

**PSYCHOLOGICAL PREDICTORS OF INJURY AMONG MALAYSIAN
PROFESSIONAL FOOTBALL PLAYERS**

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**PSYCHOLOGICAL PREDICTORS OF INJURY AMONG MALAYSIAN
PROFESSIONAL FOOTBALL PLAYERS**

by

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for the Degree of Doctor of Philosophy**

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2006 PhD

DECLARATION

This is to certify that:

- 1) The thesis comprises only my original work,
- 2) Due acknowledgement has been made in the text to all other material used,
- 3) The thesis is less than 80,000 words in length, exclusive of tables, maps, bibliographies, appendices, and footnotes.

DEDICATION

This thesis is special dedicated to my wife, Rasuna binti Haji Othman, and to my lovely and beautiful children, Aishah Shahirah, Muhammad Harris Muzzammil, Muhammad Affiq, Hanis Sakinah, and Muhammad Luqman Aqil who have been my inspiration. They have not only endured all the hardship during this study period but also sacrificed their love and time for countless hours by providing a calming influence. My special thanks to my parents, in-laws, families, colleagues, and friends for their support and encouragement in enabling me to complete my studies.

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ABSTRAK

Psikologi sukan merangkumi banyak aspek yang penting dalam sukan dan permainan. Kecederaan adalah salah satu daripada perkara biasa yang seseorang itu boleh perhatikan dalam kebanyakan sukan dan permainan. Terdapat banyak punca seseorang itu dapat fikirkan berlakunya kecederaan dan aspek psikologi dianggap lebih penting. Ramalan psikologi, kesan psikologi dan aspek psikologi dari pemulihan kecederaan adalah mustahak untuk diambilkira. Oleh itu, objektif kajian ini adalah untuk menentukan faktor peramal psikologi yang menyebabkan berlakunya kecederaan sukan dengan memfokuskan kepada pemain bolasepak Liga Bolasepak Profesioanl Malaysia. Kaedah penyelidikan deskriptif telah diguna untuk menentukan peramal psikologi ke atas kecederaan di kalangan pemain dari pasukan yang dipilih. Satu kajian lapangan telah dijalankan untuk menguji kesahan dan kebolehpercayaan soalselidik yang digunakan. Persampelan kelompok telah dipilih untuk mendapatkan jumlah sebenar subjek. Berdasarkan kaedah persampelan ini, semua pasukan dikelompokkan kepada lima kumpulan (Utara, Selatan, Timur, Barat Semenanjung Malaysia dan Malaysia Timur). Daripada lima kelompok ini, dua pasukan setiap kelompok dipilih secara rambang sebagai subjek (25 pemain setiap pasukan x 10 pasukan = 250 subjek). Soalselidik, pemerhatian dan temubual diguna sebagai instrumen kajian dalam menentukan faktor-faktor peramal psikologi kecederaan. Untuk analisa statistik, "Univariate" dan "Multivariate Logistic Regression" digunakan dalam "Statistical Package for Social Sciences (SPSS)" versi 11.0 'for windows'. Kajian ini mendapati majoriti pemain bolasepak Liga Profesional Malaysia mengalami kelemahan dalam aspek penghargaan diri (self-esteem) dan kekuatan mental (mental toughness). "Multivariate Logistic Regression" menunjukkan terdapat perbezaan yang signifikan antara pemain yang cedera dan tidak cedera dalam aspek penghargaan diri dan kekuatan mental. Ianya adalah perkara yang penting untuk pemain dilatih kuatkan mental dan mengatasi tekanan tanpa mendatangkan kecederaan. Sesuatu tindakan perlu diambil untuk mengelakkan kecederaan dengan mengendalikan program kesedaran dan juga mendidik pemain untuk mengatasi tekanan dan meningkatkan penghargaan diri serta kekuatan mental.

