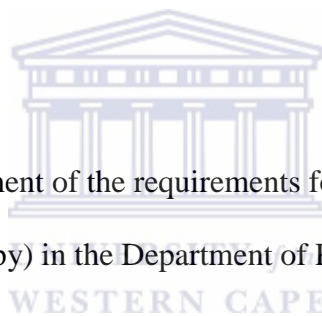


THE CURRENT STATE OF INJURY RELATED CARE FOR MALAWI SUPER LEAGUE FOOTBALL PLAYERS

Isaac Chapweteka

Student Number: 3260539



A full thesis submitted in fulfillment of the requirements for the degree of Master of Science
(Physiotherapy) in the Department of Physiotherapy,

University of the Western Cape.

10th September 2014

Supervisor: Dr Michael Rowe

ABSTRACT

Football is a contact sport with vigorous movements of all parts of the body in different directions, consequently increasing the risk of injury. For players to continue participating in football, these injuries need to be properly managed. Football injuries in Malawi are mostly managed by medical personnel who are not experts in football injury management and in most cases they are never present when a player sustains an injury. Consequently, injuries are not properly managed. In this case, football re-injuries may be more serious, more common and more expensive. However, the current state of injury related care for Malawi super league football players is not known. The study aimed at identifying the current state of injury related care for Malawi super league football players. To achieve this the study determined the average time taken by soccer players in Malawi to return to active participation following an injury, identified the type of treatment received by football players, determined the management of football injuries by team doctors in Malawi, established the responsibilities of football coaches in the management of injuries in Malawi and established the financial and medical support received by football players after sustaining an injury. A cross-sectional study design was used to collect data. A self-administered questionnaire was used to collect data from 149 football players, 10 team doctors and 11 coaches. Data was analysed using SPSS 20.1 version. The Chi square test at 5% level of significance was used to analyse the association between returning to participation and the management of injuries. Ethical clearance was obtained from the University of Western Cape and College of Medicine Research and Ethics Committee and permission was obtained from Football Association of Malawi and Super League of Malawi to conduct the study. Anonymity and confidentiality was ensured for participants and their participation was voluntary. They were free to withdraw from the study without negative consequences. The findings showed that

most players took an average of 3 to 4 weeks to return to participation. They receive treatment in the initial stages of management of injuries and get medication from other sources. Twenty seven players use traditional medicine to manage their injuries and 98 players were treated by teammates. Out of 149 players 32 received medical support and 103 received financial support after the injury. All team doctors perform physiotherapy techniques in which they are not trained. Two team doctors gave pain killers to players and allowed them to play and eight of them indicated that they do not have full authority in making decisions regarding the return of a player. Six coaches ask for players to return to participation without consulting the team doctors.

From this study it can be concluded that injuries in Malawi are managed in the initial stages by team doctors who are not sports medicine therapists but players return to active participation within the time similar to other studies elsewhere where injuries were properly managed. Team doctors perform physiotherapy techniques in which they are not trained. They also use medication from other sources and traditional medicine in the management of the injuries. Furthermore, coaches call up skilled players in crucial matches without consulting the team doctors. This study has shown that there is inadequate management of football injuries in the superleague of Malawi.

KEYWORDS

Football injuries

Injury related care

Malawi

Super League

Football injury management

Rehabilitation

Return to active participation

Type of treatment

Proper injury management

Football player



DECLARATION

I hereby declare that “The current state of injury related care for Malawi super league football players” is my own work, it has not been submitted, or part of it, for any degree or examination in any other university, and that all resources I have used or quoted have been indicated and acknowledged by complete references.

Isaac Chapweteka

Signature.....

May 2014

Witness:

.....

Dr Michael Rowe



ACKNOWLEDGEMENTS

First, I would like to thank God, the Almighty, for allowing me to carry out the research and work on this thesis. He gave me strength and protected me throughout my study period.

I would also like to thank my supervisor, Dr Michael Rowe who provided me with valuable guidance, resources and other forms of assistance throughout the study period. Thank you for the psychological, intellectual and emotional support which you offered during the difficult times.

I extend my gratitude to Sverre and Greter Bandhaug for the encouragement and financial support they rendered to me throughout the time I was studying.

Special thanks to Mr. I. Karangwa who assisted me during data processing and analysing. He spared his precious time for me.

Many thanks should go to Prof. Julie Phillips for the encouragement and guidance. Thank you very much for your time and effort.

May the Almighty Lord bless you all abundantly.

TABLE OF CONTENTS

ABSTRACT	II
KEYWORDS	IV
DECLARATION	V
ACKNOWLEDGEMENTS	VI
TABLE OF CONTENTS	VII
LIST OF TABLES AND FIGURES.....	XI
APPENDICES.....	XIII
ABBREVIATIONS AND ACRONYMS USED IN THE STUDY	XIV
CHAPTER ONE	1
1.1 INTRODUCTION OF THE STUDY	1
1.2 BACKGROUND OF THE STUDY	1
1.3 PROBLEM STATEMENT	6
1.4 RESEARCH QUESTION.....	7
1.5 AIM OF THE STUDY	7
1.6 OBJECTIVES OF THE STUDY	7
1.7 SIGNIFICANCE OF THE STUDY	8
1.8 DEFINITION OF TERMS	9
1.9 ORGANIZATION OF THE THESIS	10
CHAPTER TWO	13
LITERATURE REVIEW	13
2.1 INTRODUCTION.....	13
2.2 INCIDENCE OF SPORTS INJURIES	13

