Major Causes of Physiological and Psychological injuries of Project Athletes: the case of City Administration of Addis Ababa Yeka and Gullele Sub Cities

Zeradawit Weldekiros

A Thesis Submitted to

The Department of Sport Science

Presented in Partial Fulfillment of the Requirements of the Degree of Master of Science in Sport Science

Addis Ababa University

Addis Ababa, Ethiopia

July 2018

Addis Ababa University

School of Graduate Studies

This is to certify that the thesis prepared by Zeradawit Weldekiros, entitled:

Major Causes of Physiological and Psychological injuries of Project Athletes: The case of City Administration of Addis Ababa Yeka and Gullele Sub Cities and submitted in partial fulfillment of the requirements of degree of Master of Science in sport science complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by Examining Committee:

Examiner

(Internal)_____ Signature _____ Date_____

Examiner

(External)_____Signature _____ Date_____

Advisor _____Signature _____ Date_____

Acknowledgment

Above all I wish to express my sincere and deepest thanks to my God for helping me to continue my education without any obstacle.

I would like to thank my advisor *Dr. Tesfaye Asgedom* for his encouragement, continuous intellectual guidance, constructive comments and timely response to every step for the accomplishment of my thesis work. My thanks also go to all my family especially my father *Melakehiwot Nigus Woldekiros* and my dear mother *Mulu Belay* whose initiation and financial support to fulfill my aspiration have never departed from me.

My gratitude also extends to my friends *Andualem Taye* and *paulos Zemariam* who gave me moral and material support to fulfill my educational aspiration. I am also grateful to the research participants' athlete, coaches and sport experts who showed their unreserved cooperation in giving me the required information.

DECLARATION

I hereby declare that this honors thesis presents my own work and had not been previously submitted to this or other institution for a degree, diploma or other qualification. Citations from the other authors were listed in the references. A signature of confirmation by:

Name Zeradawit Weldekiros

Signature _____

Date _____

This thesis has been submitted for examination by my approval as a university adviser

Adviser Dr. Tesfaye Asgedom

Signature _____

Date _____

ABSTRACT

The study was conducted with the objectives of assessing the major causes of physiological and psychological injuries of project athletes. The study employed descriptive research method. The subjects of this study were 6 coaches, 92 athletes and 2 sport experts of City administration of Addis Ababa youth and sport Bureau. Random sampling method was employed to select the subjects. The data have been gathered through questionnaire, interviews and observation. The data have been analyzed using description research method through the help of Statistical Package for Social Sciences (SPSS version 20.0).Frequency and percentage distribution in the form of table was used to present and discus the data.

Findings indicated that, lack of enough modern sports wears, over loaded training, facilities and equipment, lack of enough warming up exercise prior to the main training session, insufficient water drinking, inappropriate training area and lack of individualized training were the major causes of physiological injuries. Athletes were facing different physiological injuries specially thigh and hamstring muscle pains, ankle injuries, knee pain and calf and heel pain were the most commonly injuries happened to project athletes,

Lack of treatment, feel of depression, lack of self confidence, being stressed and tense, Eating disturbances (more or less than usual) , Sleep disturbances (more or less than usual), Low energy , unexplained pain, Depression, spontaneous crying, despair and hopelessness, Anxiety, Panic attacks, Fearfulness, Compulsive and obsessive behaviors, Feeling out of control, Irritability, angry and resentment, Emotional numbness, Withdrawal from normal routine and relationships ,Difficulty making decisions, Decreased ability to concentrate, Feeling distracted were seen as symptoms of psychological injuries commonly associated with the project athletes.

KEY WORDS:- physiological injuries, psychological injuries, injury prevention, injury rehabilitation

Table of Contents

CHAPTER ONE

1. INTRODUCTION

1.1 Back ground of the study

Sport is a highly valued aspect of our culture, shapes the minds of athletes, organizers and spectators, as well as medical practitioners, partly because athletic injuries are an unfortunate part of modern sport today. Physiological Injury is defined as damage resulting in functional deficits and functional abnormalities at different parts of the body. Psychological injury is rather a psychological abnormality that gradually develops at different rates indifferent athletes, influencing both the physiological and mental status and the overall psychological well-being of an athlete. Psychological injury in an athletic environment can be caused by a wide variety of events (e.g., previous traumatic injury, conflict with coaching staff, from harmful relationships, from emotionally abusing coaching behaviors, or from bullying and hazing behaviors from teammates etc.). It usually involves a whole complex of behavioral and complete feeling of helplessness in the face of a real or subjective threat to life, bodily integrity, or sanity (Slobounov, 2006).

The most challenging issue that coaches face daily is to provide an opportunity for maximal performance enhancement and secure a safe and injury free coaching environment. There is always a possibility of injury due to the nature of athletic activity that coaches should constantly be aware of. Due to coaches' primary responsibilities, which are an achievement of maximal performance and secure winning, positive (but not negative) training effect should be their major goal. However, positive training effect may take place only if training load is above the habitual level. In other words, if training load in terms of the volume and intensity is the same over an extensive period of time, there will be no additional adaptation resulted in physical fitness saturation. If the training load and intensity are too low, detraining may occur, meaning that an athlete may not improve his/her physical status despite continuous training. On the other hand, if the training load and intensity are too high, an athlete may experience maladaptive responses to training and an increase in risk of injury. Athletes' individual responses (both adaptive and maladaptive) should be carefully monitored by the coaches in order to achieve progressive improvement and most importantly, to prevent overload-related injuries (Semyon, 2008)

Engaging in sports activities at a young age has important physiological and psychological health benefits, but also involves risk of injury. This would seem to be particularly true the intensive training programs and high frequency participation. Increased participation is associated with an increased risk of physical injury, or even sudden death.

The purpose of this study is to assess the major causes of physiological and psychological injury that are encountered on project athletes and to recommend methods of prevention and rehabilitation of injuries.

1.2. Statement of the problem

The central issue that drives this study was to assess the major causes of physiological and psychological injuries of project athletes.

Athletics projects in Ethiopia have their own way and possible outcomes which are dependent on the attention of all stakeholders. Many factors can negatively impact on young athletes' ability not to optimize their potential. Due to over training programs and high frequency competitions in which athletes often engage, many injuries are happen. Regardless of their level of involvement in training and competition, majority of athletes at some point will experience an injury that will keep them away from their sports. Injuries happen due to different circumstance surrounding certain psychological, physiological and training conditions. They can affect an athlete to such an extent that the level of injuries can increase dramatically. Psychological factors which might causes injuries are personality, stress, lack of concentration, low attentions pars level, low stamina level pessimism, psychological burnout and negative feelings (anger, exhaustion, bad mood, confusion). The physiological factors that may cause injuries are training load, nutrition; sport wears, training facilities, training area and environment.

Due to the mentioned reasons this research is initiated to investigate the major cause of physiological and psychological injuries of project athletes of Addis Ababa city administration the case of Yeka and Gullele sub cities athletes project.

1.3. Research Questions

In order to provide guidance to the goals of this study and to find out the existing causes of injuries in project athlete, the leading research questions ware specified. The questions that guide the study ware as follow.

1. What are the major causes of psychological injuries of project athletes?
2. What are the major causes of physiological injuries of project athletes?
3. What are the most common physiological and psychological injuries of project athletes?
4. What are the prevention methods of injuries?
5. What are the rehabilitation methods of injuries?

Answering these research questions increase the understanding of the major causes of the physiological and psychological injuries of project athletes. These research questions of the study were structured in order to provide straight forward assessment of the major cause of injuries.

1.4 Objectives of the study

1.4.1. General Objective

The general objective of this study was to find out the major cause of psychological and psychological injuries of project athletes of Addis Ababa city Administration the case of Yeka and Gullele sub cities.

1.4.2. The specific objectives

- ✓ To identify major causes of physiological injury.
- ✓ To investigate the major causes of psychological injuries
- ✓ To assess the most common physiological and psychological injuries on performance of athletes. .
- ✓ To suggest major mechanisms of prevention of injuries
- ✓ To identify some common methods of rehabilitation

1.5 Significance of the study

The primary interest of the research was to assess the major causes of physiological and psychological injuries of project athletes the case of Addis Ababa City Administration Yeka and Gullele sub cities. The researcher believes that this research work is significant in the following ways.

- ✓ To give awareness for athletes and coaches on methods of prevention injuries.
- ✓ It helps for other researchers' as spring board for whom study in this area.
- ✓ Identify the common injuries of project athletes.
- ✓ To provide scientific rehabilitation methods for coaches and athletes of athletics projects when injuries are happened.
- ✓ To educate athletes, coaches, sport experts. Parents and other stake holders of the athletics projects.

In general the significance of this study is to give recommendation for coaches, athletes, sport experts and other stake holders of project athletes; on how to prevent injuries and the rehabilitation methods if injuries are happen.

1.6 Limitation of the study

The researcher was faced some problems in doing the research. These may result in affecting the outcomes of the study, some of the problems were:-

- ✓ The shortage of available literatures
- ✓ Scarcity of transport to distribute questioners
- ✓ shortage of time to collecting questioners from respondents
- ✓ willingness of respondents to answers the questionnaires
- ✓ financial constraints

1.7. Scope of the study

This study was delimited to assess the major cause of physiological and psychological injuries of project athletes in city administration of Addis Ababa the case of Yeka and Gullele sub cities.

City Administration of Addis Ababa youth and sport bureau organizes athletic projects according to talent area and training environment in all sub cities of the city. Among these sub cities Yeka and Gullele sub cities athletic projects were the study area of the research. It was help full if all the projects ware assessed but due to time, money and other constraints the study area was delimited only the two sub cities.

1.8 Definition of operational terms

- **Athletics Project**:-the unique features of the training programs developed for young athletes where competitors are younger than adult age whether children or adolescents.
- **Injury Prevention**: - is an effort to prevent or reduce the severity of injuries caused by external mechanisms. Jhon, Etal (1990)
- **Performance**:-is carrying out of specific physical routines or procedures by one who is trained or skilled in physical activities. Saggar, H and Kunggtten(1996)
- **Physiological injury**: - is the transcript of physiological responses to sport injuries when body tissue is damaged. Shaver and Lary,(1981)
- **Psychological injury**: -is stress related emotional condition resulting from real or imagined threats or injuries. Richared H (1998)
- **Rehabilitation of injury**: -is the process of deciding when an injured or ill athlete may return to training or competition. Peterso, Etal (1986)
- **Sport injury**:-is the result from acute or repetitive stress associated with athletic activities. Peterso, Etal (1986)

1.9. Organization of the study

This study was divided in to five chapters. The first chapter deals with introduction, back ground of the study, statement of the problems, objectives, scope of the study, significance of the study and organization of the study. Chapter two briefly explains the review of related literatures. Chapter three explores the research design and methodology section. It also includes a brief description of the study area, population and sampling methods.

Chapter four gives emphasis to data analysis and interpretation. The last chapter five consists summary, conclusion and recommendations.

CHAPTER TWO

2. REVIEW OF LITERATURE

This chapter deals with the review of the related literature which has relation to the topic of the research. What are the major causes of injury in the project athletes?

2.1. Foundation of injury in Athletics

Injury is an unfortunate risk that, according to most coaches' athletes and medical practitioners, is unavoidable part of athletics. Most athletes that participate in high level sports experience some type of injury during their athletic casers.

Despite significant advance in science of coaching, improvement in coaching techniques, technological progress in the design of athletic equipment, protective devices and facilities, the incidence of sport injury has actually increased. Injuries in athletics were classified based on events and associated symptoms, including:

A. Acute traumatic injuries (i.e. contusions, sprains, tears etc.)
B. Chronic injuries (i.e. jumper knee, tennis elbow, thought's shoulder, etc.) and
C. Overuse injuries (i.e. low back pain, spondy lolisis, etc.)

Acute injuries occur as a result of a single, sudden impact that creates tissue damage. Most often, the athlete becomes aware of the injury soon after it has occurred. This awareness, in fact, does not mean that the athlete and his/her coach have an accurate and complete comprehension of the impact on the time of the accident. The full understanding of the initial injury may be achieved while monitoring various symptoms resolution (both physical/physiological and psychological) over the course of recovery.

On the other hand, chronic and often referred over use injuries are the accumulation of repeated and most often under threshold injuries, due to exposure to small forces over time which ultimately result in serious damage. This type of injury is frequently manifested in conditions such as tendonitis and/or stress fractures. While acute injuries may be more recognizable because of their sudden impact and often associated obvious functional abnormalities and physical symptoms; chronic injuries often gradually develop frequently not

observable and their influence of athletes may be more insidious. Chronic injuries can play havoc with an athlete's motivation and most often are major causes of burnout.

From intervention perspectives, at least 5 categories of injury severity were proposed (Hail, 1993).

1. Mild: an injury requiring treatment without interruption of training and participating in competitions with low risk of development of physical and/or psychological consequences. It should be noted that mild injuries sometimes are non recognizable by athletes, coaches and even medical practitioners. This may put the mild injuries athletes at risk for re current more sever injuries. It should be noted that multiple recurrent mild injuries may cause the development of "psychological trauma" there fore medical practitioner should consider assignment of signs for psychological trauma in athlete with multiple minor injuries and referring these athletes to qualified psychologist for further evaluation and treatment, if necessary.
2. Moderate: a relatively more sever injury that interferes with ongoing practices and potentially limiting participation in practices and competitions. This type of injury definitely requires referral to medical professional for comprehensive evaluating and treatment if necessary. Monitoring for any signs of psychological trauma is highly recommended.
3. Major:an injury requiring a long duration of in ability to practice, often associated with surgery and/or hospitalization and may potentially lead to chronic and long term physical and/or psychological deficits. It is highly recommended that referral to a sport psychologist with expertise dealing with injured athletes should be made by medical practitioners. The athletes with even a single episode of major injury are highly susceptible for development of psychological trauma.
4. Sport disabling: an injury which because of severity or timing, present an injured athlete from returning to prior level of functioning both physical and psychological. Involvement of clinical psychologist with knowledge of sport related injuries is critical for this category of injured athletes to predict and prevent potentials for post traumatic psychological/psychiatric problem (i.e. post traumatic stress disorder).

5. Catastrophic: an injury that causes permanent functional and/or psychological impairment and/or disability, typically from damage to the head and spinal cord, and other injuries of comparable severity. It should be noted that the occurrence of permanent functional disability due to catastrophic injury is infrequent relative to all sports. Care about psychological well being of this category of athletes mandatory.

2.2. Athletes' response to injury

There are numerous predisposing factor for athletic injuries, both intrinsic (i.e. physical/biological/psychological status, including fitness level, personality type, availability of coping resources, history of stressors) and extrinsic (i.e. type of sport, coaching errors, psycho-social environment). Indeed from a practical perspective, it is impossible to control these mutually, dependent factor since there is no solid theoretical foundation for predicting or preventing sport related injuries. There was an attempt to separate physical/biological and psychological factors related to injury and to develop multi component theoretical factors model of stress and injury (Anderson & Williams, 1988). This initial model implies a direct link between stress induced by sports participation and/or injury resulting from stress responses.

The central core element of this revised model is a bidirectional relationship between the athletes cognitive appraisal of the situation stress responses as evidenced by psychological changes. For example, self perception of sport related demands is challenging and realistically may consolidate an athlete's resource both physically and psychologically. This can help him or her stay focuses and creates an injury free situation. When cognitive appraisal is in accurate and distorted by irrational thoughts and there is the belief that resources are in adequate to meet the demands, the injury risk is increased due to "bad distress" (Williams, 2001). Stress, related to attention deficits is attributed to increased generalized tension, narrowing of the visual field, increased distractibility, to extract meaningful information from back ground noise.

2.2.1. Cognitive response to injury

Cognitive appraisal of the injury in general and its impact on athletes short and long-term responses to injury specifically, is highly individual. The same impact and amount of damage due to trauma for one athlete could be a career ending injury, but for another it could simply be an annoyance.

Despite individual differences, there is commonality in athlete's cognitive response to injury, (Beck & Emery, 1985).

Catastrophizing: exaggerating the severity of injury a couple of common examples of irrational thoughts are: At a pain flare up. "I'll never get over this pain".