ABSTRACT

Injury is common occurrence in many sports and games. Sportsmen get injured either by accident or intentionally by other players. There are many factors responsible for injuries in sports, of which psychological factors are one, and an important one. Many studies have shown the impact and influence of psychological characteristics of athletes in determining risk of injuries and rehabilitation. The objectives of this study was to determine psychological profiles of footballers, to document injury profiles, and to identify psychological predictors of injury occurrence among footballers involved in the Malaysian Professional Football League. A prospective research design was used in this study. Psychological profiles of the subjects were determined using a validated questionnaire. In addition, a pilot study was carried out to test the validity and reliability of the questionnaire. A cluster sampling method was used, in which all teams were grouped into five clusters; North, South, East and West of Malaysia and East Malaysia (Sabah and Sarawak). Two teams from each cluster were randomly selected and all 25 registered players in each team were taken as the study samples. A total of 250 players were selected. The subjects were then instructed to answer the questionnaire. This procedure was repeated for all subjects throughout. In addition, an interview was conducted with players who were injured during or after the game. Data were entered and analysed using Statistical Package for Social Science version 11.0. Significant differences in the mean score between injured and non-injured subjects were determined by logistic regression. Psychological predictors were derived by performing multivariate logistic regression. Univariate analysis, significant differences in the mean score of psychological profiles between the injured and non-injured players were observed in self-esteem, reboundability, ability to handle pressure, level of confidence, and motivation. However, after multivariate analysis, only self-esteem, level of

confidence, and motivation were found to be predictors of injury among Malaysian football players involved in Malaysian Professional Football League.

CHAPTER I

INTRODUCTION

1.0 Introduction

Football as it is known in many parts of the world, soccer as it is referred to in United State of America, is the world's most popular organised team sport. It is played in every nation without exception. The Federation International de Football Association (FIFA) comprises 186 countries. A total of about 200 million male players and 21 million female players have registered through their respective national association (Giza, Mithofer, Farrel, Zarins, & Gill, 2004). The sport has a rich history in the United Kingdom though it was formalised by the establishment of the English Football Association in 1863. The game soon spread to continental European countries and later to South America and other continents.

FIFA was set up in France (Paris) on 21st May 1904 by Robert Guin. Four years later in 1908, the first Olympic soccer competition was held. In that game, the United Kingdom won the finals defeating Denmark, a country which had also played a leading role in popularising the game. Uruguay hosted the first World Cup Tournament in Montevideo in 1930. This competition is now held every four years and it has fanatical hold on its spectators and television audience (Reilly, 1996).

Malaysian Professional Football League came into being in the year 1989 and conducted the first Malaysian Semi-Pro Football Tournament in the same year. In 1987, The President of Football Association of Malaysia (FAM) issued a statement that the Semi-Pro Football Tournament should commence by 1989 (Football Association of Malaysia, 2000). In December 1988, the blue print for the Semi-Pro Football Tournament was prepared and the tournament kicked off as scheduled on the 5th May 1989. The main objective of introducing Semi-Pro Football in Malaysia was to raise the standard of the game so that Malaysia could match up with the other Asian countries. The word Semi-Pro was used to mean that in the beginning only the players would become professionals followed by coaches, managers, and administrators. In 1989, it was declared that each team must have three contract players. After six years of implementing the Semi-Pro League, the Malaysian Professional Football League was introduced in 1995.

Today, football (soccer) remains the fastest growing team sport and in consequence of this popularity, attracted many young players all over the world. Though top teams participate in national and international levels, the popularity of the game is reflected by millions who participate in soccer at all level of play that include school, district and state level as well. They may play football routinely as recreational activity on streets and country side. Perception of tactics in soccer or in other sports is unique for each player. A few have good vision in perception of makers related to the game and can tackle and stay out of trouble or sustaining injury (Jackson *et al.*, 1978). Nideffer (1989) has proposed the related concept of 'attentional style'. He argued that individuals have a preferred attentional style, e.g. a broad external focus or a narrow internal focus, and that under stress they

become more heavily dependent on this style, irrespective of its appropriateness in the situation.

Before discussing more detail about the occurrence of injury in soccer, it is better to know the definition of injury in soccer. A soccer injury is defined as an injury sustained during training as well as competition for which an insurance claim is submitted (Brown, 1971; Sanderson, 1977; Eslinger, 2001). The registration of soccer injuries through insurance files and medical channel has the disadvantage because predominantly only the more serious and acute injuries are recorded.