2.3	FACTORS THAT CAUSE SPORTS INJURIES	15
2.4	PREVENTION OF SPORTS INJURIES	17
2.5	MANAGEMENT OF FOOTBALL INJURIES	21
2.6	STAGES OF THE MANAGEMENT OF FOOTBALL INJURIES	22
2.7	FACTORS INFLUENCING RETURN TO PLAY	26
2.8	CONCLUSION	31
CHAPTER THREE		32
METHODS		32
3.1	INTRODUCTION	32
3.2	RESEARCH SETTING	32
3.3	STUDY DESIGN	33
3.4	POPULATION AND SAMPLING METHOD	33
3.5	RESEARCH INSTRUMENT	34
3.5.1	<i>Development and translation</i>	34
3.5.2	<i>Reliability and Validity</i>	35
3.5.3	<i>Football players questionnaire</i>	36
3.5.4	<i>Team doctors questionnaire</i>	37
3.5.5	<i>Football coach questionnaire</i>	37
3.6	PILOT STUDY	38
3.7	PROCEDURE OF THE STUDY	39
3.8	DATA ANALYSIS	40
3.9	ETHICAL CONSIDERATIONS	40
3.10	CONCLUSION	41

CHAPTER FOUR.....	42
RESULTS	42
4.1 INTRODUCTION.....	42
4.2 FOOTBALL PLAYERS	43
4.2.1 <i>Number of days taken to return to sports participation</i>	<i>44</i>
4.2.2 <i>Treatment type</i>	<i>45</i>
4.2.3 <i>Medical and financial support.....</i>	<i>46</i>
4.2.4 <i>Association between categorical variables</i>	<i>46</i>
4.3 TEAM DOCTORS	50
4.3.1 <i>Management of injuries by team doctors</i>	<i>51</i>
4.3.2 <i>Team doctors responsibilities regarding the management of injuries.</i>	<i>53</i>
4.4 TEAM COACHES	56
4.4.1 <i>Coaches responsibilities regarding the management of football injuries.....</i>	<i>56</i>
4.5 CONCLUSION	58
CHAPTER FIVE	60
DISCUSSION.....	60
5.1 INTRODUCTION.....	60
5.2 FOOTBALL PLAYERS	60
5.2.1 <i>Number of days taken to return to active participation.....</i>	<i>62</i>
5.2.2 <i>Types of treatment players received when an injury was sustained.....</i>	<i>63</i>
5.2.3 <i>Medical and financial support.....</i>	<i>69</i>
5.2.4 <i>Association between the categorical variables</i>	<i>69</i>
5.3 TEAM DOCTORS	71

5.3.1	<i>Management of injuries by team doctors</i>	<i>73</i>
5.4	TEAM COACHES	75
5.4.1	<i>Coaches responsibilities regarding the management of football injuries.....</i>	<i>77</i>
CHAPTER SIX	78
SUMMARY, RECOMMENDATIONS AND CONCLUSION	78
6.1	INTRODUCTION.....	78
6.2	SUMMARY	78
6.3	RECOMMENDATIONS	80
6.4	LIMITATIONS	82
6.5	CONCLUSION	83
REFERENCES	85
APPENDICES	99



LIST OF TABLES

Table 3.5.2.1 Reliability test results.....	36
Table 4.1 Characteristic of football players (n=149).....	43
Table 4.2 Body Mass Index (n=149)	43
Table 4.3 Time taken to return to active participation (n=149)	44
Table 4.4 Treatment types (n=149).....	45
Table 4.5 Treatment from other sources (n=149)	46
Table 4.6 Number of players who received support (n=149)	46
Table 4.7 Association between Body Mass Index and Age (n=149).....	47
Table 4.8 Returning to sport and the type of treatment (n=149)	48
Table 4.9 Returning to sport and treatment with other modalities (n=149).....	48
Table 4.10 Returning to sports and financial or medical support (n=149)	49
Table 4.11 Team doctors qualifications (n=10).....	50
Table 4.12 Team doctors work experience and courses attended (n=10).....	50
Table 4.13 Coaching qualifications (n=11)	56
Table 4.14 Football coaches work experience (n=11)	56
Table 4.15 Coaches responsibilities (n=11).....	57

LIST OF FIGURES

Figure 4.1 Treatment types (n=10)	52
Figure 4.2 Types of treatment from other sources (n=10)	53
Figure 4.3 Team doctors responsibilities (n=10)	54



APPENDICES

Appendix A Ethical Clearance Letter from UWC	99
Appendix B Letter to COMREC.....	100
Appendix C Ethical Clearance Certificate	101
Appendix D Permission Letter to FAM.....	102
Appendix E Letter of Acceptance.....	103
Appendix F Letter to SFRL	104
Appendix G Permission Letter from SRFL	105
Appendix H Letter to SULOM requesting for permission	106
Appendix I Acceptance Letter from SULOM	108
Appendix J Letter to Football teams.....	109
Appendix K English Information Sheet.....	111
Appendix L English Consent Form	115
Appendix M English Football Players Questionnaire	116
Appendix N English Team Doctors Questionnaire	119
Appendix O English Team Coach Questionnaire.....	122
Appendix P Football Players Questionnaire back translated.....	124
Appendix Q Team Doctors Questionnaire back translated.....	128
Appendix R English Team Coach Questionnaire back translated	131
Appendix S Chichewa Information Sheet.....	133
Appendix T Chichewa Consent Form	137
Appendix U Chichewa Football Players questionnaire	138
Appendix V Chichewa Football Team Doctors Questionnaire	142
Appendix W Chichewa Football Team Coach Questionnaire	146

ABBREVIATIONS AND ACRONYMS USED IN THE STUDY

FIFA : Fédération Internationale de Football Association

CAF : Confédération Africaine de Football

WHO : World Health Organization

BMI : Body Mass Index

SPSS : Statistical Package for Social Science

SD : Standard Deviation

FAM : Football Association of Malawi

SULOM : Super League of Malawi

SRFL : Southern Region Football League

OCO : Orthopaedic Clinical Officer

CPD : Continuous Development Process



DEDICATION

I dedicate this thesis to my mother for her continued parental care, support and prayers. This achievement is the reaping of the seeds you sowed. May God continue to bless you abundantly.

