking events, and those in which physical contact with opponents or teammates is unlikely, such as gymnastics, swimming, and downhill skiing. Participation in any sport can include risk of injury, however. The injury may not occur because of contact when an athlete is pushed to a level that the body cannot accommodate. (Stableforth,1990).

There are requirements for a prompt restoration after an injury regarding physical and psychological first aid. There are diverse decisions that sports injuries result from intense injury or monotonous anxiety related with athletic exercises. By and large, these sorts of injuries are related to an abuse of a piece of the body while taking part in movements. The restoration of that body part is a dependable procedure that is rationally and physically troublesome. This can prompt completing of practicing sports. In this way, it is essential to regard competitors mental recouping and in addition physical damage. On the off chance that either mental or physical perspectives are not treated completely, it can end up with either completing profession or a different injury later on. Recovery varies, in light of injury type,

pain level, physical and mental restoration. Physical restoration can be achieved through a physiotherapist, with manual or machine treatment. Mental restoration is frequently achieved by symbolism (Renstrom et al., 2002). Moreover sports injuries happen while taking an interest in sorted out games, rivalries, instructional courses or composed wellness exercises. Sports having normal high damage risks are, for instance football, soccer, basketball, cricket, volleyball, skiing, tennis and contact has big part in all (Frisch et al., 2009). Game injuries can be seen on bones or delicate tissues (tendons, muscles, ligaments). Causes to sports injuries differ enormously. Mishaps, poor preparing rehearses or uncalled for rigging can cause injuries frequently. A few people get hurt since they are not fit as a fiddle or their eating regimen is sufficiently bad. Not warming up or stretching enough can likewise prompt injuries (Fry, and Kraemer, 1997). In the event that warming up and stretching is not rehearsed legitimately, injuries can happen and delays a restoration and recuperation. Injuries occur in all levels of games, either it is a tip top level sport or it is for tenderfoots. Mental aptitude is imperative between rivals. Enthusiastic responses show up as a cycle (Leitch, 2012), which are isolated into various parts. Pain ponders impact damage on enthusiastic balance including uneasiness, sorrow and dread. Foreswearing triggers occasions, causing mental strains. It is critical to decide adapting abilities including moving past uninvolved acknowledgment and proactive testing information and aptitude. Emotional reaction to misfortune and risk is a continuum from ordinary response to significant way of life interruption. The capacity to maintain an injury free career is connected to athletic success (Heil, 2000).

1.2 Significance of the Study

The purpose of the study is to show that the type of injuries will be different for team, combat and individual sports as well as the cause of the injuries. The result of this study will help coaches and physical education teachers to understand the types and causes of injuries occurred in Suleimaniah City to take an immediate action for prevention and treatment.

1. This study will help to increase the information for coaches and physical educators about types and causes of sport injuries in Suleimaniah.
2. This research will provide a base for the further research in the same field

1.3 Limitation

All the subjects were from different socioeconomic background, therefore their interests and dietary habits, which was different, one limitation for this study.

1.4 Research Hypotheses

1. Type of injuries will be different for team, combat and individual sports
2. Cause of injuries will be different for team and combat and individual sports

CHAPTER 2

GENERAL INFORMATION

2.1 Sport Injuries

A sport injury is defined as: Any physical complaint sustained by a player that those result from a match or training, irrespective of the need for medical attention or time loss from sport activities. An injury that results in a player receiving medical attention is referred to as a "medical-attention" injury and an injury that results in a player being unable to take a full part in future training or match play as a "time-loss" injury (Fuller et al., 2006).

There are two different perspectives within sports injury researches: pre injury and post injury. In the pre-injury, perspective studies have focused on investigating:

(A) Psychological factors relationship with injury risk

(b) If intervention programs based on mental training could decrease the injury risk.

Studies in the post-injury perspective have focused on:

(c) Psychological reactions to sports injuries and the impact of those reactions on both psychological and physiological health and well-being and

(d) factors as well as intervention programs that facilitate the rehabilitation process and increase the odds of a successful comeback to the sport (Udry, 1998).

2.2 Health and Sport Injuries

Regardless of the age of an athlete or the level of competition or the game, inflammation is probably going to find the athlete sooner or later in their attempts. The injury can either be one of chronicity and identified with dull developments, or one of intense onset, identified with injury, the negative impacts on athletic execution are all around archived. Too as often as possible the many-sided quality of the inflammatory procedure is not by any means comprehended, and inflammation is dealt with as an undesirable prevention to athletic execution. Be that as it may, it is genuinely an intricate system of vascular and cell reactions

intended to encourage the repair of damaged tissue. The development of an inflammatory reaction to an injury is complex, utilising many of the body's systems to mediate its purpose. The objective of any inflammatory reaction is to determine the neurotic affront and re-establish the life systems to a level of physiological capacity indistinguishable or almost indistinguishable to pre-damage status. In a perfect world, this can be performed by expelling sick or harmed tissue with the resulting recovery of typical anatomical tissue. Notwithstanding, this is frequently not the situation. Too as often as possible the affront is awfully incredible or executed over too long a period, bringing about expanded tissue obliteration. This frequently prompts scar tissue arrangement that thus may proliferate a proceeded with inflammatory response. A persevering inflammatory activity, consequently, would definitely be unsafe to a person's athletic career, and in addition it is also unsafe to the person. (Bryant 1977; Gamble 1988; Martinez-Hernandez 1988).

2.2.1 Most frequent diagnoses

Most sports injuries are generally mellow and do not require surgical intercession. Regardless of the level of competition, the most continuous findings are in order from highest to lowest: tendonitis (or tendinitis), first degree strains (muscle tendon unit), first degree sprains (ligament and capsular injuries), patella femoral pain and second-degree sprains. The best way of action in these cases is appropriate conservative intervention to control symptoms such as pain and swelling, followed by comprehensive rehabilitation. The signs for surgery in these cases are few and change turns into the most proficient intercession when quick come back to practice or competition and counteractive action of future wounds are the most vital objectives (Elmagd, 2016).

2.2.2 Sports injuries and health care

2.2.2.1 Isokinetic Testing

Isokinetic training and testing tools are being suggested for a long time. Be that as it may, the legitimacy, dependability and affectability has been firmly addressed amid late years (Gleeson and Mercer 1996; Stone et al. 2000). In very much controlled examinations,

isokinetic training, already thought to be prevalent, has been observed to be mediocre compared to other preparing modes (Stone et al., 2000)

Isokinetic testing is as yet the most utilized strength testing strategy, however it is proposed as more noteworthy acquaintance with the method requirements, and a few pre-and post-assessments are included in this testing. It also enhances testing dependability and effectiveness (Gleeson and Mercer 1996; Stone et al., 2000).

2.2.2.2 Closed and open kinetic chain exercises

There is a verbal confrontation concerning the utilization of shut versus open kinetic chain lower limb practices amid restoration. Studies have looked at the impact of shut versus open kinetic chain lower limb appendage practices on knee tendon strains (Henning et al. 1985; Yack et al. 1993) and patella femoral pressure powers (Gooch et al. 1993; Steinkamp et al. 1993). The significance of utilizing closed kinetic chain restoration (De Carlo et al. 1992; Shelbourne et al. 1995) and assessment (Wilk et al. 1994; Greenberger&Paterno 1995) has been stressed out. Nonetheless, few examinations have explored whether the impact of closed versus open chain weight preparing on strength and execution contrasts.

In spite of a few examinations (Yack et al. 1993; Beynnon et al. 1997) concerning safety issues of closed and open kinetic chain practices in ACL restoration, and albeit a few creators have pushed the sole utilization of shut kinetic chain works out (Shelbourne&Nitz 1992; Bynum et al. 1995), it is reasoned that both sorts of activities can be performed in ways that do not put extreme strain on the ACL (Fitzgerald, 1997).

Escamilla et al. (1998), looking at knee joint biomechanics while performing closed and open kinetic chain weight exercise at a 12 RM stack, detailed that pinnacle ACL pressure compels in open dynamic chain practice were just 0.2 times of bodyweight, and it is non-existent in closed kinetic chain work out. Elements, for example, joint compressive powers (e.g. axial loading) and joint geometry probably play integral roles in knee joint stability during closed kinetic chain exercise (Isear et al., 1997). Significant co-activation of the antagonists during maximal knee flexion/extension, indicating an inhibitory mechanism which prevents overloading of the joint and contributes to joint stabilization (Kellis and

Baltzopoulos, 1998), would explain the low ACL tension forces during open kinetic chain exercise.

2.2.2.3 Free weights and weight machines

Utmost competitors utilize battle training, including mutually free weights and weight machineries, to enhance power and strength. The upsides and downsides of preparing with free weights versus weight machines are, as closed and open kinetic chain training, generally talked about among competitors and mentors, among physical specialists, and additionally in sports science. Contrasts of feeling occur as in to which strategy brings about ideal execution picks up. Defenders of free weights accentuate usefulness and an immediate application to donning exercises (Panariello et al. 1994).

In addition, as the weight does not change in free weight work out, the resultant torque, and along these lines the required strong constriction, varies as indicated by the mechanics of the particular exercise. Weight machines, then again, empower variable resistance all through the scope of movement of an activity. This is an 8ndeavour to surmise the strength bend of the activity, subsequently constraining the muscle to contract maximally all through the scope of development.

A barbell squat is an open weight, closed kinetic chain workout, including muscles working over various joints. Competitors utilizing resistance preparing regularly incorporate a barbell squat program to enhance the bottom limit quality. A few examinations have demonstrated beneficial outcomes from a barbell squat workout program on quality and athletic execution (Thorstensson et al. 1976; Fry et al. 1991; Hickson et al. 1994).

2.2.3 Combat sports

Similarly as with any sport, but especially for the ones that spin around battling, there are injuries normally connected with combative technique. The particular regions of threat will change somewhat contingent upon the martial art being worked out, yet for the most part there are certain injuries which are especially unavoidable when participating in combative technique (Sievert, 2007).

Most Common Injuries

Similarly as with maximum games, the most well-known injuries in hand to hand fighting are minor ones, for example, wounds, cuts, and minor sprains. As a rule, these would not be recorded, but rather some different examinations throughout the years have discovered that these wounds happened most normally around the face, head, and neck. The appendages, and the legs, and covered parts, were the second fittest place to be harmed (Windsor, 2005).

Contingent upon the martial art being learnt, and where it is being learnt, the defensive material may or ought not to be utilized. Notwithstanding, a recent report directed by Finish scientists found that more wounds were found in competitions where defensive apparatus was utilized, still if the rigging was covering an alternate body part. This is conceivable in light of the fact that ladies feel to a lesser extent a need to keep down since their opponent is shielded, a marvel that has been accounted for in numerous different examinations some time recently (Leitch, 2012).

Most Serious Injuries

When partaking in an action as like combative technique, it is vital to perceive how genuine the danger of genuine injury is. The issue with injuries in hand to hand fighting identified with different games is that there is a wide assortment concerning sort and area of the injury severity (Cynarski and Kudlacz, 2008).

Fractures are the most widely recognized type of genuine injury in hand to hand fighting, with broken bones being another driving outcome. What makes these additional genuine than fractures caused by different games is not just the way that injuries can happen anyplace on the body additionally in light of the fact that they can frequently come as the aftereffect of a mixed up assault, sooner than genuine misfortune. For instance, harmed ribs are more typical damage in hand to hand fighting than most different games, and can prompt a few troubles with the interior organs. Moreover, there are so a few complex moves and bends in like manner types of hand to hand fighting that a slip-up can make somebody soften themselves up an exceptionally unnatural way. This can prompt issues transforming from a disjoined knee to a herniated circle. At that point there is the damage that can be given by the

tendons and the muscles. Individuals taking in a military workmanship won't just be utilizing a greater amount of their muscles and tendons all the more frequently, yet they will likewise keep utilizing them in an altogether different manner than they ordinarily would. This can bring about each kind of tears, or swelling which can take months to mend, contingent upon what is tore and how gravely (Sievert, 2007).

It is vital to recollect that not the greater part of the karate's most exceedingly bad injuries are given in battle. There are additionally numerous issues that can ascend after some time. Swelling of the tendons is one case. Harm to the infant finger is emphatically basic among individuals honing karate and regularly needs surgery. Joint issues, for example, joint inflammation will additionally end up noticeably clear after some time in many bodies, which at that point builds the likelihood of giving wounds later on (Cynarski and Kudlacz, 2008).

Taking up a martial art is a brilliant approach to remain dynamic and get a full preparing, however it ought to be an educated choice. On the off chance that you have any previous conditions, it is completely conceivable that it needs thought, to make sure you realize that if games were joining, you ought to be set up to manage torment (Windsor, 2005).

2.2.4 Individual sports

2.2.4.1 Swimming injuries

Swimmer's Shoulder

The shoulder is the joint most generally affected by swimming injuries or overuse. Shoulder injuries may combine rotator hit impingement — pressure on the rotator knocked from part of the shoulder scapula or blade or as the arm is lifted. Biceps tendinitis (harmful inflammation of the bicep tendon) and shoulder instability, in which structures that girdle the shoulder joint do not work to keep the ball within its socket, all can result from fatigue and weak of the rotator hit and muscles enclosing the shoulder blade (Ellenbecker and Cools.2010).