Over generalization: in correctly extending of the impact of injury to aspects of playing ability and/or daily activities that are not likely to be affected by injury. A few examples are "Because of this shoulder injury I'll probably never be swimming at full speed again" or "with this injury, my girl friend will leave me."

Personalization: experiencing undue personal responsibility for injury or exaggerating the meaning in relation to other teammates or coaches. For example, injured athletes may be pre occupied with the idea, "why me and one who always gets injured."

Confusion: or "mental block" defined as an injured athlete's acute response, characterized by the inability to cognitively comprehend the injury. "I was in the greatest shape of my entire career. I can not believe this happened." "why did this injury happen when I was ready for the best?" unfortunately, injuries always happen at unfortunate times.

Selective abstraction: focusing on specific aspects of an injury that have little meaning in the overall context of the injury. For example, an irrational thought such as "my team mate had an Acl and it was a career ending injury for him. It would be for me too." Another example is "if I were allowed to warm up longer this would not happen.

Absolutistic/dichotomous: thinking un reasonable and complex thoughts related to injuries of all categories. This is typically a reflection of injured athletes' lack of appreciation for painful experiences. An athlete is often confused about real or neurotic type of pain and experiences, and has thoughts such as: "my painful injury is neither physical nor mental."

In addition to individual differences in cognitive responses to injury, the type and severity of injury, athletes positive versus negative experiences with previous injuries and recovery, gender and many other variables should be considered.

2.2.2 Affective response to injury

The cognitive appraised of injury never occurs in isolation from its emotional content. Direction of thoughts, beliefs of prompt recovery and an athlete's over all mental trends are hardly influenced by emotions. The feeling of guilt, uncertainty about the course of recovery and fear of pain are all emotional responses which influence the self perception of injury. (Hardy &Crace, 1990). This is similarly to a series of stages experienced by terminally ill people (kubler-Ross, 1969). This initial seminal thinking was outlined in on death and dying proposed that patients typically experience disbelief, denial and isolation, anger, bargaining, depression, acceptance and resignation.

Similarly, injured athletes may follow a five stage grief response, including:

1. Denial, as a sense of disbelief as well as varying degrees of failure to accept the seriousness of the situation and severity of injury.
2. Anger, as mental and/or physical aggression/ irritation due to various attributions.
3. Bargaining, as a sense of hop that injury is not as serious as it looks.
4. Depression, as a result of anxiety, fear of uncertainty and anticipation of trouble, often manifested in rapid mood swing.
5. Acceptance and reorganization, as a sense that reality threatening life goals and personal values.

Among other cumulative reactions to injury, as described by Peptidase& Danish (1995) may be the following.

Feeling of identity loss, and/or loss of an important social role; Such as, not being recognized as an athlete,anymore and being disengaged from sport roles. This may have serious consequences affecting the athletes self concept.

Fear and observe thought of not being able to recover to the pre-injury physical status and performance level. Since the injured athlete can not practice or compete, there is plenty of time for worry and experience anxiety.

Drop of confidence level, due to temporary and/or prolonged restriction to practice this in turn \may result in decreased motivation for rapid recovery and to sports participation.

Performance decrement, especially evident upon initial return to sports participation, may be because of lowered confidence and missed practice.

2.3. Coaches and Athletes' perspective of Injury

2.3. 1 Injury in Athletics: coaches' point of view

There are numerous causes and variety of physical, behavioral and psychological consequences of athletic injury. Coaching errors are commonly cited as one of the major causes of athletic injuries. Generally speaking, there are two types of coaching styles that make a tremendous impact on the physical and psychological atmosphere in the training/competition environments.

The first one is judgmental and critical which is characterized by the situation when coaches are trying hard (may be with good intention) to identify as much error in performance as possible, they present these errors in critical manner. ''you are not listening…., how many times have I told you to keep your eyes on the ball…, you are still not doing that…., you will never get this, why don't you try to play golf instead….,'' to name just a few examples of this coaching style. It could be expected that tremendous tension can be anticipated in the coach-athlete relationship over time. Inherit ably, the breaking point will be reached and the relationship will end due to a deficient coaching style.

The second style of coaching is characterized by the atmosphere where the coaches observe and assess an athlete's performance, with the intention to identify both progress and still existing errors in performance ''Good effort…., right direction to think…., you should feel better than yesterday…., keep trying…., still losing contact with the ball….,'' to name just a few comments within this style of coaching. (Slobunor, 113)

From the above mentioned coaching styles not surprisingly the second coaching style creates an extremely positive learning/training environment benefiting both the physical and mental well-being of the athletes. In addition to issues with the over all coaching styles identified above, there are several fundamental coaching problems that directly and/or indirectly cause high risk for injury in athletic environment. Especially in adequate assessment of athletes' physical skill, misunderstanding of psychological coping resources, rushing with acquisition of new technique, over training and over loading causing accumulated muscle and mental fatigue, and early return

to sport participation after injury are just a few examples of coaching errors that increases the risk of injury/re-injury in athletics.

According to Professor Semyon (2008); the following text contains some common coaching mistakes identified by clinical sport practitioners and psychologists including, over reacting: when the athlete makes an error or does not perform, according to the coach's instructions and expectations; it should be noted that there are at least two types of errors of overly observed performance.

a. **Errors of execution of skill**, when a clear picture of an ideal performance is intact but physical capacities are not adequate and/or sufficient enough to meet high demands of performance.
b. **Errors of planning**, when a clear image of an ideal performance is lacking due to in adequate cognitive assessment of the situation and demands but the athletes capacity interns of strength, flexibility and endurance is intact. Accordingly clear identification of overall performance is critical to avoid coaches overreacting. Which in fact an indication of in efficient judgment and/or too critical style of coaching.

Demanding: too much time or commitment from athletes so that they are continually injured. Clearly to be a competitive, it is necessary to allocate enormous amount of time and effort to practice and work outs.

Relentlessly: Putting a high amount of pressure on the athletes, causing every practice to become a life or death situation or requiring that athletes are constantly at boundary level of being over-trained and/or burn out. There is common ''goal-oriented philosophy'' that sport psychologists call ''outcome orientation''. Rarely do coaches encourage the amount of effort an athlete puts in to action to accommodate his/her coaches' demands.

Accordingly so called ''mastery orientation'', which emphasizes the importance of the process of skill acquisition and step by step improvement, is a rare practice in a coaching environment.

(Greg Louganis) says that, it is not necessary to be perfect every time performing the divers both at practice and even at competition. Everybody makes mistakes, nobody is perfect.

There is always room for improvement and this is an endless process. Thus, coaches should focus on progress, even non-significant, rather than on ideal performance routines. This coaching style may reduce a lot of pressure even if the demands of the sport are exhausting.

Not respecting: that youth athletes needs to have balance in their life time for school, work, family, friends and rest. It is really difficult to work with incoming fresh man athletes. The do not have realistic expectations and do not have enough confidence in us as coaches. It makes time to develop a relationship and demonstrate that the coaches' major concern is their safety and well being not what they can or cannot do in the training.

Mistreating: the athletes for being lazy, not trying hard enough or not placing high enough and dragging the whole team down the slope is another detrimental style. Athletes are human and should be treated accordingly. As stressed by Jepson, ''people should be treated as people, not like machines and robots having a goal to be best in their sport and sport is just a part of their life.

2.3. 2.Overuse

Overuse injuries reportedly up to twice the frequency of acute injuries. According to Robert P. Wilder, MD, ShikhaSethi, MD says that overuse injuries are approximately 50% of all sports injuries are secondary to overuse. The Frequency of overuse injuries evaluated in primary care sports medicine clinic is even greater, reportedly up to twice the frequency of acute injuries. The majority of injuries evaluated in running injury clinic are related to overuse, and approximately half of these involve the lower leg (20%), ankle (15%), and foot (15%). Overuse injuries result from repetitive micro trauma that leads to local tissue damage in the form of cellular and extracellular degeneration, and are most likely to occur when an athlete changes the mode, intensity, or duration of training—a phenomenon described as the ''principle of transition''. Physical training uses prescribed periods of intense activity to induce the desired goal of ''super compensation' or performance improvement.

A mismatch between overload and recovery can lead to breakdown on a cellular, extracellular, or systemic level, however. At the cellular level, repetitive overload on tissues that fail to adapt to new or increased demands can lead to tissue breakdown and overuse injury. It is important to realize that, in theory, this subclinical tissue damage can accumulate for some time before the

person experiences pain and becomes symptomatic. On the systemic level, rapid increases in training load without adequate recovery may cause a global ‘‘overtraining syndrome.’’ Strong predictors of overuse musculoskeletal injury include a previous history of injury as well as walking or running more than 20 miles per week. Both intrinsic and extrinsic factors contribute to overuse injuries. Intrinsic factors are biomechanics abnormalities unique to a particular athlete and include such features as mala alignments, muscle imbalance, inflexibility, weakness, and instability. High arches, for example, have been demonstrated to predispose to a greater risk of musculoskeletal overuse injury than low arches (‘‘flat feet’’) in military recruits. Extrinsic (avoidable) factors that commonly contribute to overload include poor technique, improper equipment, and improper changes in the duration or frequency of activity. These improper changes in activity duration/ frequency or ‘‘training errors’’ are the most common causes of overuse injuries in recreational athletes.

Vulnerability to extrinsic overload varies with the intrinsic risk factors of an individual athlete. Sports-acquired deficiencies, categorized as an extrinsic risk factor, actually represent the product of biomechanical abnormalities and training errors. Because sports activity can overload an athlete’s musculoskeletal system in predictable ways, athletic repetition without proper conditioning can propagate muscular imbalance and flexibility deficits.

Injuries are often related to biomechanical abnormalities removed from the Specific site of injury and underscoring the importance of evaluation of the entire. Common overuse injuries of the lower leg, ankle, and foot include tendon apathies, stress fractures, chronic exertion compartment syndrome, and shin splints.

2.3.4. Psychological injuries

In athletics activities during the training or the championship situations methods of motivational arousing should set according to the level of the competition and the competitor’s condition. The psychological balance needed to the required action through subjective reflection is what we call psychological load. These psychological mobilizations the athlete to perform in training or competition situation helps the athlete to perform his/her activity without injury. The psychological load exists from experience of the difference between required and realizing abilities before the outcome or tired action. A different type of sport activities needs different amount and types of psychological load. The psychological works of the Athlete is dependent on

the change of selected psychological function. Variables like reaction abilities for instance without the load their action ability is totally poor, one needs sufficient psychological load to apply his reaction. Appearance of psychological load these are: - Psychological tiredness

Psychological dissatisfaction/ irritation/

Psychological tiredness caused injury. If the Athlete reduces timely the psychological performance deregulations which are manifested through observation, distortion, coordination distortion and thinking order. At this movement where observation, co-ordination and thinking are distorted, the Athlete will face in the extended reaction time. The psychological load leads to injury. Monotony It is the redundancy of activity, which leads an Athlete to develop lack of interest in training activity. It is also expressed in lack of attention, slow reaction ability and performance fluctuation. The final level of monotonies may lead to injury. The psychological lead come from training requirements are influenced by

- the actual condition of the Athlete
- the training content
- the performance ability of the athletes.
- The success failure dynamic in performance process success could be reduced psychological load, so the Athlete wills not injury prone. So even through psychological load and its positive preparation are important in training to develop psychological performance ability or prerequisite for good performance to balance and reduce the unnecessary loads that could lead to injury.

Pre Disposition In addition to the assessment, treatment, and rehabilitation of athletic injuries, one of the athletic injuries, one of the athletic trainer's most valuable functions is the prevention of athletic injuries. Taping, bracing, and orthotic devices are used to help deter injuries, but recently, research has shown that it may be possible to identify classifications of individuals who may be at a higher risk for injury to occur. This does not mean that we are able to predict with 100% certainty that will become injured; it simply means that certain groups of athletes may be predisposed to injury because of factors related to life stress, personality, attitude, and situational factor. Personality → history of stressors ← coping resources

Life Stress Events Intuitively it is tempting to believe that all injuries have certain physical mechanisms that cause them; a lateral blow to the knee; violent rotational movement while a foot is firmly planted on turf or the court surface; or a dramatic contraction of a muscle that produces a strain, tear, or rupture. Similarly, other readily observable factors such as equipment, environmental conditions, lack of training, lack of adequate warm up or stretching and overtraining are cited as contributing factors to injury. However, a convincing body of research evidence has recently emerged that point to the fact that there is a fairly strong relationship between psychological factors and the occurrence of injuries. Variables such as personality factors, history of life stressors, and coping resources all contribute to whether or not an individual may be at increased risk of athletic injury. Based on this, a preliminary model has been proposed to explain the relationship among variables.

According to the model, numerous variables such as personality factors, coping resources, and whether or not the individual has been or is being schooled in intervention strategies, affect the magnitude and intensity of the stress response, which, in turn influences the occurrence of injury. A significant factor in the model is the concept of life stress. Athletes who are, or have been, experiencing significant stressors in their lives are more likely to be injured, and the injuries are likely to be more severe. Stressors include, but are not limited to, such things as the death of family members, moving, change of occupation, and divorce in the family. As yet it is unclear why individuals experiencing excess life stress are predisposed to injury, but the most tenable theories have to do with muscular tension and intentional focus. Stress produces anxiety, which is accompanied by physiological arousal. One of the symptoms of excessive arousal is muscular tension, and muscles and limbs that are rigid and inflexible are more prone to injury. Additionally, it is well established that increased arousal results in a narrowing of intentional focus as well as increased distractibility. Failure to attend appropriately to the task at hand in a volatile environment might result in individuals missing important cues and stimuli that might alert them to hazardous situations, particularly in contact sports. Interacting with the concept of life stress are the individual's coping resources. Coping mechanisms such as relaxation techniques, mental imagery, and goal setting are invoked to help us overcome stressors in the environment. However, coping resources can be viewed as a reservoir that becomes depleted somewhat each time an individual encounters a stressful situation. Time replenishes the reservoir, but too many stressors in a short period of time can seriously deplete the individual's

coping resources, thus making it more likely for injury to occur due to increased anxiety, physiological arousal, and narrowed intentional focus.

Personality Factors.

Unfortunately; there is no clear pattern of personality traits that enables prediction of the individuals who are most likely to experience injury. However, several personality attributes consistently emerge in the psychological testing of injured athletes with establish instruments such as the cat tell 16PF Questionnaire and the California psychological inventory. Factors such as anxiety, locus of control, and risk-taking behavior have proven to be significantly related to the incidence of injury.

Anxiety, and in particular, competitive trait anxiety is denned as a predisposition to perceive athletic situations as threatening and to respond with heightened levels of competitive state anxiety. Such individuals are more likely to approach games or matches with high levels of fear and apprehension (cognitive state anxiety that are accompanied by increased levels of physiological arousal (somatic state anxiety). Excess arousal creates heightened muscular tension and a corresponding narrowing of intentional focus that may make the high trait anxious individual more injury prone. Related to the concept of anxiety is locus of control. Individuals can be classified along a continuum ranging from extreme internal to extreme external locus of control. Those who are classified as internals believe that they are responsible for their own actions and those they are in control of their destiny. External, on the other hand, feel "acted upon," in other words, that they have little control over what happens to them. They tend to approach situations with more caution and higher levels of anxiety, which carry with them the same consequences for injury proneness, previously described. Externals are also more difficult to deal with following an injury because they tend to progress more slowly through the stages of the grieving process, described later, and are reluctant to share in the responsibility for their rehabilitation.

Two final personality factors that may predispose an athlete to increased risk of injury are risk-taking behavior and encouraged to certain extent in achievement-oriented individual, excessive risk-takers may push themselves into stressful situations that will tax their coping mechanisms.

When coupled with the concept of invincibility found to exist particularly in college-age male populations, one has "an accident waiting to happen."