In contrast, the less serious and overuse injuries are likely to be missed (Mechelen, Hlobil, & Kemper, 1992; Mechelen, 1997a; Mechelen, 1997b). Ekstrand (1994) suggested that only those injuries resulting from practice or play should be included in the definition of injury in soccer and also suggested that even the duration of restricted athletic performance should also be considered in the future studies in determining of soccer injury since this represents a useful measure of the severity of injuries. Anshel (1997) stated that injury involves an element of risk or extreme demands in terms of strength, power or endurance.

Sport injuries in general, result from a complex interaction of identifiable risk factors at a given point in time (Lysen, Steverlynck, Auweele, Lefevre, & Renson 1984). Consequently, the prevention of sports injuries is at present a very complex problem, and a continuing challenge to preventive sports medicine. In the past 20 years, several authors (Macintosh, Skrien, & Shephard, 1972; Taerk, 1977; Jackson, Jarret, Bailet, *et al.*, 1978; Cahill & Griffith, 1979; Ekstrand & Gillquist,

1983a, Ekstrand & Gillquist, 1983b) have identified key factors involved in the pathogenesis of sport injuries.

It is quite common to get injured because of physical or physiological factors (Sanderson, 1996). Re-occurrence of injury, for example, is due to an anatomical weakness that is caused by previous injury. Meeuwisse (1991) adds that one might expect that sports injuries are predictable to the extent that if rules, equipment, playing conditions, and other factors remain constant, the same number and type of injuries would likely occur on an annual basis in a predictable fashion.

Depending on the level of play, football requires appropriate technical and tactical skills. Physiologically, football is characterised as high intensity, intermittent non-continuous exercise, and have functional activities that include acceleration, deceleration, jumping, dribbling, turning, and kicking of the ball (Ekblom, 1986). In competition, players cover approximately 10km distance per game, of which 8 to 18% of the distance is played in high speeds.

Accordingly, injury is a common phenomenon in the game of football. Injuries can occur in football even though everything possible is done to reduce the factors that might cause injuries. World elite athletes/professional athletes of football game are more prone to injury than others (Norris, 1998). There is no decline in the incidence of injuries in sports in spite of advances in technical, medical and coaching expertise in sports. In the United States, national statistics estimated that between three and five million recreational and competitive athletes experience a sport-related injury (Kraus & Gullen, 1984).

Football being contact sport, at higher level of competition such as national and international levels, there are a greater number of tackling, heading, kicking, and so on and as a result, a number of soccer injuries may be expected. Sometimes, because of the high expectations from the team management and supporters, players will be playing robustly and aggressively (Dhooghe, Watteyne, & Deneve, 1994; Inklaar, 1994a). Therefore, there are many incidences of injury occurrences in soccer and the possibility of players getting injured is very high.

Football is becoming increasingly intense, which results in more intensive body contact and tougher tackles. Besides that, the playing season is long with varying climatic conditions. The increased numbers of participation and under preparation are also the factors that may account for an increase in risk of injuries in football (Franke, 1977). For example, it is estimated that in Europe, 50 – 60% of injuries reported at hospital are due to sports and 3.5 – 10% of all hospital-treated injuries are due to football (Franke, 1977; Ekstrand, 1982; Keller, Noyes, & Buncher, 1987).

Dhooghe *et al.* (1994) stated that epidemiology studies of the rates of occurrence of football injuries in young players are relatively rare and difficult to compare. The present football injury epidemiology literature therefore relies upon a variety of definitions. There is a difference between investigations based on injuries occurring during an entire season, instead of a tournament. The total exposition is greater. It has been suggested that there is a general decrease in the incidence of injuries in younger age groups when compared to senior players, where senior players were found to be 15 – 30 times more injuries than young

players. This lesser incidence of injury in young people can perhaps be due to smaller mass and lesser velocity with reluctant lesser force. Also other factors such as a more compliant use of protective equipment and less incidence of illegal play or tactics include this discrepancy.

Although not subjected to statistical analysis, female players appear to sustain twice the number of injuries as male players (Dhooghe *et al.*, 1994). Probably, this is due to the lack of tradition for girls' football. An additional observation, which appears to be consistent, is the majority of football injuries occurring in the lower extremity. Injuries about the foot, ankle and knee are at the highest level of occurrence. Remarkably, there is a relatively higher proportion of head and upper extremity injuries among young players compared to senior players. This may be due to more frequent falls with an out-stretched hand or the increased fragility of growing upper extremity epiphyses.