Lower Body Injuries

Knee injuries that involve the ligaments (breaststrokers' knee) are common. Breaststrokers may also experience hip injury from inflammation of the hip ligaments. Back problems, including under back disk problems or different problem at the junction among the cons and spine, termed spondylolysis, may be increased by the dolphin kick often used in competitive swimming (Wolf, 2009).

2.2.4.2 Tennis injuries

Tennis Elbow

The injury is most educated about "tennis elbow," which is an overuse of those muscles that increase direct the wrist it behind. It is further the muscle necessary used when the tennis ball impacts the racquet. Individual firming of this muscle and another muscle almost it, along with a steady warm-up routine, will aid decline the probability of suffering tennis elbow. Paying attention to technical components such as grip size and proper method can also explain limit this health (Page, 2010).

Stress Fractures

Twenty percent of amateur athletes suffer from stress fractures whereas only 7.5 percent of professional athletes suffer from these. Stress fractures are the result of increasing exercise routine too rapidly. When the muscles get tired, greater stress accumulates on bones. If this situation occurs too fast, the bone cannot accommodate, therefore the pressure breaks the bone. These "fractures" usually crack the bone that causes pain rather than requiring a displacement. Stress fractures can happen in leg (tibia or fibula) or foot (the metatarsals, the navicular). These injuries are avoidable with proper power and strength training before exercising. Appropriate footwear is also critical to preventing stress fractures (Doherty and Delahunt, 2014).

Muscle Stresses

Muscle strains usually happen from fast, sudden movements. A healthy warm-up followed by proper stretching can help reduce muscle strains. The warm-up should include a slow jog, jumping jacks, or performing a bike at low intensity. Proper Stretching should be

slow and careful. Do not jump to stretch; hold the stretch 30 seconds or more. The best stretches are moving stretches, such as swinging your leg as far ahead and backwards or swinging your arms in circles and crossed your body. Proper stretching should last at least five minutes. If athletic have any matters about an injury or how to limit future injuries talk with a sports physician's professional or athletic coach. The athlete should turn to play only when clearance is granted by a health care professional.

2.2.4.3 Track and field injuries

Runner's Knee

This is a common overuse injury. Runner's knee has individual different causes. It usually happens when your kneecap is out of alignment. Over time, the cartilage on your kneecap can wear down. When that happens, the athlete may feel pain around the kneecap, especially when:

- ✓ Going down or up stairs
- ✓ Squatting
- ✓ Relaxing with the knee bent for a long time (Beazell, 2009).

Stress Fracture

This is a small crack in a bone that causes injury and discomfort. It typically affects runners in the shin and feet. It's often due to acting too hard before your body gets used to a new exercise.

Pain gets worse with activity and improves with rest. Rest is necessary, as continued stress on the bone can start to more serious injury (Brooks and Fuller, 2006).

Shin Splint

This is pain that happens in the front or inside of the lower leg along the shin bone (tibia). Shin splints are common after improving your exercise, such as running longer distances or increasing the number of days you run, too quickly. People with flat feet are more probable to develop shin splints (Bates, 1985).

Achilles Tendinitis

This is inflammation of the Achilles tendon. That's the large tendon that joins the calf to the back of the heel. Achilles tendinitis causes pain and stiffness in the area of the tendon, especially in the morning and with exercise. It is regularly caused by repeated stress to the tendon. Adding too much distance to your running routine can cause it. Tight calf muscles can also contribute (Mcquade, 1986).

Muscle Strains

This is a little tear in your muscle, also suggested a muscle strain. It's often caused by overstretching a muscle. Athlete pull a muscle; athlete may feel a popping thought when the muscle tears (Brooks& Fuller, 2006).

2.2.5 Team sports

2.2.5.1 Football injuries

Injuries occur during football games and exercise due to the joining of high speeds and full contact. During overuse injuries can occur, traumatic injuries such as impacts are the most common. The force applied to either bringing a candidate to the ground or resisting being brought to the area makes football players prone to injury anywhere on their bodies, regardless of anti-injury equipment (Cantu and Mueller, 2002).

Overuse injuries

Low-back pain, or back pain in common, is a relatively common complaints in football athletes due to overuse. Overuse can also lead to overtraining characteristics when a football player trains beyond the ability for the body to recover. Patellar tendinitis (knee pain) is a general problem that football athletes develop and can usually be treated by a quadriceps strengthening plan (Bergeron, 2009).

Heat Injuries

Heat injuries are a great concern for youth football athletes, especially at the start of exercise camp. This usually occurs in August when any of the greatest temperatures and

humidity of the year occur. Intense physical training can result in excessive sweating that depletes the body of salt and water (Hickson, 1994).

2.2.5.2 Basketball injuries

Basketball is a popular sport, especially among teenagers and young adults. But the sport carries a risk of injury, whether played in an organized league or with friends on a local park court:

- More than 200,000 basketball-related injuries occur to young characters under age 15 each year requiring therapy in hospital emergency activities.
- Basketball is the fourth leading cause of injury in both unorganized settings and organized town team sports.
- Injuries to basketball players are frequently minor; frequently strains and sprains. The ankle and knee are the most common sites of injury, attended by the lower back, hand, and wrist.
- Eye injuries are frequent, usually as a result of happening caught with fingers or elbows. Along with baseball, basketball is one of the leading causes of sports-related eye injuries in kids.
- By with baseball, basketball accounts for nearly half of all sports-related mouth injuries.
- At the high school and recreational levels, injuries occur more frequently during training; college athletes are injured more often during sports.
- Girls and women seem to have a slightly higher frequency of injury than men and boys. And many of the injuries female players sustain are more serious than those of their male counterparts (e.g., knee injuries)

According to a study by the National Athletic Trainers Association, two players on every high school basketball team in the country, regardless of gender, are likely to be injured during a season (Beazell, 2009).

2.2.5.3 Volleyball injuries

Volleyball Ankle Injuries

The most common volleyball-related injuries are usually related with the ankle.

Most ankle sprains are not severe and require only a few days or some weeks of rest and, often, physical therapy. More severe ankle injuries can result in breaks and ligament/tendon injuries that can require surgery. A supportive ankle brace can help the athlete avoid re-injury, so if the athlete has a history of ankle injuries, your doctor may recommend that to wear one (Barbanti, 1994).

Jumper's Knee (Patellar Tendonitis)

Volleyball requires athletes to jump defensively to block incoming balls and offensively spike balls within the opposing team's court.

Repeated jumping, especially on hard surfaces like the gymnasium floor can result in a condition called jumper's knee. This is when the tendons up to the knee cap (patella) become irritated by small micro-tears, resulting in knee pain and stiffness (Robins &Waked, 1998).

You can prevent jumper's knee by reducing the amount the athlete jump at practice, as well as by strengthening the surrounding knee muscles. If the athletics experience pain from jumping, it is best to seek attention from a medical expert, which may include your team's athletic trainer or a sports medicine physician (Greenberger and Paterno, 1995).

Playing on a softer surface, such as a sandy beach, can also help lessen the impact to the knee. Keep in mind, however, that sand player of volleyball may have further risk factors for injury compared to indoor players (Ghirotto et al., 1994).

Shoulder Injuries in Volleyball

In volleyball, spiking and serving are high-stress activities that can result in injuries to the tendons and ligaments that help the shoulder. While casual athletes probably do not need to worry about injuring their shoulders, competitive players should limit the number of serves and spikes and attend carefully to their body's pain signals. Shoulder strengthening, stretching

before play, and using proper mechanics for serving and hitting, also can reduce your risk of injury (Bahr et al., 1994).

Volleyball Finger Injuries

Volleyball players can suffer jammed, dislocated and fractured fingers of contact with the ball, the net, and even with teammates. An injured finger should be assessed and treated immediately, especially if there is significant pain, swelling, discoloration, or inability to move it. Quick evaluation and treatment plan can reduce the probability of long-term issues, deformity and including pain (Greenberger and Paterno, 1995).

Lower Back Pain from Volleyball

Many athletes have lower back pain from performing their sport. However, low back pain is fairly common among volleyball players as a result of muscle or ligament strain. If the pain doesn't get better after a few days or is worse during positive movements, the athlete should be evaluated by a medical professional (Richard et al., 2001).

2.2.5.4 Handball injuries

Examination of injuries measurements and writing survey shows that the general occurrence of intense wounds in handball is very nearly 2/1000h. Match occurrences are ten times higher than preparing rates. Lower limits represent most wounds, trailed by head wounds and wounds of the furthest points. Sprains and injuries are driving sorts of damage. Ladies are more powerless against non-contact bring down furthest point wounds while men have a higher offer of contact head injuries (Barbarnti, 1994).

It is roughly estimated that in Europe at least 320,000 handball injuries occur each year.

Acute injuries in handball

Going more into details, younger athletes seem to be more prone to injuries of the upper body regions, especially finger injuries. With developing age, there is an increase in injuries of the lower extremities, in careful in knee injuries (Hickson, 1994).

Localization of match injuries

Latest studies show similar tendencies. There is an accord that paying little respect to age, sexual orientation and execution level the greater part of all wounds influences the lower appendages. Additionally, is clear that youthful female competitors have an essentially higher hazard to maintain serious knee wounds (Olsen et al., 2004).

Injury types

The most well-known intense injuries are sprains, with knee, lower leg and fingers being the most influenced body parts taken after by injuries and strains. Breaks and disengagements are moderately uncommon. Notwithstanding, more youthful competitors are commonly more powerless against breaks, specifically finger, wrist and lower arm cracks, than more seasoned competitors. Strikingly, amid real first class competitions, injuries turn out to be more frequent (Bergeron, 2009).

Injury situations & risk factors

Studies commonly differentiate between contact situations, whether legal contact or foul play, and non-contact situations, typically running with quick direction changes, cutting and pivoting, starts and stops as well as jumping and landing on one or both feet. On closer examination of 293 injuries in German professional handball contact situations, either with an opponent or a teammate, trigger injuries most frequently, followed by jumping, landing, and running with quick direction changes (feints), which are typical non-contact injury situations. In the majority of all cases, injuries occurring in contact situations affect the upper body, in particular, head and fingers. In contrast, non-contact injuries mostly are related to the lower extremities (Nelson et al., 2007).

Situations leading to injuries

Several studies have indicated that mainly young female athletes are at greater risk for non-contact injuries. As far as the studies imply, non-contact injuries are commonly more serious than contact injuries.

Around 90% of ACL ruptures are reported to happen without the opponent's or team-mate's contribution. In global players in offensive actions are more at risk than defense players.

2.3 Classification of Injuries in Athletics

Ordering injuries is multi-factorial by nature. Clinicians consider the patient's past therapeutic history, which incorporates data identified with the site of damage and general wellbeing and prosperity. Through perception, clinicians can get a general perspective of basic variations from the norm, impacts of stance, and decide the different signs related with irritation. Performing palpations gives data identified with temperature changes, fits, and most basic agonizing regions. The honesty of the joints can be gotten to through the scope of movement testing and different auxiliary and useful testing. Regularly, indicative pictures (i.e. x-beam, MRI CT examines) are utilized to decide the area and in some cases seriousness of injuries (Hong and Bartlett, 2008).

Traditionally, injuries in athletics were classified based on events and associated symptoms, including:

(a) Acute traumatic injuries

(b) Chronic or overuse injuries (Cassas and Cassettari, 2006).

Acute injuries occur because of a single, sudden effect that makes tissue harm. Frequently, the competitor ends up plainly mindful of the damage not long after it has happened. The full comprehension of the underlying damage might be accomplished while observing different indications determination (both physical/physiological and mental) throughout recuperation. Strikingly, just about 60% of harmed first class skiers demonstrated that they instantly understood that something was turning out badly after the damage. The other 40% of harmed skiers noticed that they were not at first mindful of the degree and seriousness of damage (Udry, 1998).

Then again, incessant and regularly alluded abuse injuries are the aggregation of rehashed and frequently under-edge wounds, because of introduction to little strengths after some time which eventually result in genuine harm. This kind of injury is habitually showed in

conditions, for example, tendonitis and stress fractures. While intense wounds might be more conspicuous in light of their sudden effect and regularly related obvious utilitarian variations from the norm and physical indications, endless wounds regularly slowly grow, much of the time not noticeable, and their impact of competitors might be more guileful. Interminable wounds can play devastation with a competitors' inspiration and frequently are the significant reason for burnout. It ought to be said that doctors' as of now have a high worry for non-awful wounds. For instance, the regular non-horrible cycling related wounds incorporate the knee, neck/bear, hands, butt cheek and perineum (Hung and Pallis., 2012).