I dedicate this work also to all those who will find it helpful.



CHAPTER ONE

1.1 INTRODUCTION

This chapter provides the background of the study. It describes the problem investigated in the study, outlines the research question and provides aims and objectives. The chapter also explains the significance of the study. It ends with the organisation of the thesis and summary of the chapter.

1.2 BACKGROUND OF THE STUDY

Football is one of the most competitive sports with many followers worldwide. According to the Federation Internationale de Football Association (FIFA), there are 265 million professional footballers (male and female). This figure excludes amateur footballers, referees and officials who account for about 5 million. In total, about 270 million people are actively involved in professional football worldwide (FIFA, 2007).

Playing football has positive effects on an individual's health status such as mental and physical fitness and it also lowers the blood pressure (Malcom & Scott, 2011). Adolescents who play football have been shown to have better sleeping patterns and improve mental functioning (Brand, Beck, Gerber, Hatzinger & Trachsler, 2009). In America, football players indicated that playing football makes them think and react more quickly in their daily activities (Chandrasekaran, Anbanandan, Krishnaswamy & Balakrishnan, 2012). Playing football has also been shown to improve heart and lung capacity.

Apart from improving body function it is also a source of income especially when one is engaged in professional football. For instance, in the United States of America, football players from low social economic backgrounds have opportunities for education through

scholarships awarded through playing football. Their living standards improved financially and psychologically because if they travel and participate in competitive games they received game bonuses (Singer, 2008). Apart from football players benefiting, a country which is involved in hosting competitive matches also develop because basic infrastructure such as football stadiums and hotels must be provided for the participants as such they bring income in those countries that leads to an increase in tax revenue, tourism, job opportunities, sports facilities (Dreyer, 2011).

Football is a contact sport with vigorous movements of all parts of the body in different directions, which subsequently increase the risk of injury (Reuter & Short, 2005). Most injuries sustained during football occur in the lower limbs since this is the part which is mostly involved in running, jumping and kicking the ball. The most common injuries in the lower limbs are ligament sprains, and muscle strains and contusions (Ekstrand, Hägglund & Waldén, 2010). These injuries occur in the bigger muscles of the lower limbs especially the hip adductors, quadriceps, hamstrings and calf muscle groups, and are common in players of increased age (Ekstrand, Hägglund & Waldén, 2011).

The average cost of conservative treatment of a football injury is 150 U.S. dollars per injury per player (Dvorak & Junge, 2000; Nelson, Collins, Yard, Field & Comstock, 2007). An average cost of surgical management of an injured football player is 17 000 U.S. dollars per player (Nelson et al, 2007) but this cost may be higher in countries where medical facilities such as qualified personnel to manage these injuries are inadequate. The management of sports injuries has a negative impact on both the club and a player. The club is affected since it has to pay for the players medical expenses (Gabbett, 2001). For instance, medical expenses to the club in professional football is £74.7 in European countries (Woods, Hawkins, Hulse & Hodson, 2002) and a player's wage that is £100 may reduce if he is not

participating in competitive matches (Murphy & Waddington, 2007). Thus, players who sustain injuries in the world class professional football have a huge economic loss to themselves as well as the clubs (Fong, Hong, Chan, Yung & Chan, 2007). A player whose wage is reduced because of an injury is psychologically affected since he may be isolated from teammates and may be deprived from participation in matches (Drawer & Fuller, 2002). A player who sustains an injury is usually excluded from active participation and should be treated until full recovery (Kvist, 2004). The time to return may depend on the time between injury and the start of treatment, as well as the severity of tissue damage (Mithoefer, Hambrey, Logerstedt, Ricci, Silvers & Villa, 2012). An injured football player who starts getting treatment soon after the injury has a better outcome (Orchard, et al., 2008). However, the quality of care administered to injured football players is a concern, especially when certified professionals such as physiotherapists are not included in the management and monitoring of the injuries (Waddington, Roderick & Naik, 2001). It is imperative that a good football club should employ qualified medical professionals with experience in musculoskeletal and sports injuries, as well as emergency medicine (Bwabwah & Rodgers, 2008). Although this has been recommended, not all team doctors and physiotherapists in the English premier league are experienced in the management of football injuries (Waddington et al, 2001). Similarly, in Malawi, football injuries are managed by people who do not have adequate knowledge of sports medicine and are employed on part-time basis (Mkandawire & Killowe, 2005). Rapid evaluation of football injuries by qualified personnel, in the early stages, helps in early initiation of treatment which allows for a more rapid recovery and return to activity (Vormittag, Calonje & Briner, 2009). The skillful management of football injuries is therefore essential to all the stakeholders involved, including the club and individual players (Babwah & Rodgers, 2008).