Dhooghe *et al.*, (1994) stated that the increased incidence of head injuries may result from insufficient technical expertise in heading the ball or the increased ball-head weight ratio for young players. It is well known that leather balls gain extra weight when they are wet which may result in head injuries. Therefore, it is recommended that a lighter weight ball made from synthetic and non-absorbing material be used in games and training.

According to Lysen, Auweele, and Ostyn (1986), there is general agreement on the two classification categories on the risk factors for injuries in sports and games: extrinsic factors, which are related to the type of sport activity, the

manner in which a sport is practised, the environmental conditions and equipment; and intrinsic factors, which are individual physical and psychosocial characteristics (Table 1.1). Ekstrand and Gillquist (1983a, b) agreed that the role of intrinsic risk factors is possibly responsible for the majority of sport injuries. One of the earliest studies by Goven and Kopenhaver (1965) concentrated on psychological factors and found that neurotic college athletes were more prone to injury than those without this condition.

Table 1.1 shows that a few factors involve in extrinsic risk factors such as exposure to the players (type of sports that players involved, playing time, position in the team, and level of competition), training methods, environment (type and condition of playing surface, weather conditions, time of the day, and time of the season), and equipment (protective equipment and footwear). To evaluate the real risk for football injuries, the exposure factor, i.e. type of sports, playing time, position in the team, level of competition, and the time the player is at risk has to be taken into account. Position in the team, for example, will be influencing of injury occurrence in football. As a last player in defending their goal from the opponents, defenders will be at the most risk of injuries in football.

Table 1.1 also shows that a number of intrinsic risk factors that cause injuries in any sports, which include physical characteristics (age, sex, somatotype, previous injury and so on), psychological and psychosocial characteristics. Expressed as a percentage of total injuries, lower extremity injuries represent 82 – 88% for senior male amateur players (Ekstrand, 1982; Jorgensen, 1984), 73% for male professional players (Albert, 1983), 80% for senior female players

(Brynhildsen, Ekstrand, Jeppsson, & Tropp, 1990), and 65 – 68% for young players (Nilsson & Roaas, 1978).

Table 1.1: Extrinsic and Intrinsic Risk Factors (adopted Lysen *et al.*, 1984)

Extrinsic Risk Factors	Intrinsic Risk Factors
Exposure	Physical characteristics
type of sports	age sex
playing time	sex
position in the team	somatotype
level of competition	previous injury
Training	physical fitness
Environment	joint mobility
type and condition of playing surface	muscle tightness
weather conditions	ligamentous laxity
time of the day	malalignment of the lower
time of the season	extremities
Equipment	Psychological and psychosocial
protective equipment	characteristics
footwear	

With regard to physical fitness, players will not be able to play at their best performance if their physical fitness is not hundred percent. In other words, players cannot show their good skills if they are sick and their fitness level is under doubtful condition. The same thing will happen if psychological factors of the players are not under control. Players cannot play well if management side does not take care of their welfare like paying salary and bonuses on time as promised. Once the management side ignores the psychological factors, players will lose their confidence and eventually result in lack of motivation to play. Because of that, the players cannot concentrate to the game and as a result, they are going to be very easily to get injured.

When discussing about sport injuries, people cannot ignore the fact that physical factors are obviously the primary cause of injuries in sports and exercise. For instance, a poor tackle in football, an awkward landing in gymnastics or poor warm-up in sprinting. However, psychological researchers such as Andersen and Williams (1998a), Smith *et al.* (1990b), Gould and Weinberg (2000) and Junge (2002) have stated that thoughts, perceptions, and aspects of personality may be linked to the incidence of injury.

In 1991, Paul Gascoigne (one of the England national players) was stretchered off the field in the Football Association (FA) Cup final after committing a serious foul on Gary Charles of Nottingham Forrest. Gascoigne suffered a complete rupture of the anterior cruciate ligament. If we were view the incident in isolation, it was quite clear that the injury was sustained by a completely mistimed challenge. It might then be considered an accidental collision that happens from

time to time in contact sports like football. When looking at the match prior to this point, however, we are presented with an entirely different explanation. In subsequent interviews, Gascoigne had admitted to being over-aroused (too psyched-up) and his actions on the field comply with a classic case of behavioural frenzy (Gould & Weinberg, 2000).