2.4 Categories of Sports Injuries

Though sports injuries are diverse and their occurrence hinges on the type of sporting activity an athlete engages in, there are common injuries that can occur irrespective of the sporting discipline. This can be augmented by a study by Hootman et al. (2007), which contends that foot and ankle injuries are more prevalent in almost 95% of sports disciplines. However, sports injuries can be decomposed into the shoulder, back, chest, ankle, knee and foot injuries and these are herein discussed as follows;

2.4.1 Shoulder injuries

The major cause of shoulder injuries to an athlete is micro trauma in the shoulder area (Griffin et al., 2000). It must be noted that typical body move sequences during sporting activities can cross from severe abduction (moving the arms away from the body) with external rotation and turn of the shoulder blades at the end of the extension phase, to develop adduction (bringing the arms toward the body) with internal turn at the end of the pulling phase. During the abduction, the homers rub against the rotator cuffs on the acromion and the Curacao acromial ligament and cause the associated irritation of the bursa underneath the acromion (bursa sub criminalist) (Griffin et al., 2000).

2.4.2 Back injuries

The essence of sports preparation requires mechanical overload, and the absence of such may trigger a back injury as movement exercises produce a clear oppression of the lumbar spine (Hootman et al., 2007). Observations can be made that there is a trade-off

between movement needs and injuries, longer training duration, exercise intensity and lack of relative rest which has an effect of compounding overload injuries (Mckay et al., 2001). This may explain why some athletes tend to have more persistent, chronic and recurrent low back pain symptoms often accompanied by early degenerative joints disease although most of the low back pain in the athletic and non-athletic is nonspecific (Hirst, 2014). On the other hand, the mechanical nature of the athletes is an obvious reason behind such a risk, and in its ethology, it is often associated with the movement pain symptoms. This is a duplicate result of mechanical loads and often exert specific and unique movements on the athlete's spine through a variety of sports training, and competition requirements and the paediatric sports population has a high risk of injury due to less physical muscle and skeletal maturity, and often increases the risk of more serious and permanent bone damage, structural abnormalities and chronic pain (Hirst, 2014).

2.4.3 Chest injuries

Though chest injuries can be observed in some sporting disciplines, it can be noted that chest injuries that result from forceful contact and collision sports are relatively rare, particularly those that threaten life (McGown, 2004). However, as with each sport-related injury, life-threatening situations that can occur as a result of a collision with other athletes or as a result of being hit with some object which can lead to penetrating injuries are extremely rare events in sporting events. In other words, as is the case in all assessments of acute sports injuries, the cause of injury should be considered when examining the injured athlete on the field as well as in lateral lines (Brukner, 2012). These injuries can either occur with blunt trauma to the chest thorax or with penetrating injuries which are an extremely rare event in sporting events. Any of these symptoms may constitute a medical emergency, and it is the responsibility of sports officials to recognize the need for a medical emergency, transmit information to the emergency operator and provide care to the athlete until more advanced medical personnel arrive (McGown, 2004).

2.4.4 Ankle injuries

Ankle injuries are of various degree, and this implies that some are short term while others have a long term effect and may require that one undergoes surgical treatment.

Observations made have shown that a 15-24 years age group is more prone to ankle injuries of which 50% of those injuries are considered to occur during athletic activity with at least 1 million individuals being treated for ankle injuries each year (Nelson et al., 2007). Ankle injuries can be categorised into the following groups;

- **Ankle sprain:** This occurs when lateral side ligaments are damaged resulting in what is called a sprain (Fong et al., 2007). When ankle sprains last for about two weeks or less they are known as mild sprain while those that that can keep an athlete out of sporting activities for 4-6 weeks are known as the severe sprain (Nelson et al., 2007).
- **High ankle sprain:** When ligaments between the fibula and tibia are torn, the resultant effects is known as a high ankle sprain High ankle sprain is quite different from the normal ankle sprain in the sense that they require a longer healing period.
- **Lateral malleolus fracture:** This occurs when the fibulae distal gets fractured (Fong et al., 2007). The major sign of a malleolus fracture is that the pain is not confined to lateral ligaments but rather at the fracture.
- **Jones fracture:** This is a fracture of the fifth metatarsal, and such a fracture has problems that it might not be possible to heal it (Anandacoomarasamy and Barnsley, 2005). Athletes who suffer from such a fracture have a high risk that they might not compete again in future sporting activities.

2.4.5 Knee injuries

The knee is the highest and most complicated joint in the human body and is subjected to considerable loads in everyday life, particularly during physical activity. Frequent biomechanical stress and overloading can damage it just as much as constant under loading. Knee accidents and overuse injuries have topped sports injury statistics in recent years. According to Gooch et al., 1993, the knee joint can be divided into;

I. The meniscus
II. The passive and active stabilisers
III. The joint between the patella and the femur

Common knee joint problems can be separated into degenerative wear and tear symptoms (carthorses) and acute knee joint injuries (ligament, capsular and meniscus injuries). According to Gooch et al., 1993,carthorses are degenerative changes of the cartilage-covered joint surfaces, which affect the bones of the thigh and the lower leg and the back of the knee cap the latter is called retro patellar pain syndrome and is the most commonly found knee disorder, affecting 60% of all 30-year-olds (Gooch et al., 1993).

2.4.5.1 Foot injuries

A foot injury can be said to be an injury that occurs to the foot as a result of an improper interaction of the foot with the ground and other external objects thereby causing overloading damage (Gooch et al., 1993). It is worthy to note that feet help to maintain body balance when one jumps, squats, runs or walk by acting as a shock absorber. With this in mind, emphasis can also be given that foot and ankle injuries are more closely related. This is because both the foot and the ankle allow mobility and work to provide support (Norris, 2004). Examples of foot injuries include calcaneal stress fracture, extensor tendinitis, metatarsal stress fracture, heel pain, forefoot and midfoot pain, toe injuries and pain, Despite the existence of different types of foot injuries, several factors can be given towards explaining the causes of foot injuries and most of these causes have been relatively joined to engagement in physical activities (Brukner, 2012). However, a study by Johnsen and Winters (1991), established that non-physical factors such as trauma could also significantly pose a huge effect on foot injuries. This was reinforced by ideas outlined in the study by Wall and Kannangara (2006) which contends that trauma is one of the significant causes of sports injuries but has never been given due attention as studies often dwell of physical elements. Van Mechelen et al. (1992), undertook a study to examine ways that can be undertaken to kerb sports injuries. As a result, the study identified that causes of foot injuries could be listed as follows;

I. Engaging in sports activities on hard surfaces.
II. Using improper footwear.
III. Excessive workout
IV. Overuse
V. Improper and rapid workout.

Remedies have been proffered as a way to kerb foot injuries as a result of sporting activities, and the most probable are to avoid engaging in sporting exercises, but this is not usually a favourable proposition (Norris, 2004). Consequently, the use of protective materials is the widely encouraged solution of kerbing foot injuries (Bencardio et al., 1999). According to Brukner (2012), Contends that if one has succumbed to foot injuries, then treatment should minister. Such treatment can include rest, ice therapy, compression and elevation.

CHAPTER 3

METHODOLOGY

The researcher used primary and secondary data to analyze the current study. In terms of primary data, the research implemented quantitative method in order to analyze the current study. The researcher gathered data by distributing questionnaire; SPSS version 23 was used to analyze the gathered data. First the researcher used descriptive analysis in order to find the mean and SD for each question separately in order to be able to find the lowest and highest mean among all questions. Furthermore, the researcher used reliability analysis to find whether items and factors used to analyze the current study were reliable or not. Also, the research used correlation analysis to measure and finds the relationship between each variable, and finally the researcher used regression analysis to find the result of research hypotheses. In terms of secondary data, the researcher referred to academic articles, previous studies and books related to sport injuries, types of injuries and causes of sport injuries.

3.1 Research Design

This study tries to highlight the types and causes of sport injury in Northern Iraq as general and Suleimaniah city as in particular. In order to have a clear research findings and testing thesis hypotheses, the study employed a descriptive research analysis which involves quantitative approach of data analysis. Data were collected from different sources and review of related literature was used for further understanding of the problem that also helped the study as descriptive survey. A closed survey questionnaire was administered for a sample of athletes who involved in sport in general. The main criterion for the choice of the research design was the availability of information in relation to the research problem, aim and hypotheses. The characteristics of a descriptive research type make harmony with the purpose of the study.

3.2 Research Approach

The study aims for both descriptive and quantitative approaches. As it aims to highlight the most common causes and types of sport injuries, it also gives numerical support with questionnaires. The descriptive and numerical data have been collected through a structured questionnaire given in the Appendix. The analysis of the information has been given out with the help of visual statistic tools such as tables, figures and percentages.

3.3 Sample Size

The samples of respondents in the current study are different athletes in Suleimaniah city that play either as combat sport, individual sport or team sports. This study was carried out in Suleimaniah city; the research categorized athletes into three main groups which are combat sports (Athletes those who practice boxing, wrestling, Kung Fu and karate), individual sports (athletes those who practice swimming, tennis, track and field) and team sports (athletes those who practice football, volleyball, basketball, and handball). A total of 350 questionnaires were printed out in hard copies; however the researcher received 80 completed questionnaires from combat sports, 96 completed questionnaires from individual sports and 128 completed questionnaires from team sports. The overall sample size for this study was 304 participants.

3.4 The Construction and the Application of the Tools

In the current study, the researcher used a primary tool for gathering data, as follow; the primary tool is athletes' questionnaire, the purpose of using athletes' questionnaire to be more conclusive. The purpose of using athletes' questionnaire is to obtain feedback on athletes' types of injuries. Furthermore, the questionnaire used to assemble applicable data with respect to the examination of the variables that are causing sport injuries. Techniques involve the systems utilized for producing, gathering and assessing information. The analyst assembled information for the examination through disseminating questionnaires as essential information.

3.5 Questionnaires

The purpose of using questionnaires is to find out types and factors causing sport injuries. The researcher gathered data for the study through distributing questionnaires as primary

data.The researcher used different scales for each question. The questionnaire was constructed based on the information stated in the theoretical background of the survey and it consisted of nine items (as seen in appendix A) and distributed to participants who are practicing sports. As for first question, the researcher attempted to find out the relationship between the duration of practicing sport and causes of injury, as for second question the researcher attempted to find out number of male and female participated in the current study to find out whether the gender will have an effect on causing injury. The third question was to investigate the type of sport and its relationship with injury. The fourth question was to examine the years of experience and level of athlete; in this case the researcher attempted to find out whether beginners will be affected with injury. The fifth question was to investigate the type of injury that most of athletes are facing; moreover the outcome of this question will serve the athletes as a protection guideline. The sixth question was to analyze the location of injury; as a result the researcher will be able to recommend certain protection for particular body part of the athlete. The eighth question was to analyze the symptoms accurately in order to find a solution, and finally the ninth question was to investigate the main cause of injury in order to analyze and answer the main research question.

The survey questionnaire consists of 8 questions and asks the athletes how long they have been practicing, their gender, which type of sport they are into, what level of an athlete they are, what type of injury they had and the cause of that injury.

3.6 Reliability

Reliability is: “The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable” Kothari (2004), Embodied in this citation is the idea of repeatability of results or observations.

The researcher implement reliability test effectively for combat athletes’ questionnaires; it was found that the Cronbach's Alpha = .871 as shown in Table 1 which is more than 0.6 this shows that fourteen items utilized for combat athletes’ questionnaire were reliable for this study. The Cronbach's Alpha for individual athletes’ questionnaire = .827(As

seen in Table1) which is greater than 0.6 this shows that fourteen items used for individual athletes' questionnaire were reliable or dependable for this research, and the Cronbach's Alpha for team athletes' questionnaire = .799 (As seen in Table1) which is greater than 0.6 this indicates that fourteen items utilized for team athletes' questionnaire were reliable for this study.

Table 1: Reliability Analysis

Reliability Statistics		
Factors	Cronbach's Alpha	N of Items
Combat sports	.889	9
No.	Question	Cronbach's Alpha
1	For how many years have you been practicing this sport	.789
2	Gender	.711
3	Type of sport that you practice	.812
4	At What Level are you practicing	.756
5	Type of Injury	.843
6	Location of Injury	.747
7	For how long could not compete (one of them)	.732
8	Cause of Injury	.805
9	Re-injury	.764
Factors	Cronbach's Alpha	N of Items
Individual sports	.812	9
No.	Question	Cronbach's Alpha

1	For how many years have you been practicing this sport	.801
2	Gender	.732
3	Type of sport that you practice	.715
4	At What Level are you practicing	.854
5	Type of Injury	.707
6	Location of Injury	.799
7	For how long could not compete (one of them)	.833
8	Cause of Injury	.712
9	Re-injury	.733

Factors	Cronbach's Alpha	N of Items
Team Sports	.769	9

No.	Question	Cronbach's Alpha
1	For how many years have you been practicing this sport	.766
2	Gender	.813
3	Type of sport that you practice	.778
4	At What Level are you practicing	.769
5	Type of Injury	.746
6	Location of Injury	.799
7	For how long could not compete (one of them)	.795
8	Cause of Injury	.767
9	Re-injury	.861

As seen in table (1) the reliability test for three different factors, each factor has 9 items. The Alpha for combat sport =.889 > .6 this shows that all 9 items used for combat sport were dependable for this study. The researcher broke down all 9 items for the combat sport in details as follow; the Alpha for first item which stated ‘for how many years have you been practicing this sport” = .789> .6 this shows that first item used for combat sport was dependable, the Alpha for second item which stated ‘participant’s gender” = .711> .6 this shows that second item used for combat sport was reliable, the Alpha for third item which stated ‘Type of sport that you practice = .812> .6 this shows that third item used for combat sport was reliable, the Alpha for fourth item which stated ‘At What Level are you practicing” = .756> .6 this indicates that fourth item used for combat sport was reliable, the Alpha for fifth item which stated ‘Type of Injury “ = .843> .6 this indicates that fifth item used for combat sport was reliable, the Alpha for sixth item which stated ‘Location of Injury “ = .747> .6 this shows that sixth item used for combat sport was reliable, the Alpha for seventh item which stated ‘For how long could not compete (one of them) “ = .732> .6 this indicates that seventh item used for combat sport was reliable, the Alpha for eighth item which stated “Cause of Injury” = .805> .6 this indicates that eighth item used for combat sport was reliable, and the Alpha for ninth item which stated “Re-injury” = .746> .6 this indicates that ninth item used for combat sport was reliable.