The importance of the appropriate management of football injuries cannot be over-emphasised since the affected players have to return to active participation, having been properly managed and confirmed to be both mentally and physically fit (Fuller & Walker, 2006). Owoeye (2010) recommends that physiotherapists should form a core part of the medical team in establishing preventive and management measures for sports injuries as they are trained in the use of appropriate treatment modalities. A physiotherapist also has knowledge of the management of football injuries including the stages of healing and the treatment techniques in those phases (Francis, Andersen & Maley, 2000).

A football team's success is a result of collaboration between individuals who take part in the running of team activities. In most cases the relationship between a coach, a team doctor and players is an essential component that leads towards the team's success. A player has to perform well to win matches, a team doctor has to make sure that injuries are well managed and a coach has a responsibility for skills development, personal development and selection of football players for competitive games (Coopoo & Fortuin, 2012; Langan, Blake & Lonsdale, 2013). For the team to be successful, it is necessary that they all work hand in hand in the prevention and management of football injuries in all aspects (Langan et al, 2013). Thus, coaches also have a major responsibility in the prevention and management of football injuries apart from imparting skills and developing players (Gianotti, Hume & Tunstall, 2010).

The importance of medical and financial support in the management of football injuries has been emphasized by Bauman (2005). Hawkins, Hulse, Wilkinson Hodson & Gibson (2001) recommended that professional football players should have medical support since their job has risks just like any other jobs which have similar medical cover. This may assist them to

pay for the expenses which may be incurred in the event that they cannot afford to pay for treatment bills. For instance, if an injured player is getting treatment by a club sports medicine therapist, he may need another specialist who is better in the players condition if an injury needs to be investigated such as computed tomography, ultrasound and medical devices or if an injury needs to be treated, this may incur an extra cost (Krist, van Beijsterveldt, Backx & de Wit, 2013).

Since super league is a professional football and players benefit because it is an employment which helps them to earn a living, an injury may affect their life style which may jeopardize their employment. There is also no literature on how football injuries are managed in Malawi. As such, there is need to explore the current state of injury management in Malawi in terms of the time taken to return to active participation after football players sustain an injury, the treatment received by players, the management of the injuries by the team doctors, the medical and financial support given to these players, and the responsibility of coaches in the prevention and management of football injuries. Thus, the study aimed at establishing the current state of injury related care for Malawi super league football players.

1.3 Problem Statement

Injuries in football cannot be avoided due to the vigorous movements enacted during the game (Reuter & Short, 2005). For players to continue participating in football, these injuries need to be properly managed. Although Bwabwa and Rodgers (2008) have proposed guidelines for the proper management of football injuries, it is not always the case that the recommendations are adhered to. This lack of adherence is common in the Super league of Malawi. Football injuries are mostly managed by medical personnel who are not experts in football injury management (Mkandawire & Killowe, 2005). In addition, most team doctors who manage football injuries are employed on a part-time basis (Mkandawire & Killowe, 2005) and in many cases they are not present when a player sustains an injury. Consequently, injuries are not properly managed (Orchard, et al., 2008). In this case, football re-injuries may be more serious, more common and more expensive for both the club and the player. However, the current state of injury related care for Malawi super league football players is not known. In this regard, it was necessary to carry out the study to establish the current state of injury related care for Malawi super league football players to improve the football players welfare and to reduce the cost which may be incurred in the event that a player has an injury, thereby, improving football development in Malawi.

1.4 Research Question

The current state of injury related care for super league football players in Malawi has not been established. Hence, this research project aimed to answer the following question:

What is the current state of injury related care for Malawi super league football players?

1.5 Aim of the study

The aim of the study was to establish the current state of injury related care for Malawi super league football players.

1.6 Objectives of the study

- To determine the average time taken by soccer players in Malawi to return to active participation following an injury.
- To identify the type of treatment received by football players following an injury in Malawi.
- To determine the management of football injuries by team doctors in Malawi.
- To establish the responsibilities of football coaches in the management of injuries in Malawi.
- To establish the financial support received by football players after sustaining an injury.
- To establish the medical support received by football players after sustaining an injury.

1.7 Significance of the study

This study highlights the current state of injury related care for Malawi super league football players. This may help the players to get proper treatment and continue participating in competitive matches and receive more income. The extra costs which are incurred in the management of injuries may also be reduced. This will benefit both the club and the football players in Malawi. It may also assist in the development of football in the country as a whole.

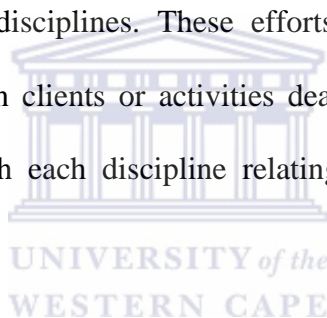


1.8 Definition of terms

A football injury consensus definition is “Any physical complaint sustained by a player that results from a football match or football training, irrespective of the need for medical attention or time loss from football activities” (Fuller et al, 2006 pp. 195).

Rehabilitation: A process intended to enable people with disability to reach and maintain optimal physical, sensory, intellectual, psychological and/or social function. Rehabilitation encompasses a wide range of activities including rehabilitative medical care, physical, psychological, speech, occupational therapy and support services (WHO, 2007).

Multidisciplinary team approach: “It refers to activities that involve the efforts of individuals from a number of disciplines. These efforts are disciplinary-orientated and, although they may impinge upon clients or activities dealt with by other disciplines, they approach them primarily through each discipline relating to its own activities” (Melvin, 1980).



Proprioceptive: A form of sensation that includes sense of movement, joint position and sensation related to muscle force (Janssen & Kamper, 2013).

Active participation: an athlete’s return to full competitive play (Meyers, McKechnie, Philippon, Horner, Zoga & Devon, 2008).