Situational Factors

If there is one thing learned through years of studying the relationship between personality factors without examining the environment or situational factors in which they exist. It is the interaction between personality, situational factors, and the individual's physical characteristics that dictate whether they are at increased risk of injury. Certain situational factors, when combined with the personality characteristics mentioned previously, beware of, for example, the substitute or marginal player who aspires to a starting position. These individuals are more likely to encourage in excessive risk-taking behavior and to mask pain and injury to gain the coaches' attention and favor. Similarly, the player who has just earned a starting role may be motivated to play through pain so as not to relinquish that which has been achieved. Another potentially problematic situation involves the marginal student whose primary sense of self-worth comes through participation in athletics. Such individuals have more to lose by not playing and therefore may be more inclined toward excessive risk taking. Similarly, the individual for whom an athletic scholarship is the only avenue to an education or who views success in sport as a vehicle for launching a professional career may be more at risk of injury.

Attitudes In a recent survey of coaches, the characteristic most admired and desired in their athletes is mental toughness. Athletes are socialized to believe that mental toughness, giving 110%, and sacrificing their bodies are essential for success in sports. Certainly it is important for athletes to strive to do their best and to persevere in the face of adversity, but it is important to realize that mental toughness and ignoring one's physical limitations can lead to injury and failure. Again, it may be the substitute or marginal player who is most at risk because he or she may disregard common sense to earn a starting position. Sports medicine professionals know that pain is a signal that something is wrong, yet among some coaches and athletes, it is considered to be a sign of mental toughness to ignore pain.

Self Concept and Self Esteem The field of sport median has advanced to such a stage that we now able to re-turn, athletes, to competition with unprecedented speed. Athletics are able to physically return to competition faster than at any time in history. However, what is forgotten is

that athletes may suffer psychology trauma as well as physical trauma when injured and if we too effective with our treatment methods and rehabilitation modalities, athletes may be ready to return to competition physically before they are to return psychologically.

Psychological consideration and their consequences of injures

In psychological antecedents and consequences of athletics injures we consider athletes as human being; we consider the important of social support, strategies of psychology rehabilitation by using relaxation techniques and imaginary. The response to physical trauma, For all types of injuries the body can be express to respond in the same way; that is, the process inflammation and heeling in addition to this predictable physical respond of the body to trauma, there are certain psychological reactions, (grief response, dental, anger, bargaining, depression, acceptance and resignation, perceptions of injuries fear alienation) that occur that have profound implications for how the sport medicine professional asses, threat and rehabilitates the injure

2.3.5 Physiological injury

An Athlete to be effective in his training or competition activity should have a well developed lung the cardio vascular system which improves the capacity of the intake of oxygen adequately.

2.3.5.1 Physical problems

Studies assert that physical activity is the most important recreational, preventive remedial instrument, which is useful for competitors. The main aim of physical conditioning preparation to maintain an athlete present physical conditioning should across though two important phenomena these are:

In physical preparation an Athlete to maintain or to improve athletics performance and to avoid risk of injury should have the quality of speed, strength, skill, mobility and endurance. But the absence of all the mentioned Athlete quality will lead to a minor or server injury during training or match condition.

2.3.5.2 Environmental conditions

The external conditions that circumstances, which are natural or manmade, in sport world the type of climate, the playground, sport equipments, spectators, facilities have a great contribution for the occurrence of injuries in competition and other athletics activities.

2.3.5.3 Warming up

The importance of proper warming up before any vigorous exercise or competition is highly recommended by different scholars. Warming up is an important requirement for an effective preparedness of the general organic, co-coordinative readiness and psychological readiness. We can think that if an athlete pass across through the main specific warming up he has a chance of minimize or avoiding injuries during training or competition condition. Anyone who wants to engage in any strenuous physical activity is advised to do proper warming up. It is a well-established fact that considerable amount of warming up enhances the performance and the result of an athlete and it reduces athletics injuries. The warm up is through to minimize the risk of in adequate blood flow to the heart and during the few seconds of heavy exercises because it gives the heart time to adjust from being at rest to undergoing sudden strenuous activity. Sudden exertion can caused can caused heart attack even among athletes in good professional positions. An less the heart is given time to warm up the coronary arteries dilate allowing more blood to flow through them it lead to the heart injuries.

2.3.5.4 Mechanical problems

One of the most significant principles which expose to a certain kind of injuries due to trauma is such as impact of load with any interval. The change of increasing velocity without progressive concept and the force of inappropriate applications bring an athlete to injury prone. In general idea the absence of interval between athletic activities, excessive velocity, un proportional distribution of force without considering time and space may lead to occurrence of injuries.

2.3.5.5 Nutrition and hydration

For athletes, nutrition and supplement use is a common way to augment a steady training program. Arguments that have gone on for years about the best diet for optimal athletic performance will likely continue for years, as well. Big questions in sports nutrition are what to eat and when to eat, as well as eating during training versus eating before competition. Specifically, they review the current scientific data related to athletes' nutrient, energy, and fluid needs, assessment of body composition, strategies for weight change, the use of supplements, and nutrition recommendations for vegetarian athletes. See Section Three, Annotated Primary Source Documents for a reprint of the ADA/CDA position stand on nutrition for athletes.

What to eat

The Acceptable Macronutrient Distribution Range (AMDR) for carbohydrates is 45% to 65% of total calories. Protein is an important macronutrient in the diet; most Americans are already currently consuming enough (AMDR _ 10% to 35% of calories) and do not need to increase their intake. The needs of athletes may or may not be the same as an average individual. During times of high physical activity, energy and macronutrient needs (especially carbohydrate and protein intake) must be met in order to maintain body weight, replenish glycogen stores, and provide adequate protein for building and repairing tissue. The debate over high-protein diets and power athletes is an old one. There is much controversy over what percentage of an athlete's diet should be devoted to carbohydrates. Fats supply energy and essential fatty acids and serve as a carrier for the absorption of the fat-soluble vitamins A, D, E, and K and carotenoids. They also serve as building blocks for membranes and help regulate degree of hydration progressively went down. During the period in which athletes were consuming the highest amounts of protein, their kidney function reached abnormal ranges. Other tests indicated that the high protein diet caused the kidney to produce urine that was more concentrated. Interestingly, though, the athletes reported no difference in how thirsty they felt. The researchers believe the bottom line is clear for athletes and non athletes alike: When consuming high-protein diets, fluid intake should be increased. In fact, they suggested drinking more water, regardless of the diet. Athletes should drink enough fluid during and after exercise to balance fluid losses. Consumption of sport Drinks containing carbohydrates and electrolytes during exercise can provide fuel for the muscles, help maintain blood glucose levels and the thirst mechanism, and Decrease the risk of dehydration or imbalance of electrolytes. Any foods with a lot of fat can be very difficult and slow to digest. These high-fat foods remain in the stomach for a long time. If eaten as a pre-event meal, they will likely be with the athlete through competition and can affect performance the more food in the stomach, the more blood flow there and the less blood available for the muscles. Caffeine acts as a stimulant on the central nervous system. It had been thought to boost endurance by stimulating a greater use of fat for energy and, thereby, reserving glycogen in the muscles. However, not all research supports this hypothesis. Caffeine can have serious side effects for some people. Those who are very sensitive to its effects may experience nausea, muscle tremors, and headaches. Furthermore, excessive caffeine acts as a diuretic, and can promote dehydration, which decreases performance. It is important for the athlete to keep in mind doping rules, too

many competitions have banned caffeine in certain quantities during international events. Suggested Pre-Competition Foods1; Other supplementary athletes often look for alternative nutrition to help them perform at their best. Supplements are a fast-growing, multimillion-dollar business that offers athletes an edge. As nutritionists and health professionals debate the merits of sports supplements and look toward further research, consumers continue to buy. A supplement is something added to the diet, typically to make up for a nutritional deficiency. Supplements often include vitamins, amino acids, minerals, herbs, and/or other botanicals. Nutritional supplements can be classified into four categories:

- Metabolic fuels (carbohydrate, lactate, fat)
- Cellular components that improve metabolism (creatine, carnitine, vitamins)
- Anabolic substances that enhance performance (protein, amino acids,

  Chromium, plant sterols, herbals)
- Substances that enhance recovery (fluids, electrolytes, herbals) Popular Supplements

Among all the marketed supplements, the most popular are energy boosters, fat burners, muscle gainers, and workout-recovery enhancers other supplements include herbals, vitamins and minerals, and weight loss agents. Vitamins are essential for the body to function properly. Everyone undoubtedly knows that the calcium in milk makes a body strong. However, research has shown that some vitamins may go beyond basic body function and actually enhance athletic performance. B-vitamins (thiamin, riboflavin, vitamin B-6, B-12, and folate), used both to convert proteins and carbohydrates into energy and for cell repair and production, may be linked to performance in high-level athletes. Researchers at Oregon State University demonstrated that athletes who lack B-vitamins have reduced high-intensity exercise performance and are less able to repair damaged muscles or build muscle mass than their peers who eat a diet rich with B-vitamins. Furthermore, even a small B-vitamin deficiency could result in reduced performance and recovery. Individual requirements for B-vitamins depend upon the type and intensity of exercise, the amount of nutrients lost (i.e., through sweat and urine), and individual differences in diet. According to these researchers, the USRDA (U.S. Recommended Daily Allowance) for B-vitamin intake may be inadequate for athletes. Athletes who limit calories or have restricted

eating plans may be at a greater risk for B-vitamin deficiencies. This study indicates exercise may increase an athlete's requirement for riboflavin and vitamin B-6; however, the data for folate and vitamin B-12 were limited. The researchers recommend that athletes who have poor or restricted diets should consult with a physician about supplementing their regimen with a multivitamin/mineral supplement. Creative To meet the demands of a high-intensity exercise, such as sprinting or power sports, muscles generate energy from chemical reactions. One such chemical byproduct, phosphocreatine, can fuel the first few seconds of a high-intensity effort. Creatine supplements seem to work by increasing the storage of phosphocreation, making more fuel available to the muscles and thus enabling them to work harder and fatigue slower.More and more research is beginning to look at possible benefits of Creation Claims:-

- Improves high-power performance of short duration
- Increases muscle mass
- Delays fatigue
- Increases Creatine and phosphocreatine in muscles Research Shows:
- Improves high-power performance during a series of repetitive high power-

  Output exercise sessions
- Requires high-intensity training to be effective (does not replace training)
- Does not increase endurance
- Does not exert an anabolic effect

•May augment gains in muscle hypertrophy during resistance training, especially in those with compromised skeletal muscle due to injury or disease Caution is strongly advised with creation consumption. Reports of use indicate a propensity for muscle cramping, strains, and pulls. In addition, there is an increased risk for renal stress and damage. Because of an increased risk of heat illness, athletes should increase fluid intake with creation use.

Sport Drinks

Sport drinks are becoming increasingly popular as we are all being encouraged to adopt a healthier lifestyle with regular exercise. These drinks contain everything from pure water to exotic herbal concoctions. Many get their boost feeling because they contain some form of caffeine combination (i.e., caffeine, Guarani, green tea) in addition to some carbohydrate. Because caffeine amounts are generally not included on the label, athletes can consume the drink and unknowingly be at risk for a positive caffeine test—a doping violation in many competitions. Research has debated the benefits of water versus sport beverages. One study compared the consumption of a light meal versus specific commercial sport drinks observed the resulting effect on time to exhaustion during simulated-combat maneuvers. The test consisted of three activities: a two-hour march, a subsequent one-hour run, and a run to exhaustion. During the test, the subjects consumed either a commercial sport drink (Ergo, Go Sports, and Gatorlode) or a light meal from a combat ration. The researchers concluded that the amount of calories ingested was responsible for the differences noted in time to exhaustion. They further suggested that the sport drinks represent a readily available source of energy and fluid that can be used to replace and/or supplement the current combat rations. Many sport drinks are based on acidic fruits and may contribute to erosion of tooth enamel. Studies have shown that several sport drinks are more acidic than even orange juice and were found to be quite erosive. Clinicians and dentists are using this information when counseling patients with tooth surface loss who use fruit based sport drinks regularly. While the debate continues over using water or sport drinks to maintain hydration in athletes, some interesting new research shows that the consumption of chocolate milk immediately following exercise actually helps athletes recover better from intense workouts. The research illustrated that chocolate milk's unique combination of calcium, protein, and carbohydrates provides the energy and nutrients needed to strengthen bones, rebuild muscle cells, and recover more quickly after vigorous exercise.

When to eat

Athletes need to carefully plan their eating to prevent any distracting symptoms of hunger during competition or training and to maintain energy stores during competition. Athletic activity on a full stomach may result in stomach upset, nausea, or cramping. Optimally, in order to ensure enough energy and reduce stomach discomfort, athletes should allow a meal to fully digest before the start of any event. This generally takes one to four hours, depending upon what and

how much was eaten. The closer to the time of the event, the less an athlete should eat. In a time crunch, he can eat or drink something easily digestible about twenty to thirty minutes before the event. If the time of the event is at hand, he should have a liquid meal (rather than a solid one), because the stomach digests liquids faster. For all-day competition or training, meal planning is absolutely essential. According to an IDEA Health and Fitness Association press release (www.ideafit.com), good nutrition is about more than just what someone eats. When you eat is equally important, as research indicates that what athletes eat before, during, and after a training session make a big difference to performance and recovery. Some of the key information shared by IDEA experts, committee members, and spokespersons include:

- Ingesting ideal nutrient combinations at optimal times enhances Performance and recovery
- while improving muscle integrity
- Combining carbohydrates and protein at the right time will improve Training and
- workouts
- Nutrient timing isn't just for athletes—these strategies can benefit Everyday Exercisers
- Increasing daily intakes of dietary calcium is a new way to combat the Obesity Epidemic
- Surviving the latest low-carbohydrate diet craze is as simple as knowing the difference
- Between good and bad carbohydrates and knowing the top twenty most nutrient-dense
- Carbohydrates

Safety and regulation of dietary supplements everyone knows the pharmaceutical industry is very tightly regulated by the government. However, the government has little to say about nutritional supplements. Products classified as dietary supplements are not required to meet any FDA standards. Therefore, the product label does not always accurately describe the contents of the container. For example, the components of the supplement may not be standardized or pure. Contamination of supplements not only can cause health problems, but also may cause an athlete to fail a doping test. Most nutritional supplements have very little or no research to validate their claims or even to attest to their safety. Other supplements may have extensive research on effectiveness, yet lack any investigations into safety. For example, although creatine has been used by athletes for over ten years, there is very little research regarding safety or long-term effects. Most folks would never consider volunteering for medical research and agreeing to

ingest foreign substances to see what happens. However, everyone who consumes sports-nutrition supplements is, in effect, doing just that. Add to the never-ending quest for a competitive edge, toss in a few celebrities touting supplements, and soon you have a recipe for a large-scale observational experiment on sports supplements. a study in which the subjects actually pay to take part and don't even know that they are test subjects.

Nutritional supplements are not:

Required to meet the same safety requirements as over-the-counter or prescription

Drugs or food ingredients

- Held to specific manufacturing standards
- Guaranteed to meet product-potency or purity ratings

Required to prove the effectiveness of any health claim they make. Required to meet safety or efficacy testing prior to going to the market Because there are no regulations that guarantee the safety or purity of something sold as a supplement, most health risks of supplements are discovered after the product is on the market.

Supplements that are pulled from the market are usually linked to a reported serious health risk or death. In fact, the FDA will not remove a product from the market unless it is proven to cause a medical problem. Ephedrine is a naturally occurring substance derived from plants. Its principal active ingredient is ephedrine, which, when chemically synthesized, is regulated as a drug. In recent years, Ephedrine products have been extensively promoted to aid weight loss, Enhance sports performance, and increase energy. It acts by stimulating the central nervous system and accelerating heart rate and blood pressure (among other effects). In December of 2003, the FDA issued a consumer alert on the safety of dietary supplements containing Ephedrine. The alert advised consumers immediately to stop buying and using Ephedrine products. On April 12, 2004, the agency's final rule ultimately banned the sale of dietary supplements containing ephedra. The FDA has developed a website where consumers can report any serious side effects for drugs or supplements. As a last note, supplement use should be considered in terms of physical safety, in addition to competition regulation. Those competing at

the college level need to know that the NCAA closely regulates the use of dietary supplement and bans the use of most.