In terms of individual sport, the researcher broke down all 9 items for the individual sport in details as follow; the Alpha for first item which stated ‘for how many years have you been practicing this sport” = .812> .6 this shows that first item used for combat sport was reliable, the Alpha for second item which stated ‘participant’s gender” = .801> .6 this indicates that second item used for combat sport was reliable, the Alpha for third item which stated ‘Type of sport that you practice = .732> .6 this indicates that third item used for combat sport was reliable, the Alpha for fourth item which stated ‘At What Level are you practicing” = .715> .6 this indicates that fourth item used for combat sport was reliable, the Alpha for fifth item which stated ‘Type of Injury “ = .854> .6 this indicates that fifth item used for combat sport was reliable, the Alpha for sixth item which stated ‘Location of Injury “ = .707> .6 this indicates that sixth item used for combat sport was reliable, the Alpha for seventh item

which stated ‘For how long could not compete (one of them) “ = .733> .6 this indicates that seventh item used for combat sport was reliable, the Alpha for eighth item which stated “Cause of Injury” = .712> .6 this shows that eighth item used for combat sport was reliable, and the Alpha for ninth item which stated “Re-injury” = .733> .6 this indicates that ninth item used for combat sport was reliable.

In terms of team sports, the researcher broke down all 9 items for the individual sport in details as follow; the Alpha for first item which stated ‘for how many years have you been practicing this sport” = .769> .6 this shows that first item used for combat sport was reliable, the Alpha for second item which stated ‘participant’s gender” = .766> .6 this indicates that second item used for combat sport was reliable, the Alpha for third item which stated ‘Type of sport that you practice = .813> .6 this indicates that third item used for combat sport was reliable, the Alpha for fourth item which stated ‘At What Level are you practicing” = .778> .6 this shows that fourth item used for combat sport was reliable, the Alpha for fifth item which stated ‘Type of Injury “ = .769> .6 this shows that fifth item used for combat sport was reliable, the Alpha for sixth item which stated ‘Location of Injury “ = .746> .6 this indicates that sixth item used for combat sport was reliable, the Alpha for seventh item which stated ‘For how long could not compete (one of them) “ = .799> .6 this shows that seventh item used for combat sport was reliable, the Alpha for eighth item which stated “Cause of Injury” = .795> .6 this shows that eighth item used for combat sport was reliable, and the Alpha for ninth item which stated “Re-injury” = .861> .6 this shows that ninth item used for combat sport was reliable.

CHAPTER 4

DATA ANALYSIS

This chapter consists of three sections; the first section includes combat sports, the second section includes individual sports and the third section includes team sports.

4.1 Combat sports

Table 2: Duration of practicing combat sports

	Frequency (N)	Percent %
1-2 years	2	2.5
3-4 years	12	15.0
more than 4 years	66	82.5
Total	80	100.0

It was found that 2.5 % participants had 1-2 years of sport experiences, 15% participants had 3-4 years of sport experiences and 82.5% participants had more than 4 years of sport experiences. The results indicated that the majority of participants (82.5%) had more than 4 years of sport experiences.

Table 3: Gender of participants practicing combat sports

	Frequency (N)	Percent %
Male	76	95.0
Female	4	5.0
Total	80	100.0

It was found that 95% male and 5% participants were female participated in the current study.

Table 4: Type of sports in combat sports athletes

	Frequency (N)	Percent %
Kung Fu	24	30.0
Wrestling	28	35.0
Boxing	14	17.5
Karate	14	17.5
Total	80	100.0

30% of participants were practising Kung Fu, 35% of participants were practising wrestling, 17.5% of participants were practising boxing and 17.5% of participants were practising karate.

Table 5: Level of athletes in combat sports

	Frequency (N)	Percent %
Recreational	24	30.0
Competition	29	36.3
High level	13	16.3
Professional	14	17.5
Total	80	100.0

It was found that 30% participants from recreational level, 36.3% participants from competition level, 16.3% participants from high level and 17.5% participants from professional level.

Table 6: Types of injury in combat sports

	Frequency (N)	Percent %
Sprain	20	25.0
Overuse	18	22.5
Fracture	19	23.8
Dislocation	23	28.8
Total	80	100.0

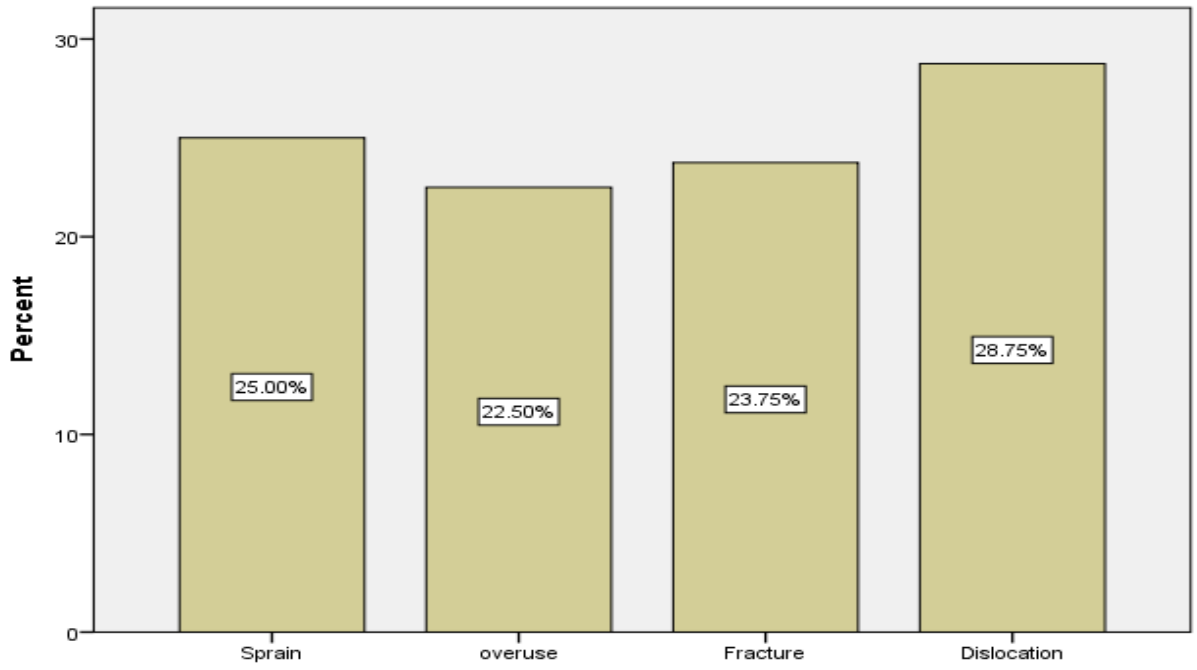

Figure 1: Types of Injuries in Combat Sports

It was found that 25% of the participants got sprain injury, 22.5% of them got overuse injury, 23.8% of the participants got fracture injury and 28.8% participants got dislocation injury. The results showed that the majority (28.85) of participants reported that they got dislocation injury.

Table 7: Location of injury in combat sports

	Frequency (N)	Percent %
Skull	13	16.3
Upper extremity	16	20.0
Lower extremity	11	13.8
Chest	15	18.8
Abdominal organs	7	8.8
Spine	18	22.5
Total	80	100.0

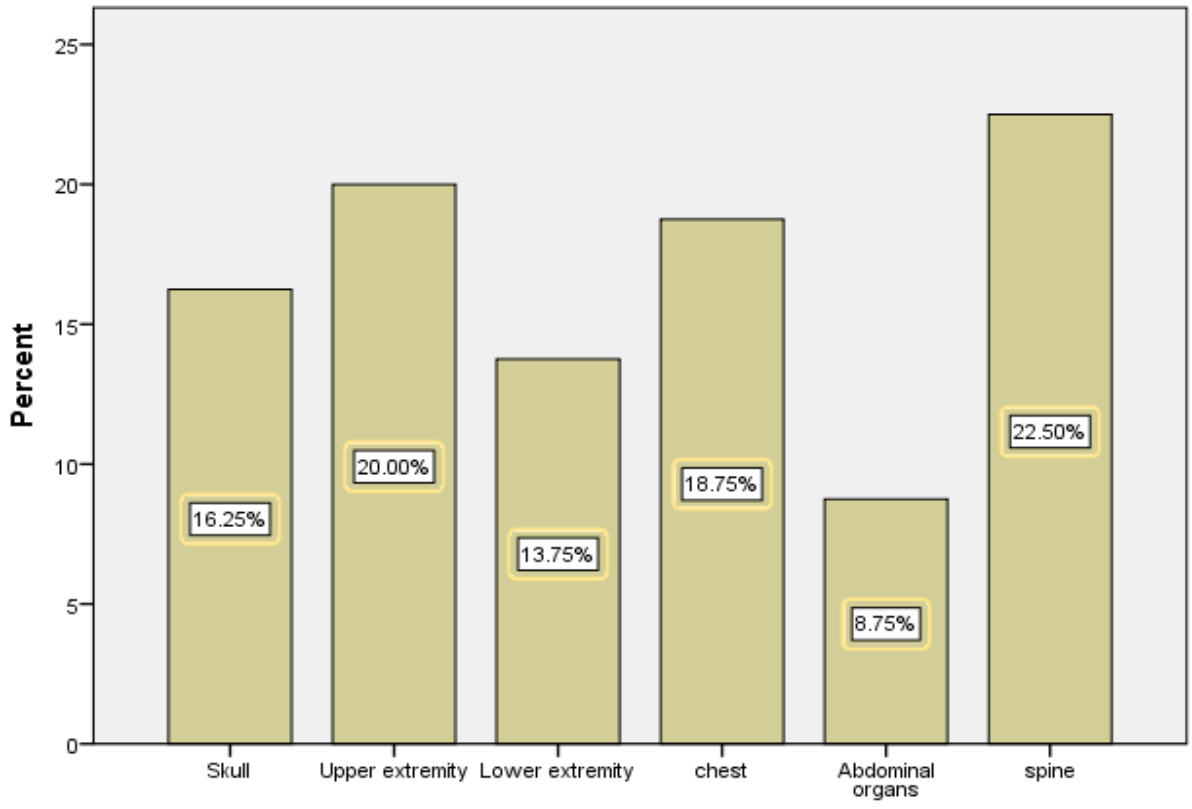

Figure 2: Location of Injury in Combat Sports

It was found that 16.3% of the participants got injury in skull, 20% of the participants got injury in upper extremity, 13.8% of the participants got injury in lower extremity, 18.8% of the participants got injury in chest, 8.8% of the participants got injury in abdominal organs and 22.5% of the participants got injury in spine.

Table 8: Time spent in combat sports

	Frequency (N)	Percent %
0-1 week	33	41.3
1-2 weeks	20	25.0
>2weeks	27	33.8
Total	80	100.0

It was found that 41.3% of the participants could not practice sport for 0-1 week, 25% of the participants could not practice sport for one week to two weeks, 33.8% of the participants could not practice sport for less than two weeks.

Table 9: Cause of injury in combat sports

	Frequency (N)	Percent %
Stress of Training	17	21.3
Incorrect practice	18	22.5
Insufficient Warming-up	8	10.0
Poor Medical Supplies	11	13.8
Inadequate Pitch	6	7.5
Fatigue (and/or) Malnutrition	6	7.5
Opponent's Contact	6	7.5
Weather Conditions	8	10.0
Total	80	100.0

It was found that 21.3% of the participants got injury because of stress of training, 22.5% of the participants got injury because of incorrect practice, 10% of the participants got injury because of insufficient warming up, 13.8% of the participants got injury because of poor medical supplies, 7.5% of the participants got injury because of inadequate pitch, 7.5% of the participants got injury because of fatigued and malnutrition, 7.5% of the participants got injury because of opponent's contact and 10% of the participants got injury because of weather conditions.