Orthopaedic Clinical Officer: Medical personnel trained in the conservative management of the most common traumatic and non-traumatic musculoskeletal conditions (Mkandawire, Ngulube & Lavy, 2008).

Medical Assistants: Part of the medical professionals in Malawi that undergo two years of formal training, earning a Certificate in Clinical Medicine (Muula, 2009).

Clinical Officers: Part of the medical professionals that undergo a formal training that requires three years of education at an institution followed by a year of internship, resulting in earning a Diploma in Clinical Medicine (Muula, 2009).

Medical support: A form of health insurance (medical cover)

Financial Support: Income given to a player in the event that he has an injury

Traditional medicine: It is the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses (Zhang, X. & World Health Organization (WHO)., 2000).



1.9 Organization of the thesis

Chapter one has provided the context of the study. It has described the problem that the study aims to address. The research question, aims and objectives have also been presented. It has also explained what the significance of the study is. The terms used in the study have also been defined. Finally the chapter outlines the organization of the thesis.

Chapter two reviews the relevant literature on the range of care that is related to football injuries. It provides an overview of the incidence of football injuries, factors that cause the injuries, and the prevention and management of the injuries. The chapter ends with a brief explanation of the reasons why players return to participation, as well as the medical and financial support given to football players following an injury.

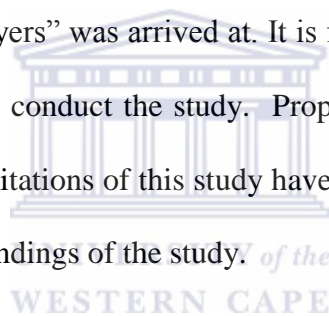
Chapter three describes the methodology employed in the study, as well as the research setting and the composition of the super league of Malawi. It also describes the study design. It also presents a description of the study population, the sampling methods used and the research instruments employed, as well as how they were developed. The procedure used to conduct the pilot study has also been described. Reliability and validity of the instruments have been presented, as well as the results of the pilot study. The chapter has also described the procedure used for data collection and analysis. Finally, it presents the ethical issues considered in the study.

Chapter four presents the findings of the study. It presents the information regarding the demographic data related to the football players, the number of days taken to return to participation and the type of treatment received by football players. It also presents the results of the medical support which football players received following an injury. In addition it presents the results of the statistical tests which were done in order to determine if there was an association between different sets of variables. Furthermore, it presents the results

regarding the management of football injuries by team doctors and the team coaches' responsibilities regarding the management of football injuries.

Chapter five discusses the results of the study in relation to literature. It starts by presenting the common ages that participate in football and the causes of injuries such as overweight. It is followed by the number of days players took to return to participation. This chapter also describes the types of treatment received by the football players and the association between the number of days, type of treatment and support given to players that influence the return to participation.

Chapter six presents the summary of the study. It starts by giving a description on how the formulation of the research question "What is the current state of injury related care for Malawi super league football players" was arrived at. It is followed by the explanation of the procedures that were followed to conduct the study. Proposed recommendations have been presented in this chapter. The limitations of this study have also been explained. This chapter ends with the conclusion of the findings of the study.



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter gives an overview of the literature on the management of football injuries. It starts by highlighting the incidence of football injuries globally. It also discusses risk factors that cause football injuries and the suggested preventive measures of these injuries. The general management of football injuries and the stages in the management of football injuries have also been discussed. It ends with the factors that influence the return of players to active participation in relation to the standard management of these injuries, as described by the literature.

2.2 INCIDENCE OF SPORTS INJURIES

A football injury consensus definition is “any physical complaint sustained by a player that results from a football match or football training, irrespective of the need for medical attention or time loss from football activities” (Fuller et al, 2006 pp125). The incidence of these injuries is calculated per 1000 hours of playing (Fuller, Dick, Corlette & Schmalz, 2007). Other studies have reported that the incidence differs in competitive and training matches as well as in different sexes of football players and age groups. Tegnander, Olsen , Mohaldt, Engebretsen and Bahr (2008) found that the incidence of injuries in male competitive football matches is higher than in training. Other studies have shown that there is a higher incidence in female than in male players. For instance, reports on the incidences in Swedish female professional football soccer indicate that players had a higher injury incidence in competitive football, while injury incidence during training was lower, and that

there were more traumatic injuries than over-use injuries (Jacobson & Tegner, 2007). In another study, in the Swedish female top division Ekstrand, Hägglund, and Waldén, (2011) observed that, the incidence of football injuries was almost twice that of males 28 % versus 16 %. The findings in the European football leagues show that the incidences of football injuries in both male and female football players indicate that the incidence of injuries may differ in many aspects. However, more injuries occur in competitive matches than training (Hägglund, Waldén & Ekstrand, 2005) possibly because players put in more effort to win matches. Contrary to this, an Iranian study in their football clubs found that 80 % of injuries occur in training matches than competitive matches (Hassabi, Mortazavi, Giti, Hassabi, Mansournia & Shapouran, 2010). In this study, they found that the injuries were higher in training sessions than competitive matches because most training sessions had no warm up exercises at the start of the training, players lacked the use of protective equipment, they did not follow proper training techniques and lacked education regarding injuries. For example, in Ghana some players in the teenage group aged involved in football because they would like to concentrate on football (Esson, 2013) and in Nigeria boys participate in sports activities from the age of 18 to 20 and progress to the early twenties with an idea of becoming professional sportsmen (Yusuf, Mijinyawa, Musa, Gezawa & Uloko, 2013).