Proper nutrition is important to recover athletes. While there is no such thing as a magic diet or food, there are many ways in which eating and drinking well can allow athletes at all levels of performance to achieve the special goals of their training and competition programmers. It makes no sense to train hard and ignore the benefits that follow from good food choices. According to Professor Louise Burke, and Professor Ron Maugham (2010) the most common problems and challenges that athletes may not get proper nutrition include:-

- Poor knowledge of foods and drinks and inadequate cooking skills
- Poor choices when shopping or dining out
- Poor or outdated knowledge of sports nutrition
- Inadequate finances
- Busy lifestyle leading to inadequate time to obtain or consume appropriate foods
- Poor availability of good food and drink choices
- Frequent travel and
- indiscriminate use of supplements and sports foods

2.4. Common athletics Injuries

2.4.1. Hip and Thigh Injuries

Hip Bursitis

- Bursa is a fluid filled sac that allows smooth movement between two uneven surfaces that move in different directions. .Rub bag between hands, movement would be smooth and effortless).
- Bursa's found points where muscles and tendons glide over bones. 100's throughout body.
- Bursa over the greater trochanter allows the IT Band to glide smoothly over it.
- If this bursa sac becomes inflamed, it loses it's gliding capabilities, the added bulk of the swollen bursa causes more friction within an already confined space, and continues to become more and more irritated and painful when it is moved; each time the tendon moves over the bone (with each step), pain results.

Causes of hip bursitis:

- Repetitive movement or prolonged and excessive pressure.
- Traumatic injury.
- Systemic inflammatory conditions (rheumatoid arthritis) may also lead to bursitis.

Treatment:

- Rest for a period of time.
- Ice pack over lateral hip for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until pain goes away.
- Ice massage over lateral hip for 5 to 10 minutes. Freeze water in a paper cup. Peel the top of the cup away to expose the ice and hold onto the bottom of the cup while you rub ice over your hip.
- Anti-inflammatory medications, if prescribed.
- Physical therapy / chiropractic can develop a stretching and strengthening program for your hip muscles – a better conditioned muscle and tendon will glide more easily and not cause hip bursitis.
- PT / Chiropractic – can use modalities such as ultrasound to decrease inflammation, stimulate blood flow and heal tissues.
- Do not begin exercises until the inflammation of bursitis has resolved.

Snapping Hip Syndrome

- Snapping sensation, often audible 'popping' noise, when you walk or run (when the hip is flexed and extended).
- May happen only occasionally or all the time.

Stress Fractures

- A hairline crack that can occur in bones from repeated or prolonged use.
- Common overuse injury most often seen in athletes who run, jump or dance on hard surfaces.
- Pain directly over shinbone; hurt to touch over the part that is fractured.

- May have swelling and bruising.

Cause of a stress fracture:

Bone is constantly undergoing changes to adapt to its environment.

When athletes increase their level of activity over a short period of time, this increased demand placed on the bone causes the bone to remodel and become stronger in the areas of higher stress. However, if the response of the bone cannot maintain the pace of the repetitive demands, a stress fracture may result.

Other factors: dietary abnormalities and menstrual irregularities. Both factors contribute to bone health; therefore any problems with diet (poor nutrition, anorexia, and bulimia) or menstruation (amenorrhea) may place an individual at higher risk for development of a stress fracture.

Treatment:

Rest the injured leg (most important treatment).

Ice pack over injury for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until the pain goes away.

Anti-inflammatory medications, if prescribed.

If there is pain, don't do it. (Running causes pain where you have a stress fracture, don't run. If walking causes pain in that location, use crutches).

Wear proper footwear.

Increase activities gradually, vary activities one week at a time.

Prevention:

Listen to your body and do not force yourself to do activities while you are in pain.

Exercise Induced Compartment Syndrome

Also called: Exertional compartment syndrome and chronic compartment syndrome.

Uncommon. Shin pain is more likely caused by medial tibial syndrome or a stress fracture.

Pain and swelling caused by swollen muscles pressing against the sides of the compartment (or sheath) that surrounds the muscles.

Typically experience pain after a period of activity of exercise, and it is quickly relieved by rest.

Pain can be quite severe, and often limits the activity level. Pain will be in the muscles around the shin bone.

Cause of exercise induced compartment syndrome:

Due to a pressure build-up within the muscles of the leg.

Muscles are enclosed within a tight tissue called a fascia. Normally, the fascia has enough extra room within to allow the muscles to function without problem.

When activity levels are increased, blood flow to a muscle increases, and the size of the muscle increases. Normally, there is sufficient room to accommodate this increase in muscle size during exercise. However, in some athletes, the fascia is too tight, and it constricts the muscle during activity.

As the muscle becomes constricted by the fascia, the blood flow to the muscle is interrupted. The lack of blood flow causes ischemia. When blood flow to a muscle is interrupted, pain results.

Prevention:

Use warm-up exercises before exercising. Gradually increase your exercise level for any job-related activity or exercise requiring extensive use of the leg muscles.

Ankle Injuries

Ankle Sprain

An injury that causes a stretch or tear of one or more ligaments in the ankle joint.

Ligaments are strong bands of tissue that connect bones at the joint.

Can happen anytime, that is why it is among the most common orthopedic injuries and the most common foot and ankle injury.

Sprains may be graded depending on their severity: Grade I sprain: pain with minimal damage to the ligaments Grade II sprain: more ligament damage and mild looseness of the joint. Grade III sprain: complete tearing of the ligament and the joint is very loose or unstable.

Cause of an ankle sprain:

Occurs following a sudden sideways or twisting movement of the foot. Usually occurs when a person lands from jumping or running on to an uneven surface. Two broad categories of ankle sprains:

Lateral ankle sprain / Inversion ankle sprain: Most common, 90% of ankle sprains.

Foot is inverted, foot turns in. The outer, lateral ligaments are stretched too far. Three ligaments that attach to the outer side of the ankle. Pain is always on the outside of the ankle, and usually no pain on the inside. Medial ankle sprain / Eversion ankle sprain:

- Foot is everted, foot turns out.
- The inner ligament, the deltoid ligament, is stretched too far.
- Pain is on the inner side of the ankle.

2.4.2. Achilles Tendonitis

- Irritation and inflammation of the large tendon in the back of the ankle.
- Common overuse injury, that typically occurs in middle-age recreational athletes.

Cause of Achilles tendonitis:

- Lack of flexibility, tight calf muscles, tight Achilles tendon
- Over-pronation
- Recent changes in footwear
- Wearing high heels at work and then switching to lower-heeled shoes for exercise
- Changes in exercise training schedules (increasing mileage or increasing hill training).As people age, tendons become less flexible, more rigid, and more susceptible to injury.

Symptoms:

- Pain over the back of the heel.
- Tendon is tender and may be swollen.
- Pain when you rise up on toes or when stretch tendon, when pushing off or jumping.
- Range of motion of ankle may be limited.
- Most significant pain after periods of inactivity.
- When the tendon tears or ruptures, may feel a pop. If complete tear, unable to lift heel off the ground or point toes.

Treatment:

- Ice pack over injury for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until the pain goes away.
- Elevate lower leg on a pillow when lying down.
- Anti-inflammatory medications, if prescribed.
- Use heel wedge, if prescribed, to minimize stress on the Achilles tendon while healing and possible longer.
- Cross-train with low-impact activities (swimming and biking).
- Physical therapy / Chiropractic can develop a strengthening and flexibility program for your Achilles tendon. Chiropractor can do Graston and A.R.T. for improved healing.
- If you over-pronate, shoe inserts (orthotics) may be recommended to keep foot
- stable.
- In severe cases of Achilles tendonitis, foot may need to be in a cast for several weeks.
- A complete tendon tear may require surgery, or put in a cast for 6 to 10 weeks.

Prevention:

- Stretch calf muscles and Achilles tendon before exercise.
- If you have tight Achilles tendons or calf muscles, stretch them twice a day
- whether or not you are doing any sport activities that day.
- If you have a tendency for Achilles tendonitis, avoid running uphill a lot.

2.4.3. Foot Injuries

Plantar Fasciitis

- Common painful foot injury.
- Painful inflammation on the bottom of the foot between the ball of the foot and the heel.
- Often most severe when you first stand and walk in the morning (stretching the plantar fascia).
- Pain often lessens with more walking, but you may have it again after periods of rest.
- Usually no pain while sleeping because fascia is allowed to rest and shorten.
- Plantar fascia is one of the major transmitters of weight across the foot as you walk or run; tremendous stress is placed on the plantar fascia.

Cause of plantar fasciitis:

o Increase mileage or frequency of workouts.

- Change exercice surface or terrain.
- Shoes are worn out and do not provide enough cushion for heels.
- Increased walking, standing, or stair-climbing.
- Wearing high heel shoes (fascia shortens).
- Gaining weight.
- Excessive pronation, or an excessively high arch, predisposes the foot to abnormal forces and irritation of the plantar fascia.

Treatment:

- Lots of rest.
- Anti-inflammatory medications, if prescribed.
- Rest heel on an ice pack for a few minutes several times a day.
- Cushion foot while walking; wear athletic shoes, heel cushions (both shoes).
- If you over-pronate, or have high arches, orthotics may be recommended for support.
- If persistent, see a physical therapist or chiropractor. They can develop a program to stretch the plantar fascia and strengthen the lower leg muscles; taping to support bottom

of foot; prescribe a night splint to keep foot stretched at night. Chiropractors also perform Graston to break up scar tissue and realign muscle fibers.

- Reduce weight, if needed.
- Cross train to maintain cardiovascular fitness.

Prevention:

- Wear shoes that are well made and fit your feet.
- Get new shoes before your old shoes stop supporting and cushioning your feet.
- Avoid repeated jarring to the heel.
- Maintain a healthy weight.

2.5. Prevention of injures

In athletics obviously, long distance events place athletes at greater risk than other. The saying ‘’prevention is better than Cure’’ is relevant measures are very much common sense but specific precautions are still important.

If you minimize your chances of injury and you can, you are far better off than trying to threat injuries once they occurring the manner of speaking, to prevent injuries from physical activity.

There are many methods of key points will help you injuries in athletics; Prevention through skill, prevention throughout fitness, prevention through warm up, prevention through environment. Obey the rule, playing areas and facilities, protective device etc and other important points will help you prevention of injury.

2.5.1. Principles of prevention

To prevent fitness related injury, several principles are helpful:

1. Don’t do too much too soon. 2. Train, don’t strain. 3. Hard days, easy days.
4. Knows your body. 5. Warm up and cool down.

2.5.1.1 Prevention through skill

Skill is of great important in safety. You must see skills training as not simply a means of improving performance, but also as a means of preventing injury. Skill involves not only the

physical control to make the body do what the mind instructs, but also the mental ability to read a situation, to know the risks involved, and so reduce them.

It is also important for the athletes to develop the ability to relax in competition and training so that the body can be allowed to carry out the required activity at an automatic level. Tension and anxiety can break down the reflex nature of skilled performance and increase the risk of injury.

Fatigue also causes a breakdown of skill. This fatigue may occur in a single training session or result from training loads being too close together. Whether overtraining is short term or long term a coach must be able to recognize the signs and symptoms of fatigue and reduce training levels before injury or illness occurs.

2.5.1.2. Prevention throughout fitness

Skill alone will not totally protect an athlete because he is at risk he understand activity beyond the limit imposed by his general fitness. We have already discussed in training theory the five main components of physical fitness.

Increased fitness reduces the risk of injures in two ways by its effect on the muscles, tendons and joints and by increasing general endurance so that the participant can compete for the whole duration of training and competition without fatigue.

Strength Muscles become stronger if they are made to work. The load that you choose must be appropriate to the athlete's requirement for his particular event. For example, it is obviously unnecessary to strength training must meet individual needs and the most appropriate training for muscles is frequent repetitions of the type of work required for individual skills. Correctly strengthened muscle is more resistant to injury.

Endurance this involves both muscular endurance and cardio-respiratory endurance. The development of endurance fitness prevents fatigue. Injury statistics for all sports indicate that injures are more liable to occur what an athlete's is tiring.

Flexibility this is often an understand aspect of physical fitness and is sometimes overlooked. Your athletes should understand that flexibility is important part muscle fitness and has an important role to play in injury prevention. Tight muscles are clearly at risk from tearing, for

example, hamstring strains. Flexibility is achieved by stretching in various ways. It is easy, uses little energy, requires no apparatus and improves with practice.

2.5.1.3. Prevention through warm up

There are three main reasons to warm up in athletics;

- To stretch the muscles and tendons
- To increase body temperature
- To increase blood circulation

2.5.1.4. Prevention through environment

Many injuries to athletes occur by accident when they are not actively participating. It is not uncommon to see sprained ankles or bruised shins because an athlete has fallen over a kit bag or piece of equipment left lying around beside the track. You must look carefully and critically at all your training facilities in terms of safety.

Equipment Safe, well designed equipment is important in injury prevention and although .It is clearly event specific; certain general remarks can be made. Take time to ensure that any equipment is safe and fit for use every time you come to use it. Damaged or faulty equipment maintenance you must make sure the person responsible is aware of the need for correct, regular maintenance.

Surfaces many different surfaces are encountered in athletics. Some natural, some synthetic, both can cause problems. Natural remember that athletes are also at risk from non-sport activities. They can fall down a step or trip up as easily as non-athletes. No matter how safety conscious you are accidents will happen. If you are constantly aware of possible dangers you should be able to minimize the risks. This unit is intended to help you realize what practical preventive measures you can apply in your coaching and what action to take if injury does occur.

Protective device there are many protective devices that are designed to reduce injury in specific sports. For examples, in close contact sport

2.5.1.5. Prevention through Nutrition

Good nutrition can make its impact on preventing injury by helping an athlete to recover between training sessions. It is important that athletes pay constant attention to eating habits. The diet must meet the demands placed on the body by training. In particular, an athlete must consume sufficient energy in the form of carbohydrates to maintain the stores of energy in the muscles and help prevent fatigue. Athletes should eat something easily digests and high in energy about 2:30 to hours before training or completion.

2.6. Rehabilitation

A rehabilitation program is to restore function as efficiently as possible, allowing the athlete to safety and quickly return to athletic completion. Although we are unable to ‘’speed up’’ the normal healing process following an injury, we can optimize our plan of care to minimize delayed healing by designing an appropriate and functional rehabilitation program. Such programs must take into account the normal phases of healing and must address the sport specific demands of the individual athlete. Failure to address normal healing parameters and sport-specific requirements will delay the return to competition, increase the risk for rein jury, and reduce the performance level of the athlete.

Although the inflammatory process in part of the normal healing process, prolonged or chronic inflammation may be deleterious to athletes who are trying to rehabilitate and return to athletic competition .By controlling the pain and swelling associated with the inflammatory process, athletes may be able to progress though the clinical rehabilitation goals and advance to progress through the inflammatory process, athletes may be able to progress through the clinical rehabilitation goals. And advance to functional activities more quickly. The cornerstone for managing the signs and symptoms of acute inflammation are trying to rehabilitate and return to athletic competition, by controlling the pain and advance to functional activities more quickly. The cornerstone for managing the signs and symptoms of acute inflammation are rest, ice, compression, elevation, and no steroidal anti inflammatory drug (NSAIDs), whenever possible ,they should be used concurrently for maximum benefits to facilitate a quick but safe progression through rehabilitation. Pain and effusion inhibit muscle activation and decrease strength and may result in additional injures and reduced performance. Following an injury and the subsequent management of the acute sign a symptoms, rehabilitation should involve a variety include

clinical goals for improving range of motion and flexibility, muscular and cardiovascular endurance, and, ultimately, strength. The program should culminate with function goals for return to sport such as increasing power, speed, and agility.

2.6.1. Injury rehabilitation

When athletes sustain injuries, the immediate focus is generally on physical dimensions of the injuries, such as the location, magnitude, and ramifications of the damage to body tissues.