Table 10: Re-injury in combat sports

	Frequency(N)	Percent
Yes	12	15.0
No	68	85.0
Total	80	100

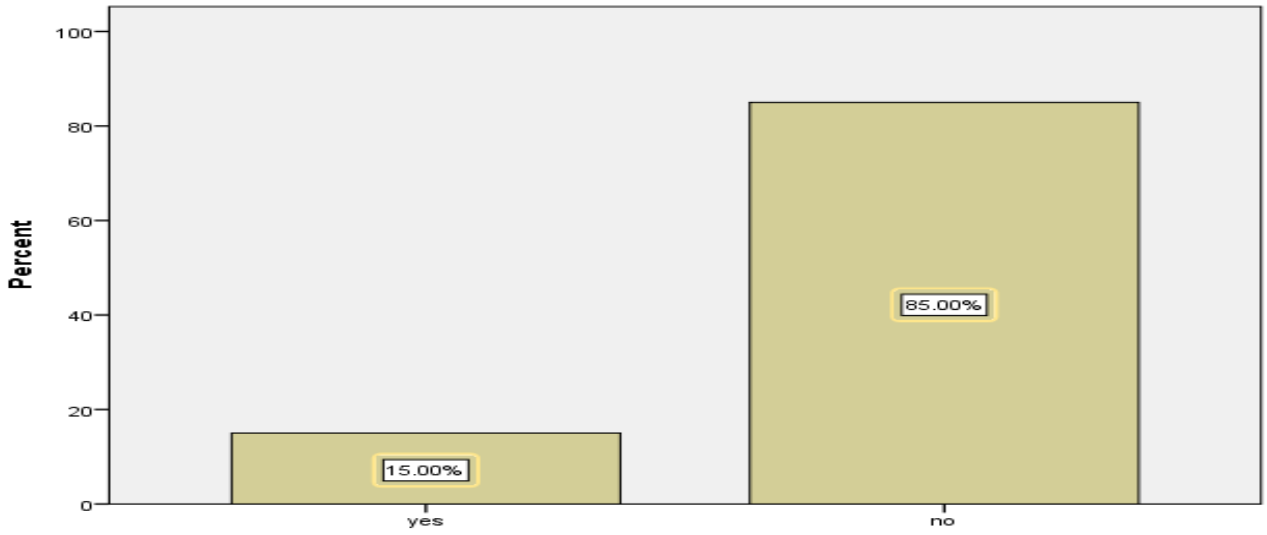

Figure 3: Re-injury in Combat Sports

It was found that 15% of the participants got re-injury during their life and 85% of the participants did not get re-injury during their life. However the results revealed that the majority of participants (85%) who are practicing combat sports did not get re-injury during their life.

4.2 Individual sports

Table 11: Duration of practicing individual sports

	Frequency(N)	Percent %
Less than a year	22	22.9
1-2 years	14	14.6
3-4 years	17	17.7
More than 4 years	43	44.8
Total	96	100.0

It was found that 22 .9% of the individuals athletic had less than a year years of sport experiences, 14.6% individuals athletic had 1-2 years of sport experiences, 17.7% of the individuals athletic had 3-4 years of sport experiences and 44.8% of the individuals athletic had more than 4 years of sport experiences.

Table 12: Gender of participants in individual sports

	Frequency (N)	Percent %
Male	58	60.4
Female	38	39.6
Total	96	100.0

It was found that 60.4% of the individual athletes were male and 39.6% individuals athletes were female participated in the current study, the results showed that the majority of individual athletes (60.4%) are male who are practicing (swimming, tennis, track and field) participated in the current study.

Table 13: Type of sports in individual sports

	Frequency (N)	Percent %
Swimming	21	21.9
Tennis	15	15.6
Track and field	60	62.5
Total	96	100.0

As seen in table (15) it was found that 21.9% of the athletes from total of 96 were practicing swimming, 15.6% of the of athletes were practicing tennis and 62.5% of athletes were practicing track and field sport.

Table 14: Level of the athletes in individual sports

	Frequency (N)	Percent %
Recreational	86	89.6
Competition	5	5.2
High level	3	3.1
Professional	2	2.1
Total	96	100.0

It was found that 89.6 of athletes who were practicing swimming, tennis, track and field were in recreational level, 5.2% were in competition level, 3.1% were in high level and only 2.1% were in professional level. The results showed that the majority of individual sport

athletes (89.6%) who were practicing swimming, tennis, track and field were in recreational level.

Table 15: Types of injury in individual sports athletes

	Frequency (N)	Percent %
Sprain	18	18.8
Overuse	27	28.1
Fracture	26	27.1
Dislocation	25	26.0
Total	96	100.0

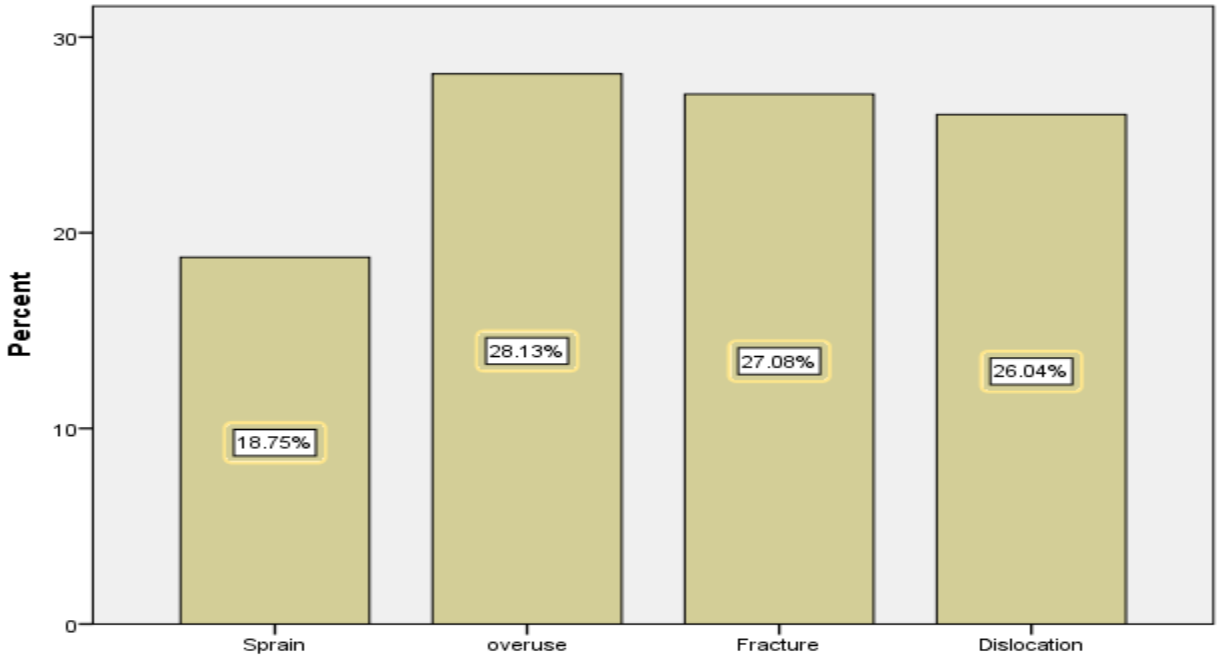

Figure 4: Types of Injury in Individual Sports

It was found that 18.8% of the athletes got sprains, 28.1% got overuse injury, 27.1% got fracture, and 26% got dislocation. The results showed that the most common injuries were overuse injuries in the athletes who were practicing swimming, tennis, and track and field.

Table 16: Location of injury in individual sports

	Frequency (N)	Percent %
Skull	12	12.5
Upper extremity	18	18.8
Lower extremity	22	22.9
Chest	22	22.9
Abdominal organs	15	15.6
Spine	7	7.3
Total	96	100.0

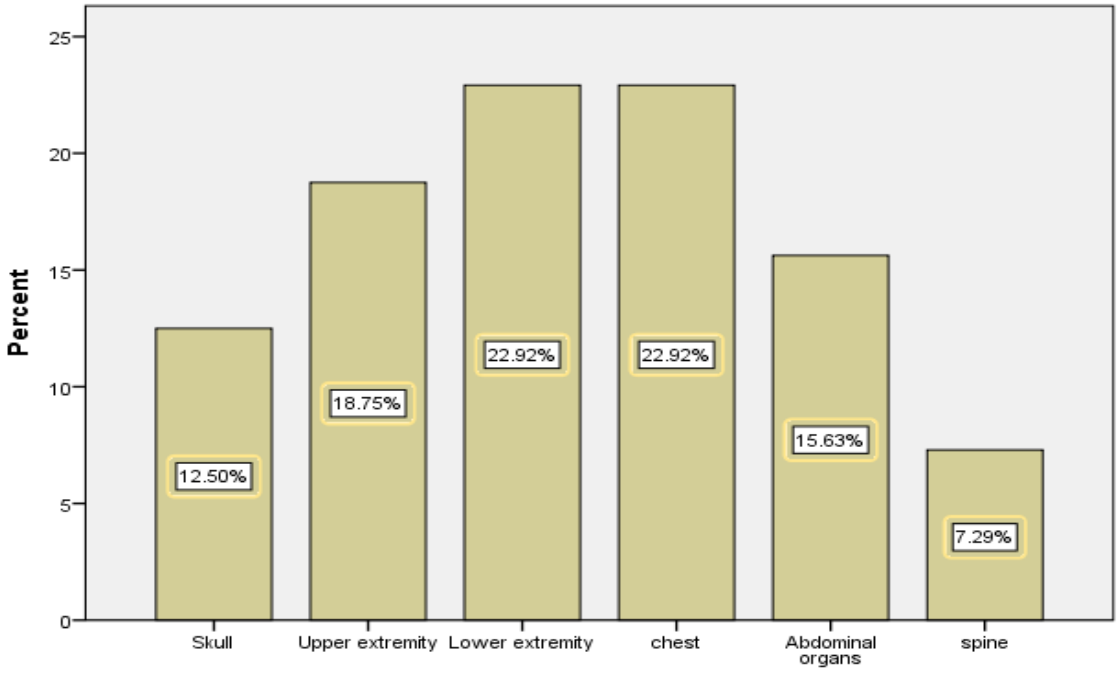

Figure 5: Location of Injury in Individual Sports

It was found that 12.5% of athletes got injury in skull, 18.8% in upper extremity, 22.9% in lower extremity, 22.9% in chest, 15.6% in abdominal organs and 7.3% got injury in spine. The results showed that the most common injury sites for individual athletes were lower extremity (22.9%) and chest (22.9%).

Table 17: Time spent because of injury in individual sports

	Frequency (N)	Percent %
0-1 week	21	21.9
1-2 weeks	48	50.0
>2 weeks	27	28.1
Total	96	100.0

It was found that 21.9% of the individual athletes could not practice sport for less than a week, 50% could not practice sport for one week to two weeks and 28.1% individual athletes could not practice sport for more than 2 weeks.

Table 18: Cause of injury in individual sports

	Frequency (N)	Percent %
Stress of Training	19	19.8
Incorrect practice	21	21.9
Insufficient Warming-up	14	14.6
Poor Medical Supplies	13	13.5
Inadequate Pitch	6	6.3
Fatigued (and) Malnutrition	8	8.3
Opponent's Contact	6	6.3
Weather Conditions	9	9.4
Total	96	100.0

It was found that 19.8% of individual athletes got injury because of stress of training, 21.9%because of incorrect practice, 14.6% insufficient warming up, 13.5% poor medical supplies, 6.3% inadequate pitch, 9.4% fatigued and malnutrition, 6.3% opponent's contact and 9.4% of the individual athletes got injury because of weather conditions. The results showed that the most common cause of injury in individual sports was incorrect practice (21.9%)

Table 19: Re-injury in individual sports

	Frequency (N)	Percent %
No	72	75.0
Yes	24	25.0
Total	96	100.0

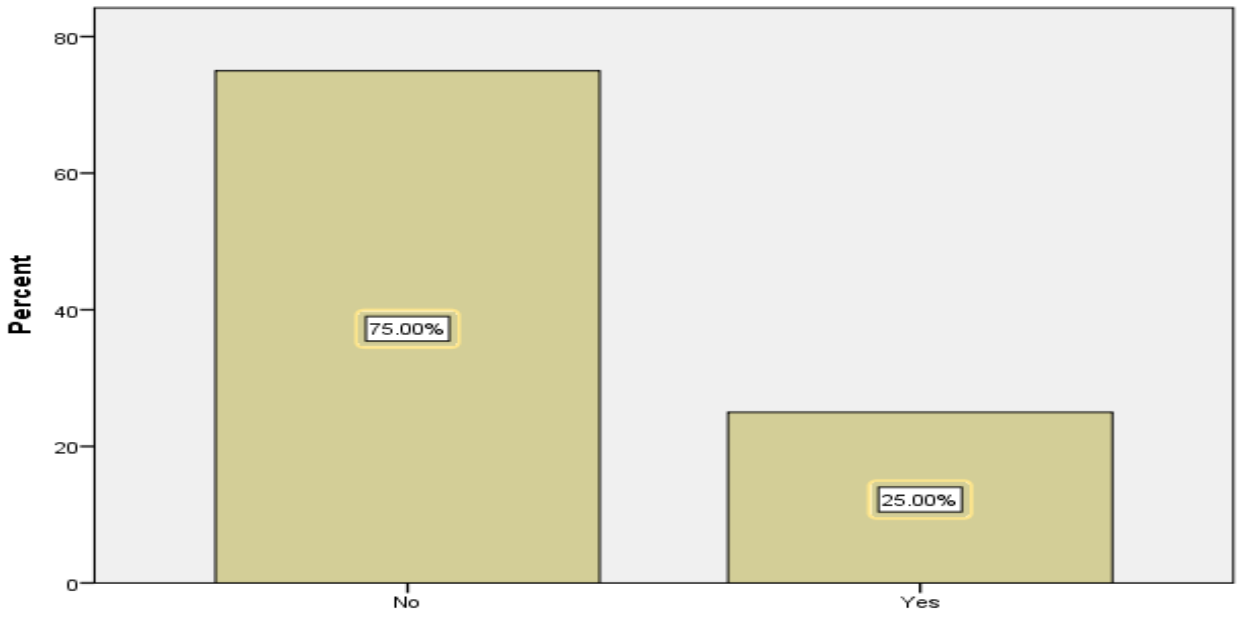

Figure 6: Re-injury in Individual Sports

It was found that 75% of the individual athletic participants did not get re-injury during their life and only 25% got re-injuries during their life. However the results revealed that the majority of participants 75% did not get re-injury during their life.