In this light, warm up exercises and the use of protective devices has been recommended by Junge, Rösch, Peterson, Graf-Baumann, and Dvorak (2002) in order to reduce the incidence of football injuries both in competitive and training matches. Hawkins, Hulse, Wilkinson, Hodson & Gibson (2001) added that most injuries occur in pre-season matches and at the start of the season because players may not have reached the appropriate physical and psychological fitness level to participate in the strenuous activity of playing football. This signifies the importance of players being physically fit when participating in football matches

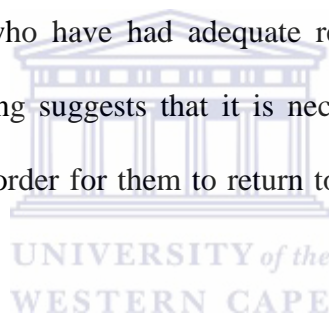
because in most cases players have an increased desire to win matches and they are under pressure themselves to perform at higher levels than they are capable of. The higher incidence of injuries in training matches in the Iranian clubs compared with the European clubs can lead to the conclusion that the top professional leagues in Europe have a top level care during training, top level medical support and availability of medical team in training sessions as well as competitive matches (Ekstrand et al, 2011). In African countries the incidence of injuries is higher than the European countries. For example, in South African football injury incidence in the professional soccer teams were 58 % (Naidoo, 2007). This could be due to the definition of a football injury and reporting of injury incidence in different parts. There are different factors that cause injuries. These factors have been discussed in the section that follows.

2.3 FACTORS THAT CAUSE SPORTS INJURIES

Factors that cause football injuries are grouped into environmental (extrinsic) or problems with the individual's body (intrinsic) (Hägglund, Waldén & Ekstrand, 2013). Extrinsic factors include: level of participation, playing surface and weather conditions (Waldén et al, 2011). For instance, cold temperatures in the Northern Europe cause hardening of the football pitches due to ice formation on football pitches in winter hence football players are forced to play football on a hard surface. This leads to more injuries in the high level professional football in Northern Europe than in the Mediterranean climate in winter (Walden et al, 2011).

Intrinsic factors include the age of a player, sex, level of fatigue, previous injury and success of rehabilitation. In addition, Woods, Hawkins, Maltby, Hulse, Thomas and Hodson (2004) observed that players who are above 28 years have a recurrence in hamstring injuries.

In relation to sex, Steffen, Myklebust, Olsen, Holme and Bahr (2008) found that female football players incur more anterior cruciate ligament injuries than males. Apart from age and sex, fatigue also contributes to the risk of injuries among football players (Warden, Creaby, Bryant and Crossley, 2007). After playing for long periods of time, football players become fatigued and can require up to 96 hours to recover (Dupont, Nedelec, McCall, McCormack, Berthoin & Wisløff, 2010). Players who continue to play more games without recovery may develop prolonged fatigue which results in overuse and contact injuries (Kofotolis, Kellis & Vlachopoulos, 2007). Kofotolis, et al. (2007) suggested that players should be given adequate time to rest before they play competitive matches. Players who had an injury and returned to participation after inadequate rehabilitation have also shown to have a recurrence of injuries compared to those who have had adequate rehabilitation (Kofotolis, Kellis & Vlachopoulos, 2007). This finding suggests that it is necessary for players to be properly managed following an injury in order for them to return to participation physically fit when they are fully recovered.



Häggglund, Waldén, Magnusson, Kristenson, Bengtsson, and Ekstrand (2013) argued that stress is an important factor in causing injuries to players who have had injuries and have returned to participation. If they return to participation while under stress they fear re-injury and the result may be reduced concentration while playing. Stress may also delay the recovery process and is, therefore, regarded as a major contributor of football re-injuries. In addition, stress from other sources can lead to reduced concentration, thereby, causing in-coordination which may result in injury (Häggglund et al, 2013). These findings suggest that it is necessary for players to be properly managed following an injury for them to return to participation when they are both physically and psychologically fit, in order to avoid stress

which may lead to re-injury. To reduce the incidence of the injuries, preventive measures have to be followed, some of which are discussed in the following section.

2.4 PREVENTION OF SPORTS INJURIES

The prevention of football injuries is essential for players to minimize absenteeism from participation in football matches. These preventive measures have been divided into three stages: primary, secondary and tertiary. The primary prevention is the prevention before an injury occurs. It starts with having knowledge of the causes of the injuries by educating those who have not yet sustained an injury, and also the use of braces. In secondary prevention, early diagnosis and proper injury care play a significant role so that further damage does not occur to the already injured tissue. Tertiary prevention involves suitable rehabilitation as well as health promotion to avoid recurrence of the injury (Jacobsson, Timpka, Kowalski, Nilsson, Ekberg & Renström, 2012).

Johnson, Ekengren and Andersen (2005) recommended that football players should have preseason screening (comprehensive assessment) before the start of competitive matches. This helps therapists to identify the presence of other illnesses, old injuries, nutritional deficits and reduced physical fitness. It also helps them to gather baseline data of players and to be able to recognize other medical problems which can be managed before the start of competitive matches. It provides a chance for the team doctors to teach football players the preventive measures such as warm up, warm down, stretching and proper use of football equipment. This helps to reduce the occurrence of football injuries when players start to play competitive matches (Argus, Gill, Keogh, Hopkins & Beaven, 2010). Warm up exercises before matches increase the flow of blood to the muscles, leading to an increased supply of nutrients and decreased vascular resistance. This improves the speed of nerve impulses and

increases oxygen delivery to the muscles, which results in optimum muscle function (Helgerud, Engen, Wisloff & Hoff, 2001). Senger (2012) added that 30 minutes of warm up is enough to reduce the risk of injury by 50%. After playing in matches, athletes should also have adequate time to rest for the body to regain lost energy and to refresh the mind (Reid, Baron, Lu, Naylor, Wolfe & Zee, 2010). Furthermore, Venter, Potgieter and Barnard (2010) emphasised the importance of warming down for proper restoration of muscle function, neuromuscular recovery, soft tissue repair, resolution of muscle soreness, proper coordination and psychological recovery after training and competitive matches.