Nevertheless, from the occurrence of sport injuries onward, psychological factors are an integral part of the rehabilitation process. For example, the pain and loss of physical functioning commonly experienced by athletes upon sustaining an injury have strong psychological components. Pain is essentially a psychophysical phenomenon, and a loss of functioning can be defying need in terms Source: Brewer, B.W., Andersen, M.B. & Van Raalte, J.L. (2002) Psychological aspects of sport injury rehabilitation: toward a biopsychosocial approach. In D.L. Mostofsky& L.D. Zaichkowsky (eds.) Medical and Psychological Aspects of Sport and Exercise, pp. 41–54. Fitness Information Technology, Morgantown. Reprinted with permission behaviors in which athletes are unable to engage. Not only has a wide variety of psychological effects of sport injury been documented, but psychological factors have been shown to affect the outcome of sport injury rehabilitation.

The bio psychosocial model presented in offers a framework for understanding the role of psychological factors in the rehabilitation of sport injuries. In this model, psychological factors such as personality, cognition (i.e., thinking), affect (i.e., emotions), and behavior are thought to be influenced by both the characteristics of the injury itself and the demographic characteristics of the person sustaining the injury. The emotional responses of a young athlete with a severe, acute injury, for example, might differ dramatically from those of an older athlete with a mild, chronic injury.

According to the model, psychological factors affect and are affected by biological factors (e.g., tissue repair, circulation), social factors (e.g., social network, life stress), intermediate bio psychological outcomes (e.g., range of motion, strength, pain), and rehabilitation outcomes (e.g., functional performance, readiness to return to sport). Of particular note, the outcomes on which the success of rehabilitation is largely judged are themselves predominantly psychological or

behavioral. Although the physical state of athletes helps to establish a potential of what the athletes are able to accomplish, it is generally what the athletes actually accomplish in the form

Psychological responses to sport injury

As indicated in the bio psychosocial model, sport injury is a stressor that has ramify captions for the biological, psychological, and social functioning of athletes. Although their focus is primarily on the biological effects of sport injury, sports medicine practitioners have long been aware of the psychological consequences of sport injury. Initial attempts to describe the psychological responses of athletes to injury borrowed heavily from models of grief and loss, noting parallels between patients with terminal illnesses and athletes with injury in terms of their psychological reactions. With injury prompting a presumed loss of an aspect of the self, athletes were thought to proceed through a sequential series of stages (e.g., denial, anger, bargaining, depression, and acceptance) after becoming injured. Unfortunately, research did not support such a characterization of athletes' responses to sport injury. Some athletes do exhibit components of a grief reaction after sustaining an injury and athletes generally do display more favorable psychological responses with the passage of time following injury, but the notion of a predictable, stage-like sequence of responses that is consistent across athletes simply has not stood up to scientific scrutiny. Instead, the cognitive, emotional, and behavioral reactions of athletes to injury vary considerably and appear to be inflected by a variety of characteristics of the individuals involved and the situations in which they find themselves.

2.6.2. Cognitive responses

The way in which athletes cognitively appraise or interpret their injuries contribute substantially to their psychological adjustment to the challenges posed by the injuries. Injuries perceived as threatening to one's sense of self- and well-being are likely to produce more adverse psychological consequences than injuries construed as neutral, benign, or, in rare cases, beneficial occurrences. Differences in cognitive appraisals help explain the diversity of psychological reactions to the injury exhibited by athletes.

For example, athletes who perceive their injuries as resulting in the loss of a self-defining activity are more likely to experience devastating emotional reactions (e.g., depression) than athletes who interpret their injuries as means of escaping the pressures of unwanted sport

involvement (and consequently experience thinly disguised feelings of liberation and relief). Among the common cognitive responses to sport injury are (a) decreased self-esteem; (b) attribution activity; and (c) use of coping strategies.

Following injury, athletes tend to experience a drop in evaluations of their self-worth. They readily make attributions regarding the cause(s) of their injuries, some involving factors internal to themselves (e.g., somatic weakness, overtraining) and some pertaining to factors external to themselves (e.g., field conditions, collision with an opponent). In an attempt to cope with the challenges presented by their injuries, athletes deploy a variety of cognitive strategies, such as accepting their injuries, focusing on their rehabilitation tasks, and thinking positive thoughts. Athletes' cognitive responses to injury seem to vary across persons and situations. For example, athletes who are psychologically invested in playing sport professionally are especially likely to experience low self-esteem following career-ending injuries. Further, athletes' self confidence is likely to wax and wane over the course of rehabilitation, with confidence generally higher at the beginning of rehabilitation and upon achieving recovery than during the rehabilitation process.

2.6.3. Emotional responses

The psychological toll of sport injury is perhaps most evident in the realm of emotions. Among the more common emotions experienced by athletes with injuries are anger, confusion, depression, fear, and frustration. In general, negative emotions tend to increase immediately following injury and decrease over the first month post-injury, presumably as athletes adjust to their conditions and recover health and function. Emotional disturbance may persist, however, when the athletes have severe injuries or encounter obstacles in the recovery progress. In approximately 5–24% of athletes with injuries, the levels of emotional disturbance are clinically meaningful and may warrant the attention of a mental health practitioner. Unfortunately, such emotional distress is not easily recognized by sports medicine professionals and may go undetected. Several risk factors for emotional distress following sport injury have been identify ed. Young athletes and athletes who are strongly invested in the athlete role as a source of self-worth tend to experience higher levels of emotional disturbance than those who are older and for whom being an athlete is a less central or exclusive aspect of who they are as a person. Athletes tend to experience greater emotional disturbance when their injuries are severe or long-lasting

and when their recovery progress has been slowed. Hardy athletes and those who are satisfied with the social support they are receiving from others tend to experience low levels of emotional disturbance following injury. The timing of injuries in the competitive sport season also seems to play a role in the magnitude of emotional disturbance, as injuries that preclude training for or participation in important events may elicit especially strong emotional reactions.

2.6.4. Behavioral responses

The ways in which athletes respond behaviorally to injury are closely tied to their cognitive and emotional reactions. For example, when athletes cope cognitively with their injury situation by focusing their attention on the tasks of their rehabilitation program, their behavior may be characterized by information-seeking and vigorous pursuit of rehabilitation activities. Similarly, in rare cases where the levels of emotional disturbance in response to injury are extreme, suicidal behavior May result. Although some athletes may seek out social support from others for assistance in dealing with their injuries, other athletes may choose to withdraw socially and attempt to cope with their situation on their own. The extent to which athletes adhere to prescribed sport injury rehabilitation programs is the post injury behavior that has received the most attention from researchers. The nature of adherence behavior depends primarily on the specific characteristics of the rehabilitation program such as its location (e.g., home-based, clinic-based) and activity components (e.g., completing exercises, taking medications, limiting sport involvement, receiving therapeutic modalities). Depending on how adherence is measured, rates of adherence to sport injury rehabilitation programs vary considerably, ranging from 40 to 143% (the latter figure due to over adherence) in research studies. Higher adherence rates are found when adherence is measured in terms of percentage of rehabilitation sessions attended or percentage of prescribed amount of time spent on rehabilitation activities than when it is assessed by means of classification by level of adherence (e.g., adherent versus non-adherent). Personal characteristics associated with high levels of adherence include being self motivated, tough minded, and tolerant of pain. Athletes tend to adhere better to sport injury rehabilitation programs when they believe in the efficacy of the treatment, find the clinical environment comfortable, perceive their rehabilitation appointments as conveniently scheduled, consider their injuries severe, and feel that their rehabilitation efforts are supported by important others. From a cognitive standpoint, adherence rates tend to be higher when athletes ascribe their recovery to

factors within their control, view themselves as able to cope with their injuries, set rehabilitation goals, maintain positive self-talk, and use mental imagery. Athletes experiencing emotional disturbance tend to adhere less well to their injury rehabilitation programs than those without such difficulties.

2.6.5. Psychological factors and sport injury rehabilitation outcomes

As suggested by the bio psychosocial model, psychological factors are thought to contribute to both intermediate bio psychological outcomes and sport injury rehabilitation outcomes (which, together, can be considered "outcomes" for the present discussion). For the most part, the relations between psychological factors and sport injury rehabilitation outcomes documented in research studies are correlation, which means that the psychological factors cannot yet be considered as direct or even indirect causes of the outcomes.

Nevertheless, the relations are suggestive of avenues to investigate in developing interventions for athletes with injuries (and, of course, for conducting further research). For example, although male gender, strong self identification with the athlete role, and low scores on the personality characteristics of hypochondria's is and hysteria have been linked to faster or better recovery from sport injuries, it cannot be Concluded that these factors cause athletes to heal faster or better. Similarly, the finding that higher levels of social support—the lone social/contextual factor that has been linked to sport injury rehabilitation outcomes—are associated with faster recoveries cannot be interpreted as indicating that social support causes athletes to recover more rapidly from injury. Correlation relationships have been documented between many cognitive factors and sport injury rehabilitation outcomes. In general, there seem to be two types of cognition that are associated with recovery from injury—positive thoughts and use of psychological skills. Athletes who demonstrate positive thinking in the form of a positive attitude toward rehabilitation, confidence in their ability to recover, general confidence in themselves, and belief in their ability to affect their recovery tend to heal more quickly than those with more negative thought patterns. Rapid recoveries are also more common among athletes who report using psychological skills such as thought management, healing imagery, and goal setting.

From an emotional standpoint, various forms of psychological distress have been linked to less favorable sport injury rehabilitation outcomes. Athletes who display general mood disturbance or specific negative emotions such as depression, tension, fatigue, fear, frustration, and

rehabilitation anxiety tend to recover from their injuries more slowly than those without such emotional difficulties. Although behaviors such as being physically active, engaging in active coping, and seeking social support have been tied to positive sport injury rehabilitation outcomes, the behavior that has been most frequently associated with recovery From sport injury is adherence to the prescribed rehabilitation program. The link between treatment adherence and rehabilitation outcome seems both obvious and straightforward, but that is not the case. For better adherence to produce a better outcome, it is necessary for the rehabilitation program to be unquestionably effective. If the rehabilitation program is anything less than effective in producing desired treatment outcomes, even complete and total adherence to the program is unlikely to yield the intended results. Moreover, because adherence is generally not the exclusive determinant of rehabilitation outcomes, exemplary levels of adherence to the rehabilitation program may not be sufficient to offset the influence of other biological, psychological, and social/contextual factors thought to play key roles in the recovery process. As a consequence, some athletes may heal rapidly despite adhering poorly to their rehabilitation program; whereas other athletes may recover slowly even though they do all that is asked of them by the rehabilitation professionals supervising their care.

The nature of the relationships between psychological factors and sport injury rehabilitation outcomes is not fully understood. Although it is plausible that rehabilitation adherence could have a direct impact on recovery from sport injury (by improving strength, flexibility, endurance, etc.), it is likely that the effects of most of the psychological factors correlated with sport injury rehabilitation outcomes—if they have an effect—are indirect, influencing outcomes through intermediary variables more closely related to indices of injury recovery. For example, emotional disturbance may affect immune functioning, which, in turn, may influence tissue repair and other aspects of healing.

Similarly, adopting a positive attitude toward rehabilitation, believing that one can influence rehabilitation outcomes, and feeling supported by family members and friends may help to facilitate adherence to the rehabilitation program, which, again, may contribute to enhanced readiness to return to sport participation, better quality of life, improved satisfaction with the course of treatment, and elevated performance of functional sport tasks.

2.6.6 Psychological interventions to enhance rehabilitation

As knowledge of the relevance of psychological factors to sport injury rehabilitation outcomes has grown, psychological interventions have been increasingly applied to enhance the rehabilitation of athletes with injuries. The effectiveness of several interventions has been documented in experimental studies, which allow inferences to be made about the causal role of psychological factors in sport injury rehabilitation. Nevertheless, as with the psychological factors for which co relational relationships with sport injury rehabilitation outcomes have been established, the exact mechanisms by which psychological interventions influence processes and outcomes in sport injury rehabilitation are not fully understood. Such understanding is not necessary to use and benefit t from psychological interventions, but knowing more about the mechanisms of effect will likely contribute to the development and implementation of even more effective interventions. Psychological interventions that have been found effective in experimental investigations include biofeedback, relaxation/imagery, goal setting, self-talk, and treatment packages combining multiple intervention strategies. Biofeedback is an intervention that involves giving (or "feeding back") physiological information to individuals in an attempt to alter a related physiological process, behavior, or psychological state. Although a wide variety of physiological variables can be assessed in different forms of biofeedback (e.g., blood pressure, heart rate, skin temperature), electro my graphic (EMG) activity (i.e., muscle tension) is the physiological parameter that has been used most frequently in the biofeedback given to athletes with injuries. In particular, EMG biofeedback has been administered to assist athletes regain quadriceps strength and range of motion in the knee joint following surgery. As in other areas of sport psychology practice, although relaxation and imagery are separate interventions with potentially disparate goals, they are often paired in treating athletes with injuries. Relaxation enables athletes to calm their minds and bodies, thereby facilitating the introduction of mental images. Common imagery themes used in association with sport injury rehabilitation are Motivation (e.g., returning successfully to sport participation), healing (e.g., increasing circulation to affected area), and rehearsal of physical skills (e.g., sport or rehabilitation tasks). In the context of sport injury rehabilitation, goal setting involves generating a set of personal behavioral standards to achieve during rehabilitation. Typically, both short- and long-term rehabilitation goals are established. Appropriate goal targets generally correspond to behaviors

over which athletes Can exert control, such as the number of repetitions of a particular rehabilitation exercise or the amount of time spent performing a given rehabilitation activity.

Reducing injury-related pain and functional impairment are worthy aims of rehabilitation, but are essentially outcomes that are potentially influenced by factors other than the behavior of athletes with injuries and are therefore likely inappropriate targets of goal setting. Progress toward goal completion is monitored and goals are adjusted as necessary, making the targets more or less challenging depending on the level of goal progress. To increase the likelihood of achieving successful completion of goals that have been established, barriers to goal attainment can be identify and strategies to conquer or evade the obstacles can be devised. In the context of sport injury rehabilitation, positive self-talk is focused on creating an encouraging internal dialog to counteract the discouraging and challenging circumstances in which athletes with injuries find themselves.

In positive self-talk interventions, athletes are taught to recognize negative thoughts and replace them with more productive thoughts. By counteracting the Negativity, athletes can enhance their attitude and emotional state, improve their motivation to engage in rehabilitation activities, and, ultimately, bolster their rehabilitation progress.

Although discussed separately, the various psychological interventions used to enhance sport injury rehabilitation are often combined into multimodal treatment packages. The interventions are highly complementary. For example, the targets of goal setting can include not only behaviors such as performing rehabilitation exercises and attending physiotherapy sessions but also engaging in rehabilitation-related activities such as imagery and biofeedback, and the content of images and positive self-talk may correspond closely to the rehabilitation goals that the athletes have set. Given their complementary nature, the interventions can be presented to athletes as components of an integrated, comprehensive approach to injury rehabilitation.

2.6.7. Practical considerations

Despite the growing body of research in support of their efficacy, psychological interventions are rarely used in the context of sport injury prevention and rehabilitation. There are several possible reasons for this.

First, the scientific studies supporting the use of psychological interventions in the sport injury realm have been published largely in journals read primarily by psychologists or sport psychologists. Sports medicine practitioners, who constitute the front lines in the prevention and treatment of sport injuries, may simply be unaware of the potential utility of psychological interventions in their work.

Second, even when those authorized to make decisions about preventive and rehabilitative interventions are aware of and receptive to psychological applications, there can be limitations in the availability and accessibility of professionals with the requisite expertise and qualifications for implementing psychological interventions with athletes.