Sanderson (1996) stated that it is quite common, of course, to be 'injury prone' because of physical or physiological factors. Wiese and Weiss (1987) and Rotella and Heyman (1993) have stated that physical factors are the primary cause of athletic injuries likewise psychological factors can also contribute to injuries. Personality factors such as stress levels and certain predisposing attitudes have all been identified as psychological antecedents to athletic injuries. Thus, fitness professionals need to understand the psychological reactions to injuries and how mental strategies can facilitate recovery.

One of the possible prevention approaches to reduce injury in sports is to address the athletes of the psychological predictors of injury occurrence. This study therefore, focuses on this particular aspect by choosing Malaysian football players involved in the Malaysian professional football league. This study attempts to look at the relationship between psychological factors and injury occurrence in sport activities, especially in the game of football. Identification of factors that predispose players to injury will help to develop effective interventions before the actual occurrence of sport injury.

1.1 Research Background

Undoubtedly, injuries in football normally occur due to physical contacts. Even though injuries in football are driven by several factors, factors such as the physical and the lack and/or improper physical preparation, the violence and harsh playing style of the opponents, and other factors like psychological profiles also need to be considered. Therefore, this study was carried out to determine the psychological factors that are assumed to be one of the predictors of injuries in football. This is because earlier researchers (Lysens *et al.*, 1986; Smith *et al.*, 1990b; Reilly & Howe, 1996; Gould & Weinberg, 2000; Gould, Petlichkoff, Prentice, & Tedeschi, 2000) have found that psychological factors also contribute to injury occurrence.

According to Smith *et al.* (1990b) for example, in all types of sports and physical activities, besides physical and situational factors, some psychological factors also contribute to injury vulnerability and resiliency. Because of that, the researcher has chosen several psychological profiles, which influence the occurrence of injuries to football players, especially to those who are involved in Malaysian Football League. In sports, it is rare that an athlete can go through an entire career without suffering at least one type of injury, whether it is a slight sprain or a broken bone (Karlsson, Sward, Kalebo, & Thomee, 1994; Inklaar, 1994b).

Recently, injuries have been described as the greatest source of stress, and single most important issue in sports (Murray, 1996a). Injuries may lead to emotional problems such as anxiety and depression, and unhealthy behaviours

such as increased drug and alcohol abuse. These negative moods and behaviours place the athlete at risk for prolonged rehabilitation and further behavioural problems.

A number of variables have been examined as potential predictors of occurrence of injuries in sports. Early work in this area provides descriptive accounts of the types of athletes that are thought to be prone to injury and suggested that intra-personal conflicts such as anxiety, depression, guilt and low self-confidence are important contributors for the occurrence of injuries (Sanderson, 1977; Kellmann, 2001). Nevertheless, most injuries can be prevented. When prevention is not made in the integral part of the programme, there would be an increase in injuries and emergencies. For instance, players may have a pre-existing condition that he or she is not aware of. This can lead to injury.

On the other hand, players may have not been properly or completely rehabilitated following the injury before returning to action, and re-injuring himself. Most of the time, the athletes have not been taught the skills needed to participate, have not been properly conditioned during the pre-season, or have been allowed to neglect their conditioning during the season. This individual, too, may injure himself as well as others.

Based on the situations of occurrence of injuries discussed earlier in this chapter, this study tries to look at the influence and relationship between psychological factors and injuries in the game of football. Identification of psychological factors that predispose athletes to injury is essential in order

to develop effective interventions before the actual occurrence of injury. Accordingly, the main objective of this research is to determine psychological predictors of injuries among football players who are involved in the 2001 Malaysian Professional Football League Season.

As it happens in any other major football leagues all over the world, injuries are also one of the major problems that frequently occur in the Malaysian Professional Football League. Most of the coaches could not name his best players in the first eleven due to an injury sustained by the players. As discussed earlier in this chapter, there are two major risk factors that cause injury in football; extrinsic and intrinsic factors (Table 1.1). These two risks factors had basically well alert by all teams. Nevertheless, the psychological and psychosocial characteristics are not addressed adequately by most of the coaches in Malaysian Professional Football League. Therefore, this study will try to give attention and priority to these intrinsic risks factors that might be cause of injury occurrence among Malaysian footballers.