4.3 Team sports

Table 20: Duration of practicing team sports

	Frequency (N)	Percent %
less than a year	22	17.2
1-2 years	25	19.5
3-4 years	28	21.9
more than 4 years	53	41.4
Total	128	100.0

It was found that 17.2% of the participants had less than a year of sport experiences, 19.5% of the participants had 1-2 years of sport experiences, 21.9% of the participants had 3-4 years of sport experiences and 41.4% of the participants had more than 4 years of sport experiences.

Table 21: Gender of participants in team sports

	Frequency (N)	Percent %
Male	81	63.3
Female	47	36.7
Total	128	100.0

It was found that 63.3% male participants and 36.7% participants were female.

Table 22: Type of team sport

	Frequency (N)	Percent %
Football	79	61.7
Basketball	18	14.1
Volleyball	20	15.6
Handball	11	8.6
Total	128	100.0

As seen in table (29), it was found that 61.7% were practising football, 14.1%basketball, 15.6% volleyball, and 8.6% handball.

Table 23: Level of the athletes in team sports

	Frequency (N)	Percent %
Recreational	68	53.1
Competition	20	15.6
High level	26	20.3
Professional	14	10.9
Total	128	100.0

It was found that 53.1% participants at recreational level of sport, 15.6% participants at competition level of sport, 20.3% participants at high level of sport, and 10.9% participants at professional level of sport.

Table 24: Type of injury in team sports

	Frequency (N)	Percent %
Sprain	30	23.4
Overuse	46	35.9
Fracture	35	27.3
Dislocation	17	13.3
Total	128	100.0

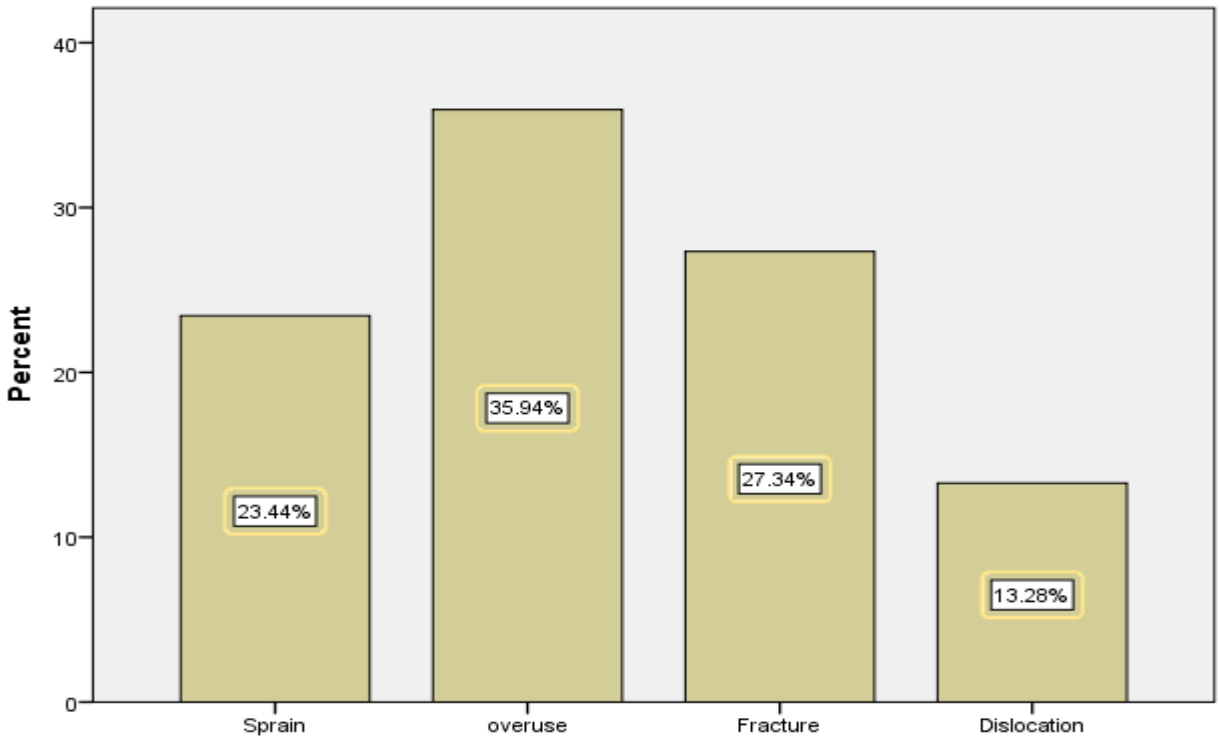

Figure 7: Type of injury in team sports

It was found that 23.4% of the participants got sprain injury, 35.9% of the participants got overuse injury, 27.3% of the participants got fracture injury, and 13.3% of the participants

got dislocation injury. The participants reported that the most common type of injury in team sport athletes was overuse injuries (35.9%).

Table 25: Location of injury in team sports

	Frequency (N)	Percent %
Skull	17	13.3
Upper extremity	24	18.8
Lower extremity	28	21.9
Chest	31	24.2
Abdominal organs	20	15.6
Spine	8	6.3
Total	128	100.0

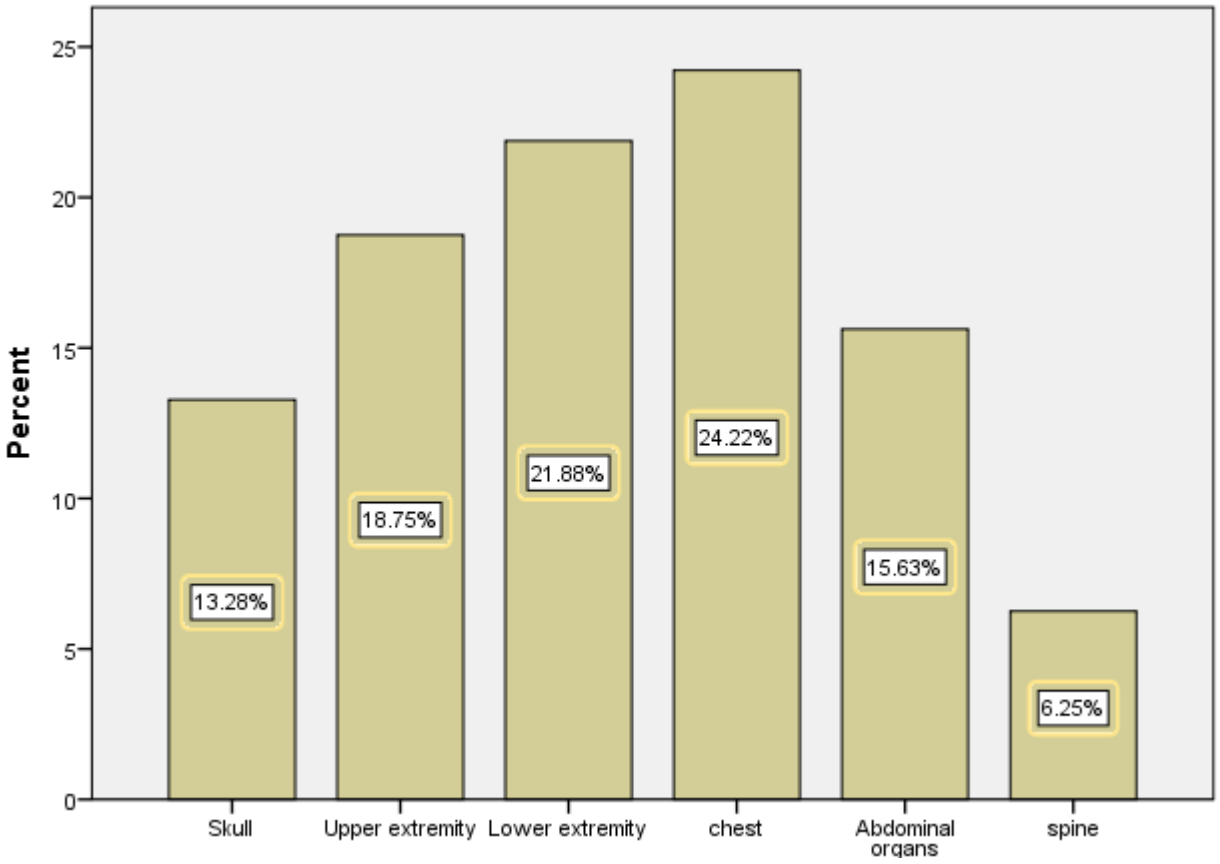

Figure 8: Location of injury in team sports

As seen in figure 8, 13.3% of participants got injury in skull, 18.8% of the participants got injury in upper extremity, 21.9% of the participants got injury in lower extremity, 24.2% of the participants got injury in chest, 15.6% of the participants got injury in abdominal organs, and 6.3% of the participants got injury in spine. The results showed that the most common site of injury was chest (24.2%) among team sport athletes.

Table 26: Time spent in team sports

	Frequency (N)	Percent %
0-1 week	29	22.7
1-2 weeks	57	44.5
> 2 weeks	42	32.8
Total	128	100.0

It was found that 22.7% of the participants could not practice sport for less than one week, 44.5% of the participants could not practice sport for one week to two weeks, 32.8% of the participants could not practice sport for more than 2 weeks.

Table 27: Cause of injury in team sports

	Frequency (N)	Percent %
Stress of Training	25	19.5
Opponent's Contact	32	25.0
Insufficient Warming-up	22	17.2
Poor Medical Supplies	18	14.1
Inadequate Pitch	6	4.7
fatigued (and) Malnutrition	8	6.3
Erroneous Practice	7	5.5
Weather Conditions	10	7.8
Total	128	100.0

It was found that 19.5% of the participants got injury because of stress of training, 25% of the participants got injury because of incorrect practice, 17.2% of the participants got injury because of insufficient warming up, 14.1% of the participants got injury because of poor medical supplies, 4.7% of the participants got injury because of inadequate pitch, 6.3% of the participants got injury because of fatigued and malnutrition, 5.5% of the participants got injury because of opponent’s contact and 7.8% of the participants got injury because of weather conditions. The results showed that the most common cause of injury in team sport athletes was opponent’s contact (25%).