Third, with respect to preventive interventions, coaches are sometimes reluctant to allocate valuable time for programming that addresses problems that are likely (in most sports) to emerge but have not yet developed. The typical low cost and potentially beneficial "side effects" of preventive psychological interventions (e.g., improved ability to cope with life and sport stressors) are arguments against such reluctance. Fourth, regarding psychological intervention with athletes who are already injured, emotional disturbance is not always readily apparent to those treating the injury, so sports medicine practitioners may experience difficulties in determining which athletes to refer for psychological consultation. Because psychological interventions are potentially useful for many athletes with injury, not just those displaying distress, professionals treating the athletes from a medical Perspective can routinely enlist the assistance of a sport psychology consultant (where such an individual is available) as part of a holistic approach to rehabilitation. Such an approach may also serve to minimize any sort of stigma associated with consulting a sport psychology practitioner. An advantage in implementing psychological interventions for sport injury prevention is that there is generally a good deal of flexibility in terms of when, where, how, and by whom the interventions are delivered. As with any preventive intervention, it is ideal if they are administered before extensive exposure to risk occurs, which, for athletes, is early in the preseason period. Participating in these interventions does not typically involve physical exertion, so they can be planned for blocks of time before, after, or between training sessions. Preventive psychological interventions can be implemented indoors and, depending on the weather and mode of presentation, outdoors in classroom, sport, and other facilities. As they are essentially

educational programs, the interventions can be delivered efficiently in both individual and large or small group formats through live and, potentially, multimedia (e.g., Internet) presentation methods. Conceivably, the interventions can be presented to athletes not only by sport psychology consultants, but also by professionals in other disciplines (e.g., coaches, physiotherapists) who are knowledgeable of the curriculum.

Intervening psychologically with athletes after they have been injured can be considerably more complex and challenging than doing so preventively. Although psychological intervention can begin at any time following injury, it can be difficult to determine the exact point at which to intervene, the type of intervention to provide, and the particular professional to deliver the intervention Unless a sport psychology consultant is an integral part of the sports medicine treatment team and post-injury psychological evaluation is standard. An initial decision involves whether to intervene proactively or to wait until psychological or other problems have developed before intervening. This decision is influenced by factors such as the sports medicine team's treatment philosophy and the availability of professionals to provide psychological intervention. The type of intervention to be implemented is determined primarily by the goals or purpose of the intervention. For example, a different intervention is likely to be selected for an athlete who is experiencing difficulty sleeping as a result of reduced physical activity following injury than for an athlete who is having trouble adhering to the prescribed rehabilitation program. Determining the appropriate practitioner to intervene psychologically is also influenced largely by the reasons for which intervention is sought. When the reasons involve concerns regarding the mental health of the athlete in question, a professional with expertise in assessing and treating clinical issues should be consulted. With the permission of the athlete, some Interventions, such as goal setting, imagery, and biofeedback, can be optimized through consultation and coordination with the physiotherapist or other sports medicine practitioner overseeing the care of the athlete. Regardless of the psychological interventions selected or the professionals chosen to implement the interventions, it is important that the interventions are not be viewed as "extra" or "additional" by the athletes. Despite the common perception that athletes with injuries have more "time on their hands," they often have less available time than they would when uninjured due to ongoing team commitments (e.g., attending practice sessions), treatment obligations, and cross-training activities (where feasible).

Presenting psychological interventions as just another modality within the overall treatment program can enhance the acceptability of the interventions to the athletes. Careful consideration of the timing, nature, providers, and framing of psychological interventions can help to ensure that the interests of athletes with injuries are best served.

2.6.8 Sport massage

Getting a regular sport massage can flush the muscles that if left may cause strains and tears. It is possible for a good sports massage therapist to identify potential trouble sports long before they become injures.

The major techniques of sport massages adapted to needs athletes. Massage adapted to needs of athletes. Focuses on two aspects, maintenance (the training regimen) and event (before and after event) also used to promote healing due to injuries. Massage has established its value in nonclinical settings. Amateur and professional athletes use it to assist in preparation for recuperation from events.

2.6.9 Manage existing injures properly

Returning to sport too early after injury can make the athlete susceptible to further injury. Before returning to training or competition the athlete should be able to answer yes to the following questions:

- Can you move injured part easily through a full range of movement? (I.e. compared to the athlete's opposite side)
- Has the injured area fully regained its strength?
- Is the injured area pain free?

Balanced Competition;-In order to reduce the risk of injury, it is important to keep competitions balanced. Consideration should be given to the age, size, sex, strength and skill of the athletes.

CHAPTER THREE

3. RESEARCH METHODOLOGY

In this chapter the researcher outlines the research design, the research method, the population and sample selection method, the sources of data collection, the instruments of data collection, the method of data analysis and the ethical considerations.

3.1 Research Design

The main concern of this study was to investigate the major causes of physiological and psychological injuries of project athletes. To meet the purpose of this study both qualitative and quantitative (mixed) research methods was used. The target populations for the study are: City Administration of Addis Ababa Yeka and Gullele sub cities of project athletes, coaches and Youth and Sport bureau sport experts Addis Ababa.

3.2 Research Method

Under this study, descriptive research method was employed. The descriptive research is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. In other words, only a part of the population is studied, and findings from this are expected to be generalized to the entire population (Nworgu1991:68).

3.3Sample and sampling technique

City Administration of Addis Ababa youth and sport bureau organizes athletics projects in all sub cities of the City. The target populations of the researcher wereYeka and Gullele sub cities which have 4 and 2 athletics projects respectively. Each athletics project has 20 athletes and 1 coach. Each sub cities also has 1 sport expert who controls the training centers. From the two sub cities 2 experts were selected. There for the total populations of the study were 128 subjects.To determine numbers of participants purposive sampling technique and sample size determination formula was used.

$n = N/ [1+N (e)^2]$ where n= sample size N= population e=0.05 then

$n=120/ [1+120 (0.05)^2] =92$ so, numbers of participant athletes were 92+6 coaches+2sport experts = 98

3.4 Sources of Data Collection

The collection of data was carried out through both primary and secondary sources of data.

The primary sources of data collection were from the project athletes, coaches and Addis Ababa youth and sport bureau sport experts.

Secondary sources of data collection were from different books, internet websites, previous research works, magazines and news papers.

3.5 Instruments of Data Collection

a) Questionnaire

The major technique of collecting data for this study was questionnaire. The reason why the researcher chose this tool is that its appropriateness to collect information from a larger population. The other reason is it helps to secure relevant information without bias; moreover, it helps to obtain descriptive information to answer the basic questions of the study without confusion. 22 Questionnaires were prepared for project athletes.

b) Interview

Semi structured interview questions were prepared for 6 coaches and 2 sport experts from Yeka and Gullele sub-cities'. Total of 8 participants all (6) coaches and 2sport experts were selected: by using purposive sampling technique for the interview.

c) Observation

In order to obtain relevant data for the study, the researcher was use observation data collection instrument. The researcher would collect data by using the observation check list in the training field.

3.6. Procedure of Data Collection

First, the questionnaire was distributed for the project athletes, coaches and youth and sport officers of Addis Ababa city Administration. Second, the questionnaires were collected and analyzed the interview part also continued analyzing and present. Finally the information gathered through observation was interpreted and discussed.

3.7 Methods of Data Analysis

In order to manage and acquire detailed information easily, the data collected through questionnaire will organized and presented in tables and analyzed using descriptive analysis methods. The analysis, presentation and discussion of results continued based on the research questions. The percentage will used to analyze the characteristics of respondents Such as age, sex, educational level and for closed ended questionnaires the interview and observation also continued analyzing. For this research the Statistical Package for Social Sciences (SPSS version 20.0) was be used to analyze the quantitative data obtained from questionnaires.

3.8 Ethical Considerations

Since this study utilizes human participants and investigate from the athletics projects, coaches, and sport experts, certain issues will be addressed. The consideration of these issues is necessary for the purpose of ensuring the privacy as well as the security of the participants. These issues will identify in advance to prevent future problems that could have risen during the research process. Among the significant issues considered includes, consent, confidentiality of the participants and data protection, and the researcher was used the information only for the purpose of the study.

CHAPTER FOUR

4.1 DATA ANALYSIS AND INTERPRETATION

This part of the study deals with the analysis and interpretation of data gathered through questionnaire, interview and observation. And it presented in tables. The percentage was used to analyze the characteristics of respondents Such as age, sex, educational qualification, experience and for closed ended questionnaires. The analysis is based on athletes' training age.

4.1.1 Personal information of respondents

Table1.Percentage and frequency distribution of athletes by sex: Male = M and Female = F

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	45	48.9	48.9	48.9
	M	47	51.1	51.1	100.0
	Total	92	100.0	100.0	

According to the information in the above table 45(48.9%) were female athletes. Whereas the rest 47(51.1%) were male athletes. This indicates the researcher was give emphasis for both sexes

Table2. Percentage and frequency distribution of athletes by Age: Thirteen to Fifteen years of age = 0; Fifteen to seventeen years of age =1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	40	43.5	43.5	43.5
	1	52	56.5	56.5	100.0
	Total	92	100.0	100.0	

As table 2 shows 40(43.5%) were between thirteen to fifteen years old which is known as U-15 athletics project and 52(56.5%) were between fifteen to seventeen years old also known as U-17 athletics project

Table3. Percentage and frequency distribution of athletes (in respect of their training age)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 year	35	38.0	38.0	38
	2 years	30	32.6	32.6	70.6
	3 years	21	22.8	22.8	93.4
	4 years	6	6.6	6.6	100.0
	Total	92	100.0	100.0	

Regarding to the participants training age 35(38.0%) athletes were with one year training age, 30(32.6%) athletes were had two years training age, 21(22.8%) were with three years training age and the rest 6(6.6%) were four years training age. This indicates athletes in one athletics project might have different training age.

4.1.2. Percentage and Frequency distribution of athletes with 1 year training age (in respect of causes of psychological injuries)

Table4.

Item 1. Lack of motivation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	12	34.3	34.3	34.3
	D	4	11.4	11.4	45.7
	SA	10	28.6	28.6	74.3
	UD	9	25.7	25.7	100.0
	Total	35	100.0	100.0	
Item2. Feel discourage by the couch					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item 3. Feel frustration during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item4. Lack of treatment by the coach					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	12	34.3	34.3	34.3
	SA	23	65.7	65.7	100.0
	Total	35	100.0	100.0	

Item 5. Frustration to your fitness (performance) because of injuries					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item6. Lack of self-confidence during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item 7. Feel stressed, depressed and tense during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	16	45.7	45.7	45.7
	SA	18	51.4	51.4	97.1
	UD	1	2.9	2.9	100.0
	Total	35	100.0	100.0	
Item8. Feel depression during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item 9. Feel helplessness because of injury					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0

In the above table item 2, 3, 5, 6, 8 and 9; 100% of the respondents were strongly agreed that they feel depressed, frustrated for their performance, feel frightened during training and competition , feel discouraged by their coach and they feel they had lack of self confidence also feel helplessness.

In Item 2; 12(34.3%) of the respondents agreed that they had lack of motivation for their sport.10 (28.6%) also strongly agreed for their lack of motivation. on the other hand 9(25.7%) respond that they could not determined their motivation and the others 4(11.4%) disagreed for lack of motivation.

Item4. 23(65.7%) of the respondents strongly agreed and 12(34.3%) also agreed that they had lack of treatment from their coach.

Item7. 28(80%) of the respondents were strongly agreed where 7(20%) were agreed that they feel discouraged.

Item 9.From the above frequency and percentage distribution 16(45.7%) and 18(51.4%) of the respondents were agreed and strongly agreed respectively they were feels stressed, depressed and tense during training and competition. Only 1 (2.9%) of the respondents did not determine their feeling.

The above response indicates that the fresh athletes feel of frustrated, depression and discouraging during their training. If an athlete is is not motive for his/ her training it has no positive effect for his / her performance. Not only decreasing in performance but also leads them for long term psychological traumas. I this regard coaches had work carefully with fresh athletes.

(Semyon slobounov, 2008) Emotional trauma cannot be predicted and/or anticipated and it is therefore an unexpected emotional reaction to harmful stimuli this means that injury in athletics that is always happening at the wrong time, prior to important competitions, at the peak of performance when an athlete is in great physical shape); An individual is usually unprepared for the traumatic event and therefore is unable, at least in the acute stage of trauma to cope with it.

4.1.3 Percentage and Frequency distribution of athletes with 2 years training age (in respect of causes of psychological injuries)

Table5.

Item 1. Lack of motivation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	30	100.0	100.0	100.0
2. Feel discourage by the coach during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	30	100.0	100.0	100.0
Item 3. Feel frustration during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	7	23.3	23.3	23.3
	SA	23	76.7	76.7	100.0
	Total	30	100.0	100.0	
Item 4. Lack of treatment by the couch					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	30	100.0	100.0	100.0

Item 5. Frustration to your fitness (performance) because of injuries					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	30	100.0	100.0	100.0
Item 6. Lack of self-confidence during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	24	80.0	80.0	80.0
	SA	6	20.0	20.0	100.0
	Total	30	100.0	100.0	
Item 7. Feel stressed, depressed and tense during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	26	86.7	86.7	86.7
	UD	4	13.3	13.3	100.0
	Total	30	100.0	100.0	
Item 8. Feel depression during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	21	70.0	70.0	70.0
	SA	9	30.0	30.0	100.0
	Total	30	100.0	100.0	
Item 9. Feel helplessness because of injury					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	1	3.3	3.3	3.3
	SA	24	80.0	80.0	83.3
	UD	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Item 1. Among Athletes with training age of two years 30 (100%) the respondents were disagreed about lack of motivation. But In item 2 and 4, 30(100%) of the respondents were agreed respectively with feeling of being discouraged and not treated by their coaches during trainings and competition.

Item 3 was about feels of frustration during competitions; amongst athletes with training age of two years 7 (23.3%) of them agreed and also the rest respondents 23 (76.7%) were strongly agreed that they had frustration during competition.

Item 5. Hundred percent (100%) of the respondents were strongly agreed that they feel frustrated about their performance declined because of the injuries.

Item 6. 24 (80 %) of the respondents were agreed that they have lack of self confidence. Similarly 6 (20 %) of the respondents also strongly agreed about their lack of self confidence during their competition.

Item 7. 26 (86.7%) of the respondents were strongly agreed that they feel stressed, depressed and tense during training and competition. The rest 4 (13.3%) of the respondents were didn't determined their feelings.

Item 8. 21 (70%) of the respondents were strongly agreed and 9 (30%) of the respondents were agreed that they feel depressed during competition.

Item 9. 24 (80%) of the respondents strongly agreed that they feel helplessness because of their injuries. Whereas 1 (3.3%) of the total respondents were disagreed and the rest 5 (30%) replied that they could not determined their feelings. emotional feelings response of Athletes in respect of three years training age seen as major indicators for psychological injuries. Being discouraged, lack of treatment by the coach, frustration during

4.1.4 Percentage and Frequency distribution of athletes with 3 years training age (in respect of causes of psychological injuries)

Table6.

1. Lack of motivation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	7	33.3	33.3	33.3
	SD	14	66.7	66.7	100.0
	Total	21	100.0	100.0	

2. Feel discourage by the coach during training and competition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	7	33.3	33.3	33.3
	SD	9	42.9	42.9	76.2
	UD	5	23.8	23.8	100.0
	Total	21	100.0	100.0	

3. Feel frustration during competition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	14	66.7	66.7	66.7
	D	7	33.3	33.3	100.0
	Total	21	100.0	100.0	

4. Lack of treatment by the coach

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	4	19.0	19.0	19.0
	D	16	76.2	76.2	95.2
	SD	1	4.8	4.8	100.0
	Total	21	100.0	100.0	

5. Frustration to your fitness (performance) because of injuries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	9	42.9	42.9	42.9
	D	6	28.6	28.6	71.4
	SA	6	28.6	28.6	100.0
	Total	21	100.0	100.0	

6. Lack of self-confidence during competition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	4	19.0	19.0	19.0
	D	12	57.1	57.1	76.2
	UD	5	23.8	23.8	100.0
	Total	21	100.0	100.0	

7. Feel stressed, depressed and tense during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	4	19.0	19.0	19.0
	SD	17	81.0	81.0	100.0
	Total	21	100.0	100.0	
8. Feel depression during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	11	52.4	52.4	52.4
	D	1	4.8	4.8	57.1
	UD	9	42.9	42.9	100.0
	Total	21	100.0	100.0	
9. Feel helplessness because of injury					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	15	71.4	71.4	71.4
	SD	6	28.6	28.6	100.0
	Total	21	100.0	100.0	

Item 1. The total respondents of athletes with training age of three years were 21. Among these respondents 7 (33.3%) of them replied they disagreed and 14 (66.7%) respondents were strongly disagreed about lack of motivation for their sport.

Item 2. 7 (33.3%) of respondents were disagreed and 9 (42.9%) were also strongly disagreed. The rest 5 (23.8%) of them replied that their feeling were undetermined.