Weinberg and Gould (2003) and Kellmann and Kallus (2001) have stated that personality factors (attitudes) such as state-trait anxiety, self-esteem, and stress levels are possible psychological antecedent of injury. Based on these situations, this study attempts to look at psychological factors that can influence the occurrence of injury and whether these can be assumed to be predictors of injury occurrence among football players. This study therefore, focuses on psychological predictors of injury occurrence by choosing the football players who are involved in the 2001 Malaysian Professional Football League Season as respondents.

1.2 Statement of Problem

Injuries in sport activities can occur for many reasons. No matter how safe the environment or how well conditioned the athlete is will sometimes inevitably produce some injuries, whether it is by contact with other bodies or by psychological factors as discussed before in this study. We are specifically interested in how or whether psychological factors can be used as predictors of injury occurrence. Accordingly, the statement of problem in this study is the effect of psychological factors as predictors of injury occurrence among football players involved in the 2001 Malaysian Professional Football League. Four psychological profiles such as personality traits, state-trait anxiety, self-esteem, and mental toughness are considered for this study.

1.3 Research Objectives

No published study on predictors of football injury in Malaysia. Therefore, the aim of this research was to determine psychological predictors for occurrence of injury among football players involved in Malaysian Professional Football League. The specific objectives of this study were:

- 1.3.1 To determine psychological profiles of footballers in Malaysian Professional Football League.
- 1.3.2 To document injury profiles of footballers in Malaysian Professional Football League.
- 1.3.3 To identify psychological predictors of injury occurrence among footballers in Malaysian Professional Football League.

1.4 Significance of the Study

The Professional Football League, which was introduced in 1995, has made the league in Malaysia grand and won the heart of football fans and supporters. Every team competing in this league hope for victory in one or more competitions such as FA (Football Association) Cup, League Cup, and Malaysian Cup. The competitions have been made more interesting and challenging by offering larger sum of prize money and other incentives provided by Football Association of Malaysia (FAM) and their team. Consequently, all players hope to be in the first eleven in every game. The players would do anything, even risking injury just to show their abilities, skills, talents, commitments, and team spirit to ensure the success of their teams.

This study can help all parties who are involved directly or indirectly in football by determining psychological profiles of footballer, especially in the Malaysian Professional Football League. Psychological profiles are vital in helping FAM and every state's/club's team in assessing the players chosen to represent the state, club, and national teams. The players need to have positive and good personalities in becoming successful professional football players.

The players also need to have a low level of anxiety, have a high level of self-esteem, and a very strong mental toughness. FAM and all state teams can use the results of psychological profiles of the players in this study to enable coaches to choose players who are truly worthy, good, and have the thirst for success to bring up the name and reputation of the team. This also allows the players to improve themselves and to possess positive and good psychological profiles to excel.

This study can help FAM to be aware of the type of injuries that usually occurs in football. The types of injuries are very important to be alerted by coaches and players in order to reduce the injury occurrence in football. This is important aspect that coaches and players need to be careful and at the same time attempt to reduce and avoid the incidence of injury. This is because, once the players get injured, it does not only affect them, but also their local and the national team as well.

This study can help FAM and all teams involved in Malaysian League in identifying the psychological predictors of injuries that are more likely to occur in football. The results of this study can be used by the person who is in charge in a team to overcome the injuries among their players. Results of this study can be used by FAM as well as by all football associations in Malaysia to overcome psychological problems and at the same time reduce any serious injuries occurrence as a result of having a weak psychological profile among their players. Based on the predictors, one can take steps to educate and create awareness program and by doing this one can minimise the occurrence of injury among footballers. Indirectly, this will help FAM to build a strong and respected team in Asian region as well as at the international level.

The results from this study can also be used by all football teams for proper preparation and pre-participation screening of the players to ensure that there is absence of eliminating conditions and have the right physical capacity to participate in football. For example, players who are undergoing periods of relatively rapid growth rate may be unaware of their true physical capabilities, and therefore

might be more susceptible to injury. Besides the psychological profiles, the presence of good environmental condition, proper training preparation, and playing instructions also contribute to the occurrence of football injuries which include the weather and field conditions, the use of protective equipment such as the use of taping, shin protectors and appropriate choice of footwear.