Table 28: Re-injury in team sports

	Frequency (N)	Percent %
Yes	19	14.8
No	109	85.2
Total	128	100.0

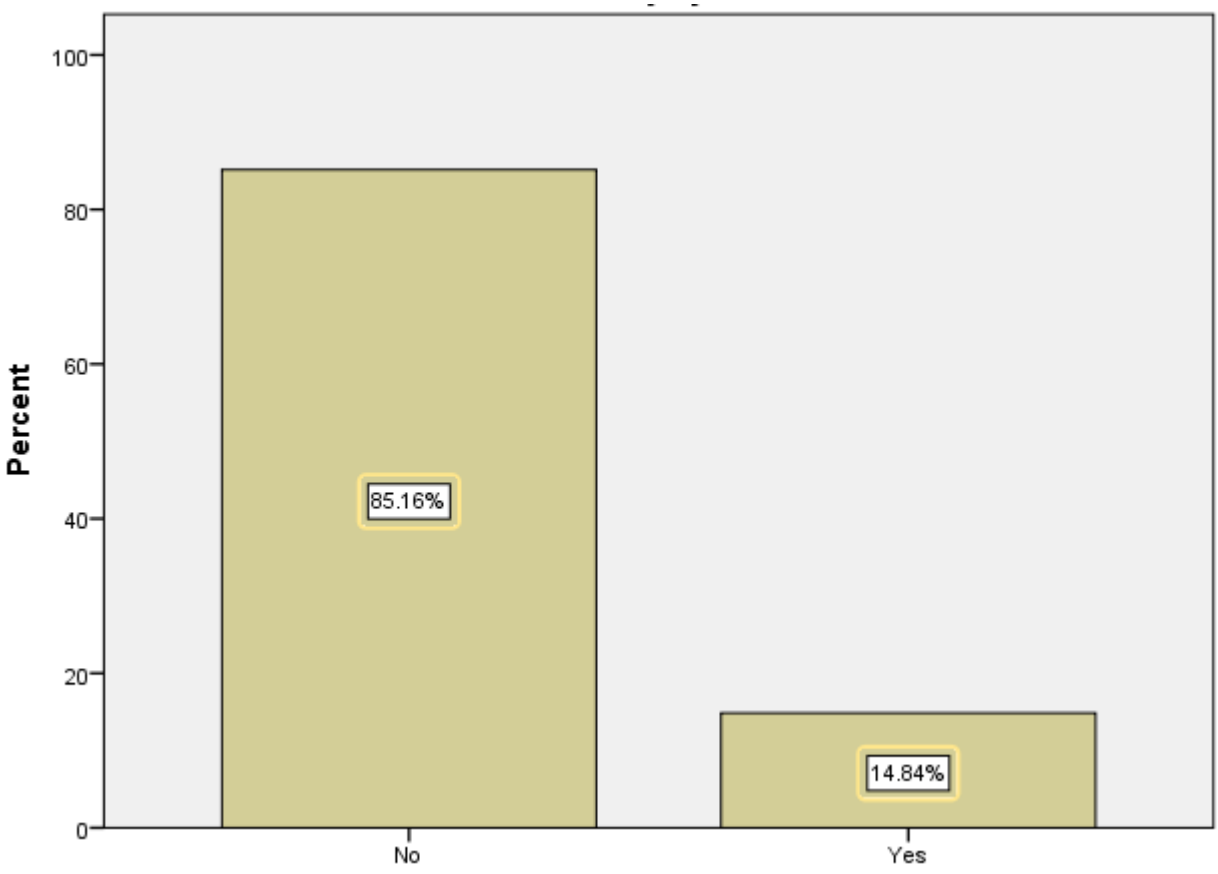

Figure 9: Re-injury in team sports

It was found that 14.8% of the participants got re-injuries during their life and during of practicing (football, volleyball, basketball, and handball) and 85.2% of the participants did not

get re-injuries during their life and during of practicing (football, volleyball, basketball, and handball). The results indicated that the majority of participants 85.2% did not get re-injuries during their life and during of practicing (football, volleyball, basketball, and handball).

Table 29: Location of injury

Location of Injury		**Combat Sports**	**Individual Sports**	**Team Sports**
Skull	Frequency	13	12	17
	Percent	16.3	12.5	13.3
Upper extremity	Frequency	16	18	24
	Percent	20	18.8	18.8
Lower extremity	Frequency	11	22	28
	Percent	13.8	22.9	21.9
Chest	Frequency	15	22	31
	Percent	18.8	22.9	24.2
Abdominal organs	Frequency	7	15	20
	Percent	8.8	15.6	15.6
Spine	Frequency	18	7	8
	Percent	22.5	7.3	6.3
Total	Frequency	80	96	128
	Percent	100	100	100

Table 30: Summary

Summary	Combat	Individual	Team
Duration of practicing sport	More than 4 years	More than 4 years	More than 4 years
Gender of participants who are practicing sports	Male	Male	Male
Level of the athletes	Competition	Recreational	Recreational
Type of Injury	Dislocation	Overuse	Overuse
Location of Injury	Spine	Lower extremity and chest	Chest
Period unable to compete	One day to one week	1 week to two weeks	1 week to two week
Cause of Injury	Incorrect practice	Incorrect practice	Opponent's Contact
Re-injury	No	No	No
Total	80	96	128

4.4 Testing research hypotheses

Table 31- Comparison

Percentages (%) of injuries in sports					
Duration of Practicing Sports	Combat	Individual	Team	Findings	Hypotheses
	82.5% more than 4 years	45% more than 4 years	41 % more than 4 years	Difference in duration	H1=Supported H2=Supported
Gender of Participants Practicing Sports	95% Male	60% Male	63% Male	Difference in gender	H1=Supported H2=Supported
Type of Sports	Wrestling 35%	Track and field 63%	Football 61%	Difference in types of sports	H1=Supported H2=Supported
Level of Athletes	Competition level 36%	Recreational 86%	Recreational 53%	Difference in level	H1=Supported H2=Supported
Types of Injury	Dislocation 29%	Overuse 27%	Overuse 36%	Differences in Types of injury	H1=Supported H2=Supported
Location of Injury	Spine 23%	Lower extremity and Chest 23%	Chest 24%	Difference in injury location	H1=Supported H2=Supported
Time Loss	0-1 week 41%	1-2 weeks 50%	1-2 weeks 45%	Difference in time loss	H1=Supported H2=Supported
Cause of Injury in	Incorrect practice 23%	Incorrect practice 22%	Opponent's Contact 25%	Differences in cause of injury	H1=Supported H2=Supported
Re-injury	Yes 85%	Yes 75%	No 85%	Differences in re-injury	H1=Supported H2=Supported

4.5.1Testing first research hypotheses

Hypothesis one: Type of injuries will be different for team, combat and individual sports

Hypothesis two: Cause of injuries will be different for team and combat and individual sports

Table 32-Correlations Analysis

		Types of sports	Cause of injuries	Types of injuries
Types of sports	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	304		
Cause of injuries	Pearson Correlation	.571**	1	
	Sig. (2-tailed)	.000		
	N	304	304	
Types of injuries	Pearson Correlation	.875**	.694**	1
	Sig. (2-tailed)	.000	.000**	
	N	304	304	304

** p<0.01, Correlation is significant at the 0.01 level (2-tailed).

As seen in table 32, the correlations between types of injuries and cause of injuries with types of sports. It was found that types of injuries has significant correlation (r=.875**, p<0.01) with types of sports and cause of injuries has significant correlation (r=.694**, p<0.01) with types of sports. The hypothesis is accepted.

Table 33: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875[a]	.765	.765	.213

a. Predictors: (Constant), types of injuries, cause of injuries

As seen in table 33, shows the value of R square = .765 this indicates that 77% of total variance has been explained.

Table 34: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	145.777	2	145.777	3221.304	.000
	Residual	44.756	989	.045		
	Total	190.533	990			

a. Dependent Variable: Types of sports

b. Predictors: (Constant), types of injuries, cause of injuries

*p<0.05

Table (34) explains the result of the ANOVA in order to find out the significance difference between types of sports as dependent variable and types of injuries and cause of injuries as independent variables. As it can be seen that the significance value = .000 which less than 0.05, hence the researcher concluded that there is a significant difference between variables. Moreover, the F value for both independent variables for types of injuries and cause of injuries =3221.304, since 3221.304>1, this indicates there is a significant relation between both independent variables and dependent variable.

Table 35: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Beta	Std. Error	Beta		
1	(Constant)	.397	.062		6.407	.000
	Types of sports	.898	.016	.875	56.757	.000
	Cause of injuries	.510	.023	.571	51.758	.000

a. Dependent Variable: Types of injuries

*<p 0.05

Linear regression analysis concentrates on the p-value for every variables intended to measure in the study, the research hypothesis that the coefficient should = 0, this means no affect. In case the p value is less than 0.05, this means that developed hypothesis is rejected. Or, we can see that a predictor with low P value is mostly being more effective in research model. On the other hand, a greater P value proposes that modify in the predictor are not linked with modifies in the answer. As seen in table 35, explains the findings of research hypotheses, in terms of first research hypothesis which stated that '' Type of injuries will be different for team, combat and individual sports'', it was found that the P value =.000 <.001, this indicates that types of injuries will be different for team, combat and individual sports accordingly the first research hypothesis is supported, in terms of second research hypothesis which stated that '' Cause of injuries will be different for team and combat and individual sports'', it was found that the P value .000, p<.001, this indicates that cause of injuries will be different for team and combat and individual sports accordingly the second research hypothesis is supported.

CHAPTER 5

DISCUSSIONS

5.1 Discussion

This chapter presents and debate the findings of the study; the main aim of this study is to investigate the causes and types of sport injuries in Suleimaniah -Northern Iraq.

The findings categorized into three sections; first section included the combat sports athletes who are practicing, boxing, wrestling, Kung Fu and karate, the second section included athletes who are practicing team sports football, volleyball, basketball, and handball, and the third section included athletes who practice individual sports athletes who practice swimming, tennis, track and field.

In terms of the first section; it was found that the 82.5% of participants from total of 80 had more than 4 years of sport experiences and 95% were male participants in the current study. Among combat sports, it was found that the majority of participants were practicing wrestling in competitive level and this indicated that the high degree of possible injury.

The comparison between the result of the current study and previous studies in terms of location and type of the injuries, As for types of injuries that most of the athletics facing recently; it was found that athletics that practicing swimming, tennis, track and field are mostly facing and getting Fracture injury (27.3%), previous studies such as Wadey, et al., 2012. They found that athletics most of them are getting fracture injury because of practicing track and field. Furthermore, these athletics mostly got injury in lower extremity and chest. (22.9%), previous studies supported the finding for instance Stiller-Ostrowski and Ostrowski, 2009, however, in contrast another study found dissimilar to the current result such as Russel and Laurier, 2011.

As for types of injuries that most of the athletes facing recently; it was found that athletes that practicing combat sports are mostly facing with dislocation injury, previous studies (Podlog and Eklund, 2007; Saelens, et al., 2012) support these finding. Moreover, the results indicated that the majority of participants (41.3%) who are practicing combat sports

could not practice sport for one day to one week. The results indicated that the majority of participants who are practicing combat sports had received medical treatment, similar previous studies found similar results (Hamson and Utley, 2008).

As for the cause of injuries the results showed that the majority combat sport athletes got injury because of incorrect practice (22.5). Moreover, the results showed that most of participants (85.0%) effectively received medical treatment which leads to decrease in re-injury. However, these athletes who got re-injury during practicing combat sports got re-injury from rip and muscle cramping, previous studies found similar to the current study's' findings(Finch, et al., 2011).

In terms of the second section; it was found that the majority of individual (44.8%)from total of 96 had more than 4 years of sport experiences of practicing swimming, tennis, track and field and the majority of these participants are male (60.4%) participated in the current study. Among sports (swimming, tennis, track and field), it was found that the majority of participants are practicing track and field sport with level of recreational (89.6%) this indicated that the high degree of possibility injury, similar studies found the similar results of the current study for example (Laats, 2011;Podlog, et al., 2010). Moreover; most of those athletics who are practicing swimming, tennis, track and field have got injured before during training this indicated the these individuals have lack of experience in swimming, tennis, track and field, therefore the possibility of getting injury will be high; a study was carried out by (Russel and Laurier, 2011), found similar findings as the current study, however in contrast another study was carried out (Wadey, et al., 2012) by found that athletics who are swimming, tennis, track and field less likely get injury comparing with athletics who are practicing wrestling and boxing.

Moreover, the results indicated that the majority of participants (50.0%) who were injured that are practicing swimming, tennis, track and field could not practice sport for one to two weeks. As for the cause of injuries the results showed that the majority of participants who are practicing got injury because of incorrect practice (21.9%) and the majority of participants got treatment during their injury (68.0%). Moreover, the results showed that most of participants effectively received medication and treatments which lead to decrease of causes

of injury therefore the results revealed that the majority of participants (75%) did not get re-injury during their life. However, these athletics that got re-injury during practicing was found that athletics got re-injury from breaking.

In terms of the third section; it was found that the majority of team sports (41.4%) from total of 128 had more than 4 years of sport experiences of practicing and the majority of these participants (63.3%) are male participated in the current study. Among sports football, volleyball, basketball, and handball, it was found that the majority of participants are practicing football sport (53.1%) with level of recreational this indicated that the high degree of possibility injury, similar studies found the similar results of the current study for example (Corbillon, et al., 2008).

It was found that athletes who are practicing football, volleyball, basketball, and handball are mostly facing with overuse injury (35.9%), previous studies such as (Christakou and Lavallee, 2009) they found that athletics most of them are getting overuse injury because of practicing track and field. Furthermore, these athletics mostly got injury in chest. Previous studies supported the finding for instance (Wadey, et al., 2012) however, in contrast another study found dissimilar to the current result such us (Duda, 2007).

Moreover, the results indicated that the majority of participants (44.5%) that are practicing could not practice sport for one to two weeks.