Item 3. During training and competition 14 (66.7%) of the respondents were agreed that they feel frustrated whereas 7 (33.3%) were disagreed.

Item 4. Among the total respondents 4 (19 %) were agreed that they had lack of treatment by their coaches. While others respondents 16 (76.2) disagreed and 1 (4.8 %) were replied strongly disagreed that they had not lack of treatment by their coaches.

Item 5. Athletes were gave their response about their performance frustration because of injuries. Among the respondents 9 (42.9%) were agreed they feel frustrated, 6 (28.6%) were also strongly agreed. But the rest 6 (28.6%) were disagreed.

Item 6. 4 (19%) of the respondents agreed they had lack of self confidence. Whereas 12 (57.1%) were disagreed and the rest 5 (23.8%) of respondents undetermined their self confidence.

Item 7. 4 (19%) of respondents were disagreed about feeling of stressed, depressed and tense similarly the rest 17 (81%) of them were strongly disagreed. Item 8 and 9 .feeling of depression during competition and feel of helplessness because of injuries were not seen as the problem of athletes with training age of three years.

4.1.5 Percentage and Frequency distribution of athletes with 4 years training age (in respect of causes of psychological injuries)

Table7.

Item 1. Lack of motivation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0
Item 2. Feel discourage by the coach during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0
Item 3. Feel frustration during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	2	33.3	33.3	33.3
	SD	4	66.7	66.7	100.0
	Total	6	100.0	100.0	
Item 4. Lack of treatment by the coach					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0
Item 5. Frustration to your fitness (performance) because of injuries					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	1	16.7	16.7	16.7
	SA	5	83.3	83.3	100.0
	Total	6	100.0	100.0	

Item 6. Lack of self-confidence during competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	2	33.3	33.3	33.3
	SA	4	66.7	66.7	100.0
	Total	6	100.0	100.0	
Item 7. Feel stressed, depressed and tense during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0
Item 8. Feel depression during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	6	100.0	100.0	100.0
Item 9. Feel helplessness because of injury					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0

All respondents with training age of four years were strongly disagreed about lack of motivation from their coaches (item 1), feel discouraged (item 2), lack of treatment (item 4) from their coaches, feel stressed, depressed and tense during competition (item7), feel of depressed during training and competition (item 8) and feel of helplessness because of their injuries.

Item 3. 2 (33.3%) of respondents were disagreed to the frustration during competition and the rest 4 (66.7%) also strongly disagreed.

Item 5. All respondents were frustrated for their performance declining because of their injuries. As indicated in the above table 1(16.7%) responded agreed and 5(83.3%) also strongly agreed.

Item 6. As indicated in the above distribution 2(33.3%) were agreed and 4(66.7%) were strongly agreed that they had lack of self confidence during competition.

There for according to the respondents, athletes with training age of four years did not emotionally injure. They did not feel discouraged, stressed, depressed, and tense. This indicates that athletes who had longer training age are good psychologically prepared. So they are better than the other athletes with training age less than three years. But they have frustrations about their performance because of injuries, and also feel have less self confidence in competitions.

Lack of self confidence during competition had an impact in performance this athletes may not successful in their competition.

4.1.6. Percentage and Frequency distribution of athletes with 1 year training age (in respect of causes of physiological injuries)

Table8.

Item1. Lack of sport cloths during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item .2 Lack of foot wears during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0
Item 3. Insufficient water drink during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	27	77.1	77.1	77.1
	SA	8	22.9	22.9	100.0
	Total	35	100.0	100.0	
Item 4. Lack of enough diet after training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	21	60.0	60.0	60.0
	SA	14	40.0	40.0	100.0
	Total	35	100.0	100.0	
Item 5. Lack of enough warming up exercise before training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	11	31.4	31.4	31.4
	SA	24	68.6	68.6	100.0
	Total	35	100.0	100.0	
Item 6. Load of training (over training)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	35	100.0	100.0	100.0

As indicated in the above frequency and percentage distribution, Item 1 and item 2 were about training shoes and clothes: 35(100%) the respondents were strongly agreed that they had lack of sports wears.

Item 3. Showed that 27(77.1%) of the respondents agreed and the rest 8(22.9%) also strongly agreed that they had not drink sufficient water during training and competition time.

Item 4.Similar to drinking water athletes were not had enough balanced diets after training and competition. As described in the above distribution 21 (60%) of the respondents were agreed and the rest 14(40%) were strongly agreed.

Item 5. 11(31.4%) of the respondents were agreed about lack of enough warming up exercise and 24(68.6%) were strongly agreed they had not done enough warming up exercise prior to the main training session. 35 (100%) of the respondents were strongly agreed that the load of training was over training as indicated from the frequency and percentage distribution in the above table in Item 6. From item 1 all athletes with training age having one year had similar response to the cause of physiological injuries that they have no modern and appropriate sportswear, materials, they did not drink sufficient water they did not perform proper warming up exercise. Due to these factors athletes are tend to be injured. Specially aver loaded training is among the primary causes for injury. As stressed by (Difiori, 1999)It is important to note that overuse injuries are not caused by a specific injury or accident, but rather by repeated stresses on the body

4.1.7. Percentage and Frequency distribution of athletes with 2 years training age (in respect of causes of physiological injuries)

Table9.

Item 1. Lack of sport cloths during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	19	63.3	63.3	63.3
	SA	11	36.7	36.7	100.0
	Total	30	100.0	100.0	

Item 2. Lack of foot wears during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	29	96.7	96.7	96.7
	SA	1	3.3	3.3	100.0
	Total	30	100.0	100.0	
Item 3. Insufficient water drink during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	14	46.7	46.7	46.7
	D	9	30.0	30.0	76.7
	UD	7	23.3	23.3	100.0
	Total	30	100.0	100.0	
Item 4. Lack of enough diet during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	25	83.3	83.3	83.3
	D	5	16.7	16.7	100.0
	Total	30	100.0	100.0	
Item 5. Lack of enough warming up exercise before training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	14	46.7	46.7	46.7
	D	6	20.0	20.0	66.7
	UD	10	33.3	33.3	100.0
	Total	30	100.0	100.0	
Item 6. Load of training (over training)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	23	76.7	76.7	76.7
	D	1	3.3	3.3	80.0
	SA	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Item1. 19(63.3%) of the respondents agreed, 11(36.7%) also strongly agreed that they had lack of sports clothes.

Item2. 29(96.6%) of respondents responded agree and 1(3.3%) were also strongly agreed that they had lack of appropriate training shoes.

Item3. 14(46.7%) of respondents were agree that they didn't rink sufficient water during training and competition. On the hand 9(30%) of the respondents were disagreed and the rest 7(23.3%) were undetermined.

Item4. Among 30 respondents of athlete with training age of two years 25(83.3%) were agreed that they lack of enough diet where the rest 5(16.7%) were disagreed.

Item5. 14(46.7%) were agreed that they had enough warming up exercise. On the other side 6(20%) were disagreed and the rest 10(33.3%) responded undetermined whether the warming up exercise was enough or not.

Item6. The respondent athletes with training age of two years: 23(76.7%) of them were agreed the training load was over their capacity and 6(20%) also strongly agreed while 1(3.3%) was disagreed.

According to the participants athletes have lack of sports clothes and foot wears. These shortages lead them for different physiological injuries. It is impossible to train without appropriate spots wear. Because sports wear have their own contribution for injuries especially if no modern and appropriate shoes. Proper warming up exercise is among the mechanisms of prevention injuries. But as the result indicates athletes had no enough warming up exercise thy start the main training, the main exercise load is more intensive than the warming up exercise so the training may be difficult to perform and causes injuries.

4.1.8. Percentage and Frequency distribution of athletes with 3 years training age (in respect of causes of physiological injuries)

Item1. Lack of sport cloths during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	15	71.4	71.4	71.4
	D	6	28.6	28.6	100.0
	Total	21	100.0	100.0	
Item2. Lack of foot wears during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	15	71.4	71.4	71.4
	D	5	23.8	23.8	95.2
	SD	1	4.8	4.8	100.0
	Total	21	100.0	100.0	
Item3. Insufficient water drink during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	21	100.0	100.0	100.0
Item4. Lack of enough diet during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	18	85.7	85.7	85.7
	SD	3	14.3	14.3	100.0
	Total	21	100.0	100.0	
Item5. Lack of enough warming up exercise before training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	8	38.1	38.1	38.1
	SD	13	61.9	61.9	100.0
	Total	21	100.0	100.0	
Item6. Load of training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	18	85.7	85.7	85.7
	SD	3	14.3	14.3	100.0
	Total	21	100.0	100.0	

Item1. Like athletes with training age of one and two years, athletes with training age three years also had lack of sports wears. As indicates in the above frequency and percentage distribution 15(71.4%) were agreed while 6(28.6%) were disagreed. Item 2 also responded similar to item 1.

Item3. Unlike athletes with training age of one and two years of training age, athletes with training age of three years of training age were 100% disagreed that they had not problem in drinking sufficient water during and after training and competition.

Item4. Regarding to balanced diet 18(85.7%) of the athletes were disagreed and the rest 3(14.3%) also strongly disagreed that they had not shortage of diet.

Item5. 8(38.1%) of the respondents were disagreed and 13(61.9%) were also strongly disagreed that warming up exercise was not a causes for injury. Item6. Unlike the other respondents training load was not over training to these athletes. Among these athletes 18(85.7%) were disagreed and 3(14.3%) were also strongly disagreed. Athletes with training age have a shortage of sports wears as it discussed in page 63 it has similar effect for this athletes. This lack of sportswear leads the athletes to be injured physiologically.

Regarding to water intake and having enough diet during and after training athletes with training age of three years had no a problem as it indicates in the above distribution. In respect of warming up exercise and training load these athletes replied that they had enough warming up exercise and the training load was not over loaded. In this situation these athletes may not injured be use of these factors.

4.1.9. Percentage and Frequency distribution of athletes with 4 years training age (in respect of causes of physiological injuries)

Item 1. Lack of sport cloths during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	6	100.0	100.0	100.0
Item 2. Lack of foot wears during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	6	100.0	100.0	100.0
Item 3. Insufficient water drink during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	2	33.3	33.3	33.3
	SD	4	66.7	66.7	100.0
	Total	6	100.0	100.0	

Item 4. Lack of enough diet during training and competition					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	100.0	100.0	100.0
Item 5. Lack of enough warming up exercise before training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	1	16.7	16.7	16.7
	SD	5	83.3	83.3	100.0
	Total	6	100.0	100.0	
Item 6. Load of training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	2	33.3	33.3	33.3
	SD	4	66.7	66.7	100.0
	Total	6	100.0	100.0	

As shown in the above table item1 and item2, athletes with training age of four years had lack of sports wears. They responded 100% of them.

In item3, athletes had not lack of drinking sufficient water during their training and competition time. 2(33.3%) of them were disagreed and 4(66.7%) were also strongly disagreed.

Item4. Indicates about having lack enough diet after training and competition, among the respondents 6(100%) of them were strongly disagreed that they had not lack of diet.

Item5. 1(16.7%) of the respondents were agreed the warming up exercises were not enough while the others 5(83.3%) responded that disagreed warming up exercises were not seen as problem.

Item6. About training load 2(33.3%) were disagreed and 4(66.7%) were also strongly disagreed that the training load was not over training for them.

According to the above response lack of sportswear are the major shortages of these athletes. Lack sportswear means athletes are Easley

4.1.10. Percentage and Frequency distribution of athletes (in respect of Method of prevention and rehabilitation)

Item 1. After injury do you have enough rest and recovery?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	57	62.0	62.0	62.0
	Y	35	38.0	38.0	100.0
	Total	92	100.0	100.0	
Item 2. Do you have rehabilitation program?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	84	91.3	91.3	91.3
	Y	8	8.7	8.7	100.0
	Total	92	100.0	100.0	
Item 3. Do you have family support during rehabilitation time?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	55	59.8	59.8	59.8
	Y	37	40.2	40.2	100.0
	Total	92	100.0	100.0	
Item 4. Do you have professional sport psychologist?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	92	100.0	100.0	100.0
Item 5. Do you have medical doctor or physiotherapist?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	92	100.0	100.0	100.0

Regarding to prevention and rehabilitation of injuries respondents were responded as followed.

Item1. Indicates in the above table 57(62.0%) were did not get enough rest and recovery after injuries happened. Whereas the rest respondents replied that they recovered.

Item2. 84(91.3%) of the respondents had not a rehabilitations program while the rest 8(8.7%) were responded that they had rehabilitation program.

Item3. Regarding to family support 55(59.8%) of them had strong family support on the other hand 37(40.2%) had not family support during their rehabilitation time.

Item4. All participants were responded that they had no professional sport psychologist and also as indicated in item 5, there was no medical doctor/physiotherapist for athletics projects.

4.1.11. Percentage and frequency distribution of athletes ranking (in respect of types of physiological injuries commonly occurred:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ankle injury	14	15.2	15.2	15.2
	Back Pain	5	5.4	5.4	20.7
	Calf pain	9	9.8	9.8	30.4
	Foot &Heel Pain	9	9.8	9.8	40.2
	Groin pain	7	7.6	7.6	47.8
	Hip pain	5	5.4	5.4	53.3
	Knee pain	12	13.0	13.0	66.3
	Muscle pain	9	9.8	9.8	76.1
	Neck pain	1	1.1	1.1	77.2
	Thigh & Hamstring pain	21	22.8	22.8	100.0
	Total	92	100.0	100.0	

Participants were asked to give rank for the above based on the injuries frequency happened to them and they give rank as shown in the above table. Among the most common physiological injuries happened to project athletes' thigh and hamstring injuries were the highest influential injuries and they get 21 respondents from 92. Secondly Ankle injuries and third level knee pain, in the fourth level calf pain, foot and heel pain and muscle pain, fifthly groin pain, sixthly back pain and hip pain and finally neck pain.

Although all injuries were happened to the project athletes' thigh and hamstring muscle injuries had the higher frequency in happening to athletes.

4.1.12. Percentage and frequency distribution of athletes ranking (in respect of their emotional feeling

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Angry	9	9.8	9.8	9.8
	Depressed	14	15.2	15.2	25.0
	Discouraged	12	13.0	13.0	38.0
	Frightened	7	7.6	7.6	45.7
	Frustration	7	7.6	7.6	53.3
	Helplessness	5	5.4	5.4	58.7
	Lack of Self Confidence	16	17.4	17.4	76.1
	Stressed	17	18.5	18.5	94.6
	Tense	5	5.4	5.4	100.0
	Total	92	100.0	100.0	

Participants were asked to give rank for the above emotional feelings as indicated in the above table. Among the listed feelings stressed lack of self confidence, depressed and discouraged, were the highest influential factor for athletes during their training and competition. The rest Anger, frightened, frustration and being tense were had rank respectively and had their impact on the project athletes psychology.

4.1.13. Findings From coaches and sport experts interviews

1. What are the major causes of physiological injuries of project athletes?

In athletics training without sufficient and appropriate sportswear, modern equipments, sufficient drinking water, balanced diet and safe training area it is difficult to think about athletics training. Athletes are not strengthening enough they are kids; so, they easily get injuries. Youth and sports office should give great emphasis to project athletes.

2. What make athletes to be anger, depressed, stressed, etc during training?

Some athletes have no good family support. Athletes have different background and different economical status. Athletes who come from poor economical status are easily disturbed with a little thing because they are kid.

Regarding to training and competition when there is a competition they are more stressed, anxious. All athletes way not participate in competition during that time the non participated athletes are anger, depressed, nervous and sometimes they feel like discriminated by coaches.

3. During psychological injuries do you have professional sport psychologist? If no how do you threat them?

Because of the above mentioned reasons athletes are dropped out from training. It is difficult to give counseling to psychologically injured athletes it need professional counselor. Rather than giving advice they have not anything to do to calm dawn the athletes.

In case of physiological injuries, rather than stop bleeding by compressing, they have no knowledge to give treatment to injuries. So, they send them to home.