In another aspect, this study can provides a new approach in the use of instrument in any research that related to psychological factors of injury. All the literature reviews referred in this study discussed on psychological predictors of injury in other sports and very few researches had been done in the game of football/soccer. All the four psychological profiles used by other researches are used separately in one single study, whereas in this study we have combined all the four psychological factors in one single research.

1.5 Research Questions

Soccer entails physical contact in the course of tackling or contesting possession of the ball with opponents and this inevitably leads to injury of varying severity (Reilly & Howe, 1996). A majority of injuries are unintentional, resulting from an error may lead to an accident and some of these accidents lead to injuries. Inflicting injury intentionally on another player is severely punishable by both the laws of the game (where the evidence is clear-cut) and by civil law too.

Athletes in today's society have many things to deal with. They have to practice, make sure they will be able to participate and represent their team, and at the same time they have to deal with injuries. Some athletes know how to handle injuries and others have a hard time coping with injuries. Most of the time, the athletes may require assistance in getting through the injury. An athletic trainer or coach could be the first to help an athlete with the injuries. However, the athletes also need to know about the seriousness of injury and what they are supposed to do to avoid from the incidence.

Based on these injury situations in football, this study seeks to identify the following research questions:

- 1.5.1 What are the psychological profiles of footballers in Malaysian Professional Football League?
- 1.5.2 What are the types of injuries and the most common body parts injured among footballers in Malaysian Professional Football League?
- 1.5.3 What psychological factors can predict injury occurrence among footballers in Malaysian Professional Football League?

1.6 Research Hypothesis

- 1.7.1 Psychological factors can predict occurrence of injury in footballers.
- 1.7.2 Psychological factors cannot predict occurrence of injury in footballers.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

A few studies dealing with factors that might predispose athletes to injury have been made (e.g., Coddington & Troxell, 1980; Passer & Seese, 1983), but there was little systematic analysis of relationship between them. No real attempt was made to integrate them in a meaningful way for the athlete, coach, sport psychologist, or trainer (Rotella & Heyman, 1993). Increased injury rates phenomena, both in professional and amateur levels of sport participation is a cause of grave concern. Though injuries could be largely explained by external causes such as the environment, equipment, and the degree of contact involved in the sport, internal causes such as the physical state of the athlete have been recognised as contributing factors (Kerr & Fowler, 1988).

Injuries were described as the greatest source of stress, and single most important issue in sports (Murray, 1996b). They may lead emotional problems such as anxiety and depression, and unhealthy behaviors such as increased drug and alcohol abuse. These negative moods and behaviors place the athlete at risk for prolonged rehabilitation and further behavioral problems. More severe injuries obviously occur in contact sports such as football and boxing, injuries in non-

contact sports may also cause great distress on the injured players such as lost playing time, forfeited scholarships, decreased self-esteem, or simply the lack of a pleasurable outlet.

Injuries in sport such as in football are driven by several factors as the lack and/or improper physical preparation, and the violence and harsh playing style of the opponents, consideration for other factors like psychological profiles need to be given attention (Gould & Weinberg, 2000). Other researchers (Wiese & Weiss, 1987; Rotella and Heyman, 1993; Gould *et al.*, 2000) also found that psychological factors contributed major role for occurrence of injuries in sports.

Many factors in combination create a situation in which sport injury is more likely to occur. These factors are grouped into four major areas: physical, environmental, socio-cultural, and psychological (Wiese-Bjornstal and Shaffer (1999). Physical factors are defined as the physical characteristics of individual athletes which consist of their physical condition, age, experience, existing muscular imbalances, over-training, and physical fatigue.

Environmental factors are the physical and social environmental surrounding such as uneven surface, slippery conditions, unsafe equipment, including the quality of officiating, and the quality and style of coaching. Certain specific psychological factors may also predispose some individuals to injury and re-injury in sports such as stressful life events, personality, and coping resources (Wiese-Bjornstal and Shaffer, 1999).

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 over-training are cited as contributing factors to injury.

However, a convincing body of evidence has emerged that point to a relationship between psychological factors and the occurrence of injuries. Variables such as personality factors, major life stressors, daily hassles, anxiety, self-esteem, and mental toughness are also contributing to whether or not an individual may be at increased risk of athletic injury. In fact, an injury can disrupt the normal functioning of the injured individual, their families and significant others in their work or sport environment.