Aerobic exercises improve optimum oxygen uptake in the muscles and allow them to adjust to the desired activity (Siahkhouhian, Khodadadi & Shahmoradi, 2013). These exercises prepare the muscles for vigorous activity which occurs during strenuous activities (Young 2012). Helgerud et al. (2001) also added that these exercises increase muscle endurance and strength. Aerobic exercises performed at high intensity from 30 seconds to three minutes, two times per week, increase the overall speed in football players (Iaia, Hellsten, Nielsen, Fernstrom, Sahlin & Bangsbo, 2009). Jovanovic, Sporis, Omrcen and Fiorentini (2011) advocated for sports specific exercises such as aerobic exercises to enable proper muscle function to prevent the incidence of sports injuries.

In addition, aerobic exercises and anaerobic exercises can be done in combination for a better activity performance (Wong, Chamari & Wisløff, 2010). Diminished aerobic fitness may cause fatigue leading to reduction in muscle power in order to protect anatomical structures (Murphy, Connolly & Beynnon, 2003). However, it is difficult to compare studies as they use different methods to describe aerobic fitness.

A player whose optimum fitness has reduced can be improved by doing anaerobic fitness exercises (Rhea, Lavinge, Robbins, Esteve-Lanao & Hultgren 2009). The importance of

aerobic and anaerobic exercises has been emphasised by Britoa, Figueiredoa, Fernandes, Seabraa, Soaresa, Krstrup et al (2010) who recommended that coaches should be aware of the importance of educating players on the prevention of hamstring injuries by doing aerobic and anaerobic exercises. Thus, players who have aerobic and anaerobic fitness have a lower chance of sustaining an injury.

Intense movement of the body parts reduces the glycogen stores in the body because of the higher rate of metabolism that takes place in the muscles during strenuous activities. The amount of glycogen depleted has to be replaced to allow for the normal functioning of the organs. Hence, the nutrition status of a player has to be monitored to ensure that these nutrients are kept at an optimal level for proper functioning of the body. Venter, et al. (2010) advocated that athletes should have an appropriate diet after sporting activities in order to replace the energy which is depleted during those activities. Reduced glycogen stores may impair the immune response and a player may, therefore, be prone to infections (Duzova, Erdogan, Fadillioglu & Emre, 2012). Thus, players need to have proper nutrition to prevent these infections from occurring (Suzic Lazic, et al., 2011). Despite this, most athletes only replace the water that is lost through sweating while playing. The increased intake of water may also put players at risk because the amount of potassium left in the body may be diluted which may result in reduced potassium in the body (hypokalaemia) which can lead to decreased nerve conduction and result in impaired motor function and coordination (Chia & Mukherjee, 2012).

In secondary prevention, sports medicine professionals use evidence based practice to manage and prevent further damage to the injured body parts (Woods, et al. 2004; Christkou & Lavallee, 2009). They also use external devices such as ankle braces and ankle taping as

well as wobble board exercises after the acute phase has elapsed. Ankle taping has been used in preventive programs although there is no proof that it is effective in the prevention of ankle injuries (Bahr, 2009). A reduction in proprioceptive input increases the chance of sustaining a recurrent injury in the ankle and knee joints (Zazulak, Hewett, Reeves, Goldberg & Cholewicki, 2007). Petersen, Broun, Bock, Schmidt, Weimann, Drescher et al, (2005) proposed that more emphasis should be put on proprioceptive exercises using a wobble board in ankle joint exercises as this would increase joint proprioception. In addition, wobble boards can be used to perform pumping exercises for the ankle joints in the rehabilitation phase of the management of injuries. Therefore, a wobble board can be used in the primary stage as well as the secondary stage to prevent further damage to players.

Tertiary prevention by a qualified specialist, who has skills in the prevention of injuries, helps in reducing the occurrence of injuries. It includes having an up to date first aid equipment and knowledge in the preventive measures of a specific injury. Performing strengthening exercises, aerobic and anaerobic exercises, and rehabilitation and following return to sport guidelines reduces the risk of recurrence of an injury (Junge et al., 2002; Gabbe & Finch, 2000). In addition, coaches also assist in preventing injuries by recognising injuries and encouraging a player to get appropriate treatment and rehabilitation. They also provide support and encourage the players throughout the recovery phase. Coaches also seek advice from sports medicine therapists, and training staff when deciding if an injured player is ready to return to sport. They make sure that the return of a player does not lead to long term breakdown. In summary, football coaches have a number of responsibilities to fulfill with respect to injury prevention (Gabbe & Finch, 2000). Team administrators need to educate players on the effects of injuries. In this regard, it is necessary that coaches, trainers and team

physicians work hand in hand to prevent, and manage injuries since they are responsible for the daily running and success of the football team.