The results indicated that the majority of participants who are practicing had received medical treatment, similar previous studies found similar result for example (Levy, et al., 2009). As for the cause of injuries the results showed that the majority of participants who are practicing got injury because of Opponent's Contact (25.0%) and the majority of participants (72%) got treatment during their injury. Moreover, the results showed that most of participants effectively received medication and treatments which lead to decrease of causes of injury therefore the results revealed that the majority of participants (85.2%) who are practicing football, volleyball, basketball, and handball did not get re-injury during their life. However, these athletics tha got re-injury during practicing football, volleyball, basketball, and handball was found that athletics got re-injury from fractures.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATION

6.1 CONCLUSIONS

Based on the research findings, comparing three categories the researcher came to conclude the followings;

Duration of Practicing Combat Sports, it was found that 2.5 % participants (Frequency: 2) had 1-2 years of sport experiences, 15% participants (Frequency: 12) had 3-4 years of sport experiences and 82.5% participants (Frequency: 66) had more than 4 years of sport experiences. The results indicated that the majority of participants (82.5%) had more than 4 years of sport experiences.

Gender of Participants Practicing Combat Sports, it was found that 95% of the participants were male (Frequency: 76) and 5% participants were female (Frequency: 4) participated in the current study.

Type of Sports in Combat Sports Athletes, it is found that 30% of participants (Frequency: 24) were practising Kung Fu, 35% of participants (Frequency: 28) were practising wrestling, 17.5% of participants (Frequency: 14) were practising boxing and 17.5% of participants (Frequency: 14) were practising karate.

Level of Athletes in Combat Sports, it was found that 30% participants (Frequency: 24) from recreational level, 36.3% participants (Frequency: 29) from competition level, 16.3% participants (Frequency: 13) from high level and 17.5% participants (Frequency: 14) from professional level.

Types of Injury in Combat Sports, it was found that 25% of the participants (Frequency: 20) suffer from sprain injuries, 22.5% of the participants (Frequency: 18) suffer from overuse injuries, 23.8% of the participants (Frequency: 19) suffer from fracture injuries, 28.8% of the participants (Frequency: 23) suffer from dislocation injuries.

Location of Injury in Combat Sports, it was found that 16.3% of the participants (Frequency: 13) suffer from skull injuries, 20% of the participants (Frequency: 16) suffer from upper extremity injuries, 13.8% of the participants (Frequency: 11) suffer from lower extremity injuries, 18.8% of the participants (Frequency: 15) suffer from chest injuries, 8.8% of the participants (Frequency: 7) suffer from abdominal organ injuries, 22.5% of the participants (Frequency: 18) suffer from spine injuries.

Time Loss in Combat Sports, it was found that 41.3% of the participants (Frequency: 33) could not practice sport for 0-1 week, 25% of the participants (Frequency: 20) could not practice sport for one week to two weeks, 33.8% of the participants (Frequency: 27) could not practice sport for less than two weeks.

Cause of Injury in Combat Sports, it was found that 21.3% of the participants (Frequency: 17) got injury because of stress of training, 22.5% of the participants (Frequency: 18) got injury because of incorrect practice, 10% of the participants (Frequency: 8) got injury because of insufficient warming up, 13.8% of the participants (Frequency: 11) got injury because of poor medical supplies, 7.5% of the participants (Frequency: 6) got injury because of inadequate pitch, 7.5% of the participants (Frequency: 6) got injury because of fatigued and malnutrition, 7.5% of the participants (Frequency: 6) got injury because of opponent's contact and 10% of the participants (Frequency: 8) got injury because of weather conditions.

Re-injury in Combat Sports, it was found that 15% of the participants (Frequency: 12) got re-injury during their life and 85% of the participants (Frequency: 68) did not get re-injury during their life. However the results revealed that the majority of participants (85%) who are practicing combat sports did not get re-injury during their life.

Duration of Practicing Individual Sports, it was found that 22 .9% of the athletes (Frequency: 22) had less than a year years of sport experiences, 14.6% of the athletes (Frequency: 14) had 1-2 years of sport experiences, 17.7% of the athletes (Frequency: 17) had 3-4 years of sport experiences and 44.8% of the athletes (Frequency: 43) had more than 4 years of sport experiences.

Gender of Participants in Individual Sports, it was found that 60.4% of the athletes (Frequency: 58) were male and 39.6% individuals athletes (Frequency: 38) were female participated in the current study, the results showed that the majority of athletes (60.4%) are male who are practicing (swimming, tennis, track and field) participated in the current study.

Type of Sports in Individual Sports, it was found that 21.9% of the athletes (Frequency: 21) from total of 96 were practicing swimming, 15.6% of the athletes (Frequency: 15) were practicing tennis and 62.5% of the athletes (Frequency: 60) were practicing track and field sport.

Level of the Athletes in Individual Sports, it was found that 89.6 of the athletes (Frequency: 86) who were practicing swimming, tennis, track and field were in recreational level, 5.2% of them (Frequency: 5) were in competition level, 3.1% of them (Frequency: 3) were in high level and only 2.1% of them (Frequency: 2) were in professional level. The results showed that the majority of individual sport athletes (89.6%) who were practicing swimming, tennis, track and field were in recreational level.

Types of Injury in Individuals Sports, it was found that 18.8% of the participants (Frequency: 18) suffer from sprain injuries, 28.1% of the participants (Frequency: 27) suffer from overuse injuries, 27.1% of the participants (Frequency: 26) suffer from fracture injuries, 26% of the participants (Frequency: 25) suffer from dislocation injuries.

Location of Injury in Individual Sports, it was found that 12.5% of the participants (Frequency: 12) suffer from skull injuries, 18.8% of the participants (Frequency: 18) suffer from upper extremity injuries, 22.9% of the participants (Frequency: 22) suffer from lower extremity injuries, 22.9% of the participants (Frequency: 22) suffer from chest injuries, 15.6% of the participants (Frequency: 15) suffer from abdominal organ injuries, 7.3% of the participants (Frequency: 7) suffer from spine injuries.

Time Loss in Individual Sports, it was found that 21.9% of the participants (Frequency: 21) could not practice sport for 0-1 week, 50% of the participants (Frequency: 48) could not practice sport for one week to two weeks, 28.1% of the participants (Frequency: 27) could not practice sport for less than two weeks.

Cause of Injury in Individual Sports, it was found that 19.8% of the participants (Frequency: 19) got injury because of stress of training, 21.9% of the participants (Frequency: 21) got injury because of incorrect practice, 14.6% of the participants (Frequency: 14) got injury because of insufficient warming up, 13.5% of the participants (Frequency: 13) got injury because of poor medical supplies, 6.3% of the participants (Frequency: 6) got injury because of inadequate pitch, 8.3% of the participants (Frequency: 8) got injury because of fatigued and malnutrition, 6.3% of the participants (Frequency: 6) got injury because of opponent's contact and 9.4% of the participants (Frequency: 9) got injury because of weather conditions.

Re-injury in Individual Sports, it was found that 75% of the participants (Frequency: 72) got re-injury during their life and 25% of the participants (Frequency: 24) did not get re-injury during their life. However the results revealed that the majority of participants (75%) who are practicing combat sports did not get re-injury during their life.

Duration of Practicing Team Sports, it was found that 17.2% participants (Frequency: 22) had less than a year of sport experiences, 19.5% participants (Frequency: 25) had 1-2 years of sport experiences, 21.9% participants (Frequency: 28) had 3-4 years of sport experiences and 41.4% participants (Frequency: 53) had more than 4 years of sport experiences. The results indicated that the majority of participants (41.4%) had more than 4 years of sport experiences.

Gender of Participants Practicing Team Sports, it was found that 63.3% of the participants were male (Frequency: 81) and 36.7% participants were female (Frequency: 47) participated in the current study.

Type of Sports in Team Sports Athletes, it is found that 61.7% of participants (Frequency: 79) were practising football, 14.1% of participants (Frequency: 18) were practising basketball, 15.6% of participants (Frequency: 20) were practising volleyball and 8.6% of participants (Frequency: 11) were practising handball.

Level of Athletes in Team Sports, it was found that 53.1% participants (Frequency: 68) from recreational level, 15.6% participants (Frequency: 20) from competition level, 20.3%

participants (Frequency: 26) from high level and 10.9% participants (Frequency: 14) from professional level.

Types of Injury in Team Sports, it was found that 23.4% of the participants (Frequency: 30) suffer from sprain injuries, 35.9% of the participants (Frequency: 46) suffer from overuse injuries, 27.3% of the participants (Frequency: 35) suffer from fracture injuries, 13.3% of the participants (Frequency: 17) suffer from dislocation injuries.

Location of Injury in Team Sports, it was found that 13.3% of the participants (Frequency: 17) suffer from skull injuries, 18.8% of the participants (Frequency: 24) suffer from upper extremity injuries, 21.9% of the participants (Frequency: 28) suffer from lower extremity injuries, 24.2% of the participants (Frequency: 31) suffer from chest injuries, 15.6% of the participants (Frequency: 20) suffer from abdominal organ injuries, 6.3% of the participants (Frequency: 8) suffer from spine injuries.

Time spent in team sports, it was found that 22.7% of the participants (Frequency: 29) could not practice sport for 0-1 week, 44.5% of the participants (Frequency: 57) could not practice sport for one week to two weeks, 32.8% of the participants (Frequency: 42) could not practice sport for less than two weeks.

Cause of Injury in Team Sports, it was found that 19.5% of the participants (Frequency: 25) got injury because of stress of training, 25% of the participants (Frequency: 32) got injury because of opponent's contact, 17.2% of the participants (Frequency: 22) got injury because of insufficient warming up, 14.1% of the participants (Frequency: 18) got injury because of poor medical supplies, 4.7% of the participants (Frequency: 6) got injury because of inadequate pitch, 6.3% of the participants (Frequency: 8) got injury because of fatigued and malnutrition, 5.5% of the participants (Frequency: 7) got injury because of erroneous practice and 7.8% of the participants (Frequency: 10) got injury because of weather conditions.

Re-injury in Team Sports, it was found that 14.8% of the participants (Frequency: 19) got re-injury during their life and 85.2% of the participants (Frequency: 109) did not get re-

injury during their life. However the results revealed that the majority of participants (85.2%) who are practicing Team sports did not get re-injury during their life.

6.2. RECOMMENDATIONS

According to the research findings, the researcher recommended the followings;

I. The research was conducted over a short period of time. Further research over a long period of time is strongly recommended so as to fully understand the types of injuries that athletes encounter all year round in different seasons.
II. The research was conducted in North of Iraq only; therefore results are limited to a small geographical location. Further research is recommended covering a wide geographical location so that researchers may fully understand if the types and causes of injuries among athletes are similar in different continents and countries.
III. For future related studies, the scope of the research should be narrowed for example only one sport should be studied in order to have a more appealing result. The number of study participants should also be increased so as to have an optimal result. We also recommend that other analysis method should be used. In addition, the study should cover more area in Northern Iraq such as Erbil, Dohuk, Karkuk, Halbja and Garmian.

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APPENDIX

TYPES AND CAUSES OF SPORTS INJURIES IN SOME ATHLETES IN SULEIMANIAH - NORTH OF IRAQ

This questionnaire is explicitly designed for a thesis research study. All information collected will be used strictly for the purpose of this thesis work and treated with outmost confidentiality. The collected data of the questionnaire will be used as a report in Master Thesis at the Physical Education and Sport Teaching, Near East University.

Please, make sure you answer all questions and feel free to give correct information.

Thanks for your considerations.

Karwan Ahmed (Master Student)

(Supervisor) Assoc. Prof. Dr. UlasYavuz

Questions

1. How long have you been practicing?

.....

2. Please state your gender.

Male ( ) Female ( )

3. Which type of sport are you into?

……

4. What is your level as an athlete?

Recreational ( ) Competition ( )

High level ( ) Professional ( )

5. What type of injury do you have?

Sprain ( ) Overuse ( )

Fracture ( ) Dislocation ( )

Other ( )

**Please explain your injury:

……

6. Please state the location of your injury:

A. Skull		
Head	R	L
Eye	R	L
Ear		
Nose		
Jaw		
Concussion		

C. Chest		
Clavicle	R	L
Sternum		
Ribs	R	L

E. Spine		
Neck		
Middle back		
Lower back		

D. Upper Extremity		
Shoulder	R	L
Upper arm	R	L
Elbow	R	L
Forearm	R	L
Wrist	R	L
Fingers	R	L

E. Abdominal Organs		
Stomach		
Kidney		
Spleen		
Liver		
Genitals		

F. Lower Extremity		
Gluteal muscle	R	L
Hip	R	L
Groin muscle	R	L
Hamstring muscle	R	L
Thigh muscle	R	L
Knee	R	L
Shin	R	L
Achilles tendon	R	L
Calf muscle	R	L
Ankle	R	L
Foot	R	L
Toes	R	L

G. Other	_____

7. What is the cause of your injury?

Stress of Training	( )	Opponent's Contact	( )
Insufficient Warming-up	( )	Poor Medical Supplies	( )
Inadequate Pitch	( )	Fatigued / Malnutrition	( )
Erroneous Practice	( )	Weather Conditions	( )

8. Is it a reoccurring injury?

Yes ( ) No ( )

Thanks.