2.1 Psychological Factors and Sport Injuries

Psychological factors may play a dominant role in determining of injuries in sports and physical activities. Though physical factors are involved in the complex aetiopathogenesis of sport injuries, the accident-prone profile seems to be dominated by psychological and psychosocial factors. Lysens *et al.* (1989) examination of accident prone and overuse prone profiles of young soccer players, acknowledge the importance of physical traits in predisposing a player to injury, and it is stressed that psychological factors need to be considered, even in relation to profiling the overuse prone player. Psychological factors will also be

affecting reaction to do rehabilitation. For instance, if the injury background is extensive then psychologically negative reactions to work on rehabilitation are likely to be more intense.

A number of studies exist on psychological impact and/or psychosocial response of injuries in athletes, but very limited research was found in terms of the psychological predictors of athletic injury (Junge, 2002). Most studies on psychological impacts of sport injuries discussed on psychological predictors as the factors that influence occurrence of injury. Therefore, it is a really challenging part in completing this study in terms of getting literature reviews that have been done in this specific area before.

Series of specific psychological attributes have been investigated in connection with sports injuries. They are type A behavior (Carver, DeGregorio, & Gillis, 1981); expression of anger (Thompson & Morris, 1994); self-concept (Young & Cohen, 1981; Kerr & Minden, 1988; Pargman & Lunt, 1989); self-esteem (Smith, 1996); attentional and interpersonal style (Bergandi & Witting, 1988; Bond, Miller, & Chrisfield, 1988); vital exhaustion (Mechelen, Twisk, & Molendijk, 1996); fatigue (Smith, Stuart, & Wiese-Bjornstal, 1997); reaction time (Taimela, Osterman, & Kujala, 1990b); and everyday problems (Blackwell & McCullagh, 1990; Hanson, McCullagh, & Tonymon, 1992).

Wiese-Bjornstal and Shaffer (1999) advocate that besides giving more attention to the training programmers, coaches need to give serious attention to the psychological predictors of injuries. This job is not only needed to be done by coaches but also by professional sports medicine. In fact, one of the most important functions of sport medicine professionals is injury prevention. Thus, the identification of factors that predispose athletes to injuries is essential in order to develop effective interventions before the actual occurrence of sport injuries.

Theoretically, preventing all sport injuries are impossible, but reducing their frequency is the desirable goal. Coaches and athletes embrace preventive strategies recommended by sports medicine professionals. Although sports medicine professional recommend physical prevention strategies and it is more advantage as to recommend psychosocial prevention strategies, which warrant an understanding of the precursors to injury.

Medical professionals involved in treating sport injuries are familiar with physical and environmental risks elements and are comfortable recommending preventive strategies for managing these risks factors, but they are not familiar with the social-cultural and psychological factors affecting the occurrence of sports injuries. The empirical studies published to date concerning the relationship between sports injuries and psychological factors have employed heterogeneous designs, various criteria, different evaluation strategies, and, at times, have also displayed considerable methodological flaws. This renders comparison between the studies somewhat difficult.

Specific examples of these deficiencies include lack of differentiation between the type of sport (Smith *et al.*, 1990a) or between the sexes (Rider & Hicks, 1995), retrospective investigation of injuries (Schafer & McKenna, 1985), investigation periods varying between 3 months and 1 year (Taimela *et al.*, 1990a), and no detailed definition of the criteria used (frequency of injury, severity of injury, absence from the sport). These studies focused mainly on the influence of life events or personal characteristics on the risk of injuries, although other psychological attributes (for example, control beliefs, self-concept, and Type A Behavior) were also investigated.

A number of variables, however, have been examined as potential predictors of injury occurrence in sport. Early work in this area provided descriptive accounts of the types of athletes thought to be prone to injury and suggested that intra-personal conflict, anxiety, depression, guilt and low self-confidence were important contributors to injury occurrence (Sanderson, 1977). Subsequent research has taken a variety of other factors into account, and the manner in which they interact has been summarized by Andersen and William (1988b) in their stress-related model of the injury occurrence process in sports. An understanding relating to factors which help to avoid sports injury by a coach or an athletic trainer will help to relieve an athlete anxiety or stress that the injury could cause. Besides the physical factors, factors relating to mental state of the player have to be considered for treatment of sports injuries.