4. What methods of prevention you use to avoid or minimize injuries?

coaches get lose sight of what is more important than just hard or move them through recoveries at such a rapid pace that they end up doing more harm than good for the them and their bodies. Proper training about their sport for coaches, who can then show their athletes correct techniques, is the most essential way to reduce injuries in sports. It is an unfortunate fact that coaching errors, including inability to properly assess the level of skill and/or fatigue and change the loading level, ended up with career ended injuries of their athletes. Athletes need to either be completely healthy to return or very confident in returning to avoid further injury. Psychological counseling can be very helpful when an injury is severe enough because it definitely can help athletes get over insecurities and fears.

4.1.14. Findings from observation

In order to obtain information about major causes of physiological and psychological injuries, observation has been used by the researcher. Hence, the researcher has observed that most of the athletes did not wear appropriate sport wears during their training; which leads them for different physiological injuries.

Athletes do not warm up their body properly prior to the main training session. The training load was not considering individual athlete performance. All male and female junior and senior athletes were working together. For some athletes the training load was too loaded, for others it

was medium and for others it was too easy. This shows that athletes have different performance, in different training age.

Most athletes were not drink water before, during and after training, even they are dehydrated. The training fields for some projects were not safe to train athletics especially for project athletes.

Some coaches were not well known about their athletes' performance and the load they give to them, rather than giving by guess, they have no well prepared training plan.

In the training fields the researcher had not observe physiotherapist and sport psychologist. When injuries were happened, there was no a person to give first aid threat meant. Even the coaches have not first aid kits.

After training cooling down exercise was not done properly, simply after they finished their training they take rest and went home.

CHAPTER FIVE

5. SUMMERY, CONCLUSION AND RECOMMENDATION

5.1. Summery

The purpose of this study was to assess the major causes of physiological and psychological injuries of project athletes. In order to answer the questions, the descriptive research method was employed and SPSS method of data analysis was also used. The relevant data to the study were gathered through questionnaires, interview and Observation. In general 98 participants were involved in the study. These were 92 athletes, 6 coaches and 2Addis Ababa youth and Sport bureau experts.

As in indicated in the interpretation and discussion the following points were mentioned as findings of the major causes of physiological and psychological injuries of project athletes.

- ✓ Athletes' revealed serious problems as lack of treatment, stressed, lack of self confidence, depressed, Angry were among psychological injuries of project athletes.
- ✓ Situational anger, depression, alternation of mood, confusion and/ or apathy, isolation and withdrawal from team mates and coaches, acting helpless and hope less.
- ✓ Athletes were facing for different physiological injuries specially thigh and hamstring muscle pains, ankle injuries, knee pain and calf and heel pain were among injuries commonly happened to project athletes,
- ✓ The major causes for these physiological injuries were over training, lack of modern sports wears; lack enough warming up exercise, insufficient water drinking and balanced diet.
- ✓ There were neither professional sport psychologists nor physiotherapist for project athletes.
- ✓ The same training for different athletes and events, lack of adequate facilities, lack of adequate balanced diet, and lack of sufficient incentive and motivation, coaching errors, overloaded training, lack of appropriate sport wears and training area.
- ✓ Coaches have Lack of knowledge and education in prevention of injuries when to return to training after injury.
- ✓ There was no center of rehabilitation center and program for athletes.

From this notion, it is so easy to understand that there was consistency of views on the part the respondents. At the juncture, it is also important to remind that considerable numbers of respondents were complaining about the lack of individualized training for different track events in which they are now working, for example, many informants expressed it; we are done training with mixed short distance, middle distance and long distance trainee athletes, male and female athletes, athletes with different training age were working together all the mentioned coaching errors were the major causes for project athletes injuries.

5.2. Conclusions

Based on the results of the study the researcher obtained and analyzed, the following points as a conclusion.

Psychological injury overall is defined as an individual's subjective experience determining whether an event is or is not traumatic (Slobounov, 2001). It is not the event that determines where something is traumatic to someone, but the individual experience of the event. (http://www.traumaresources.org/emotional_trauma_overview.htm). As stressed by the scholars,

Injuries are commonly blamed on coaches. Inadequate assessment of athletes' physical skill, misunderstanding of psychological coping resources, rushing with acquisition of new techniques, overtraining and over loading causing accumulated muscle and mental fatigue, early return to to training after injury are just a few examples of coaching errors that increase the risk of injury in project athletes.

The most important message from the coaches' responses is that education and knowledge about injuries is currently lacking. The most serious concern is lack of knowledge about psychological injuries in athletics. Most coaches rely have knowledge gap regarding the impact of injury and the time frame for return to training after injury. It is essential that coaches should be properly trained and educated in terms of devastating effect of injuries.

If an athlete believes that return to training after injury would endanger his/her well-being both physiologically (i.e. increased risk for re- injury) and psychologically (i.e. exaggerated irrational thoughts and misperceived high risk of danger), then more sports participation would be perceived as caused for injury. It is important to stress again that there may or may not be bodily injury involved, but psychological injuries coupled with physiological responses may develop as a chronic and long term disability.

Therefore it is the responsibility of medical and psychologist professionals to consider the importance of a timely assessment not only of physiological but also the psychological symptoms of injured athletes'.

5.3. Recommendations

Recommendations for the causes of physiological injuries;

- The youth and sports bureau of Addis Ababa should fulfill appropriate and modern sports wears and equipments in order to prevent injuries.
- Training environment also has their influence for injuries occurrence, youth and sports bureau have to identify the training area and make them appropriate for training.
- Coaches should be follow the principles of sports training specially understanding of principle of over load how and when to increase the load: because athletes were injured because of over loaded training.
- Stake holders of project athletes should create awareness on how to preventing injuries on coaches and athletes.
- There should be professional physiotherapists for each project who gives scientific treatment for the injured athletes.
- Athletes must develop water drinking culture before, during and after training and competition. Coaches help their athletes' to know the merit of water drinking and demerits of its deficiency.
- Before the main session warming up exercise should be done properly. Because it helps the body to be ready, well warmed and flexible for the next task.
- Scholars also recommend that flexibility and strength exercise are among the methods of preventing injuries.

Recommendations for the causes of psychological injuries;

- In order to prevent depression of athletes on their training, it is better to train them in deferent training place and design variety of training methods.
- Young athletes need more motivation from their coach, family, teammates and from the society: the primary motivator of the athletes is the coaches. So they should be taking care of their emotional feelings.
- I order to avoid the feeling of discouraging from athletes; coaches should treat and develop good relationship equally with all athletes.
- Understanding back ground of the athletes help the coaches to handle the emotional feeling of their athletes. Because some athletes have good family support and others did

not have. So, athletes who had no good family support might be easily emotionally disturbed. It is better to know each individual athlete.

- Although it is difficult to train freshman athletes, who have no realistic expectation and enough confidence, coaches' major concern should be their safety and well being. Not what they can or cannot do.
- There should be professional sport psychologist in case of psychological injuries for each athletics projects
- Youth and sport bureau should facilitate rehabilitation centers and programs with enough professionals.

References

Adrix and G.Kungtten.(1988) the Olympic Book of Sport Medicine.Published by Black way scientific publication.

Atwell EA, Jackson DW: Stress fractures of the sacrum in runners: two case reports. Am J Sports Med 1991; 19(5):531-533.

Bergman AG, Frederickson M: MR imaging of stress reactions, muscle injuries, and other overuse injuries in runners. Magn Reson Imaging Clin N.Am 1999; 7(1):151-174

BL, Healy NL, Rencken ML, et al: Effectiveness of nasal calcite in preventing bone loss in amenorrhea women, abstracted. J Bone Miner Res 1993;8 (suppl 1):S264 .

Bottomley MB: Sacral stress fracture in a runner. Br J Sports Med 1990; 24(4):243-244.

Braun J, Sieper J, Bollow M: Imaging of sacroiliitis. Clin Rheumatol 2000; 19(1):51-57.

Carolyn, and Lynn (1979) Therapeutic Exercise foundation and technique. F.A, David Publisher.

Cumming DC, Cumming CE: Estrogen replacement therapy and female athletes: current Issues. Sports Med 2001; 31(15):1025-1031.

Czarnecki DJ, Till EW, Minikel JL: Unique sacral stress fracture in a runner. AJR Am J Dasgupta B, Shah N, Brown H, et al: Sacral insufficiency fractures: an unsuspected cause of. low back pain. Br J Rheumatol 1998; 37(7):789-793.Drinkwater.

Dick, R., Romani, W.A., Agel, J., Case, J.G., & Marshall, S.W. (2007). Descriptive epidemiology of collegiate men's lacrosse injuries: National collegiate athletic association injury surveillance system, 1988-1989 through 2003-2004. Journal of Athletic Training. 42, 255-61.

Eller DJ, Katz DS, Bergman AG, et al: Sacral stress fractures in long-distance runners. Clin J

Fredericson M, Bergman AG, Hoffman KL, et al: Tibia stress reaction in runners: correlation of clinical symptoms and scientific graph with a new magnetic resonance imaging grading system. Am J Sports Med 1995; 23(4):472-481.

Gerrard DF, Doyle TC: Lumbo sacral pain in an athlete: an unusual site for stress fracture. Clin J Sport Med 1998; 8(1):59-61.

Hetland ML, Haarbo J, Christiansen C: Low bone mass and high bone turnover in male long distance runners. J Clin Endocrinol Metab 1993; 77(3):770-775

Jhon, Etal (1990). Therapeutic exercise. East prestone Publisher.

John W.Best and James V. Kahn (2002) Research in Education. Prentice hall of India private limited publisher, New Dehhi.

Johnson AW, Weiss CB Jr, Stento K, et al: Stress fractures of the sacrum: an atypical cause of low back pain in the female athlete. Am J Sports Med 2001;29(4):498-508.

Major NM, Helms CA: Sacral stress fractures in long-distance runners. AJR Am J Roentgenol 2000; 174(3):727-729.

Major NM, Helms CA: Sacral stress fractures in long-distance runners. AJR Am J Roentgenol 2000; 174(3):727-729.

Manning, M.R., & Levy, R.S. (2006). Soccer. Physical Medicine and Rehabilitation Clinics of North America. 17, 677-95.

Marx RG, Saint-Phard D, Callahan LR, et al: Stress fracture sites related to underlying bone health in athletic females. Clin J Sport Med 2001; 11(2):73-76.

Marx RG, Saint-Phard D, Callahan LR, et al: Stress fracture sites related to underlying bone health in athletic females. Clin J Sport Med 2001;11(2):73-76

Matheson GO, Clement DB, McKenzie DC, et al: Stress fractures in athletes: a study of 320 cases. Am J Sports Med 1987; 15(1):46-58.

Matheson GO, Clement DB, McKenzie DC, et al: Stress fractures in athletes: a study of 320 cases. Am J Sports Med 1987; 15(1):46-58.

McFarland EG, Giangarra C: Sacral stress fractures in athletes. ClinOrtho1996; 329(Aug):24024.

McFarland EG, Giangarra C: Sacral stress fractures in athletes. ClinOrthop 1996;329(Aug):240-243.

Mumm and Norman (1946) Psychology the fundamental of human adjustment. Reveries press

Mumm and Norman (1946) Psychology the fundamental of human adjustment. Reverse press Publisher, Cambridge.

Myburgh KH, Hutchins J, Fataar AB, et al: Low bone density is an etiologic factor for stress fractures in athletes. Ann Intern Med 1990; 113(10):754-759.

Myburgh KH, Hutchins J, Fataar AB, et al: Low bone density is an etiologic factor for stress fractures in athletes. Ann Intern Med 1990; 113(10):754-759.

Peterson, Etal (1986), sport injuries, the prevention and treatment. Martin Publisher, London.postural control. Journal of Motor Behavior, 29, 263-281.publisher, Cambridge.

Richard H (1998) sport psychology concepts and Applications Edward E. Bartell publisher U.S.A.Roentgenol 1988;151(6):1255.

Saggar, H and Kungttgen (1996), How to keep fitness through Diet and Exercise. Vikes Publisher, Newdelhi.

Semyon Slobounov (2008) injuries in athletics : causes and consequences, New York, NY 10013, USA)

Shaver and Lary, (1981) Essential of Exercise physiology. (1981) subject publishes, NewDelhi.

Slobounov, S., Slovounova, E., Newell, K. (1997). Virtual time-to-collision and human Sport Med 1997;7(3):222-225.

Volpin G, Milgrom C, Goldsher D, et al: Stress fractures of the sacrum following strenuous activity. Clin Orthop 1989; 243(Jun):184-188.

Appendixes

Appendix 1

Addis Ababa University

School of graduate studies

Department of sport science

Questionnaire for project athletes

Dear athletes the purpose of this questionnaire is to obtain information about the Major cause of physiological and psychological injuries of project athletes the case of city administration of Addis Ababa Yeka and Gullele sub cities

I will be kept confidential so that your genuine view, frank opinion and timely responses are very valuable in determining the success of the study. Therefore, you are kindly requested to extend your cooperation honestly by providing relevant information and filling out the questionnaire that are prepared for this intention.

Thank you in advance for your cooperation!!!!

Instruction

- ✓ No need to write your name
- ✓ Try to answer the question according to the instruction provided
- ✓ If you need additional information use the space provided at the end of the questionnaire

Back ground information

- ✓ You sex male---------- female----------
- ✓ Age A. below 12 B.12-13 C. 13-15 D. 15 -17
- ✓ Your training age A. 1 year B. 2 years C. 3 years D. 4 years

I. Questions about psychological injuries

no	Items	Strongly agree	agree	undetermined	Disagree	Strongly disagree
1	Lack of motivation					
2	Feel discourage by the coach during training and competition					
3	Feel frustration during competition					
4	Lack of treatment by the coach					
5	Frustration to your fitness (performance) because of injuries					
6	Lack of self-confidence during competition					
7	Feel stressed, depressed and tense during training and competition					
8	Feel depression during training and competition					
9	Feel helplessness because of injury					

II. Questions about physiological injuries

no	Items	Strongly agree	agree	undetermined	Disagree	Strongly disagree
1	Lack of sport cloths during training and competition					
2	Lack of foot wears during training and competition					
3	Insufficient water drink during training and competition					
4	Lack of enough diet during training and competition					
5	Lack of enough warming up exercise before training					
6	Load of training					

III. In respect to methods of prevention and rehabilitation

no	Items	Yes	No
1	After injury do you have enough rest and recovery?		
2	Do you have rehabilitation program		
3	Do you have family support during rehabilitation time?		
4	Do you have professional sport psychologist?		
5	Do you have medical doctor or physiotherapist?		

IV. Athletes rank in respect of common psychological injuries

Items	Rank
Angry	
Depressed	
Discouraged	
Frightened	
Frustration	
Helplessness	
Lack of Self Confidence	
Stressed	
Tense	
Total	

V. Athletes rank in respect of common physiological injuries

Items	Rank
Ankle injury	
Back Pain	
Calf pain	
Foot &Heel Pain	
Groin pain	
Hip pain	
Knee pain	
Muscle pain	
Neck pain	
Thigh & Hamstring pain	
Total	

Appendixes

Addis Ababa University

School of graduate studies

Department of sport science

Questionnaire for coaches and sport experts

Dear athletes the purpose of this questionnaire is to obtain information about the Major cause of physiological and psychological injuries of project athletes the case of city administration of Addis Ababa Yeka and Gullelesubcities

I will be kept confidential so that your genuine view, frank opinion and timely responses are very valuable in determining the success of the study. Therefore, you are kindly requested to extend your cooperation honestly by providing relevant information and filling out the questionnaire that are prepared for this intention.

Thank you in advance for your cooperation!!!!

1. What are the major causes of physiological injuries of project athletes?

---

2. What make athletes to be anger, depressed, stressed, etc during training?

---

3. During psychological injuries do you have professional sport psychologist? If no how do you threat them? ---
---

4. What methods of prevention you use to avoid or minimize injuries?

Appendix III

Observation check list

Name of project----------

Place----------

Training time----------

Number of athletes----------

no	Items	available	Not available
2	Sports wears during training		
3	Insufficient water drink during training		
4	warming up exercise before training		
5	Load of training		
6	Sport psychologist		
7	Medical doctor/ physiotherapist		
8	Training area		