2.5 MANAGEMENT OF FOOTBALL INJURIES

A professional player who sustains an injury is biologically, psychologically and socially affected (Christkou & Lavallee, 2009). An explanation has to be made as to why and how the injury occurred as this helps a player to understand and cope with the treatment regime once the diagnosis has been made and confirmed (Quinn, 2012). The player should be reassured that he could be doing other activities while on the treatment regime in order to maintain and improve fitness (Sanders, Foster, Bishop & Ong, 2013). This helps an injured player to return to participation from an injury as early as possible (Solomon, Ott & Lovell, 2011). A multidisciplinary team approach helps to successfully manage football injuries by encouraging health professionals to work together with a player and their families to create a safe and healthy environment for a player (Francis, Andersen & Maley, 2000; Norrefalk, 2003). Therefore, management of an injured football player should involve the patient himself, a physiotherapist, an athletic trainer, and a physician. More emphasis should be put on the player's environment such as a club where he shares most of the activities as well as family and friends. This approach plays a major role in the recovery of an injury (Quinn, 2012). It has been observed that there is a quick recovery if an athletic trainer is involved in the rehabilitation of an injury because many athletes have confidence in trainers and, therefore, follow the rehabilitation program (Bone & Fry, 2006). In addition, physiotherapists have shown to have the knowledge in the management and rehabilitation of injuries because they are trained to manage neuromuscular conditions and rehabilitation of injuries (Zachazewski & Magee, 2012). They also manage players by setting goals in relation to the

phases of healing which a player may follow during the management of an injury. This makes players aware of the healing time and they can then plan their return to active participation (Francis, Andersen & Maley, 2000).

Furthermore, a physiotherapist is trained in the use of appropriate treatment modalities for these injuries (Owoeye, 2010). A physiotherapist also has knowledge of the management of soft tissue injuries, the stages of healing of injuries and the treatment techniques in these phases of healing of an injury (Owoeye, 2010). The skillful management of football injuries is essential, which is why a physiotherapist should play a central role in football injury management (Babwah & Rodgers, 2008). As such, qualified medical personnel such as physiotherapists are essential in the management of the injury and have to continue through all the stages. This allows a proper and a more rapid recovery and return to activity. Vormittag, Calonje and Briner (2009) urged that rapid evaluation of football injuries in all stages and good management helps quicker return to participation. The stages of management that have been suggested have been discussed below.

2.6 STAGES OF THE TREATMENT OF FOOTBALL INJURIES

The stages of injury management have been grouped according to the rate of healing by Krajicek (2009). He grouped the management of football injuries into four stages: initial stage, intermediate stage, advanced stage and return to full sport. The initial stage involves the use of Rest, Ice, Compression and Elevation (RICE), functional activities like swimming and cycling as well as other modalities like electrotherapy, isometric exercises and stability programmes (Verrall, Slavotinek, Fon and Barnes, 2007; Krajicek, 2009). RICE is used as primary treatment in the early stage of an injury (Bleakley, McDonough & MacAuley 2004). The injured part should be rested soon after the injury to avoid excessive swelling. However,

this should be done in the first few days as this helps scar tissue to connect the injured muscle tissue and gain strength to withstand the contraction forces to avoid re-rupturing of muscles (Järvinen, et al., 2007). Therefore, this technique should be used immediately after an injury has occurred.

In addition, an injured body part is always painful and a player should avoid excessive use of the injured limb to avoid the possibility of increasing the pain. The pain which is experienced soon after the injury may lead to players' avoiding movements of the injured body part (Wollin & Lovell 2006). An immobilised body part may be at risk of developing contractures and muscle weakness and it is, therefore, necessary to mobilize the injured part in the acute phase of healing (Järvinen, et al., 2007). Players have to do functional activities after the acute stages of healing has passed to prevent muscles from developing contractures or tension which may inhibit optimum function of the injured body part. These exercises later help in increasing the flow of blood to an injured body part which allows muscle flexibility, which can assist with preventing the development of muscle contractures. In addition, the exercises also help to stabilize the body by maintaining muscle strength and minimizing muscle atrophy. Furthermore, because exercises performed in the initial stage enhance the flow of blood to the injured muscle, they can, therefore, lead to quicker recovery of the tissue (Krix, Weber, Kauczor, Delorme & Krakowski-Roosen, 2010).

The intermediate stage begins when a football player regain the ability to perform activities of daily living (Krajicek 2009). At this stage, exercises should be initiated to full range of motion with caution and functional activities like basketball shooting, stretches, neuromuscular exercises and agility exercises have to be incorporated. Performing different types of exercises helps in keeping the memory of the functional movements in the brain,

which is negatively affected when there is prolonged inactivity (Schwenk, Zieschang, Oster & Hauer, 2010). An injured player may also be stressed and as a result pain may increase (Hartfiel, et al., 2012). This may make the body develop generalized muscle tension, which results in a reduction in the body's flexibility and altered motor coordination. Therefore, flexibility exercises help players to overcome the tension and prevent contractures by improving blood circulation and reducing stress in returning to sports participation (Brewer, 2001). Relaxation exercises also facilitate the healing process by promoting the flow of blood and supply of nutrients for the healing of the injured body part (Senger, 2012). In addition, doing neuromuscular exercises improves the functions of the lower limbs especially in knee injuries (Eitzen, Moksnes, Snyder-Mackler & Risberg, 2010) as this is a joint which is important in playing football. These exercises have been proven to improve knee functions and prepare the player for return to sports. Agility exercises and sport oriented exercises which are performed by a physiotherapist help a player in regaining the quick movements which are required when he returns to participation (Heiderscheit, Sherry, Silder, Chumanov & Thelen, 2010; Myer, Paterno, Ford, Quatman & Hewett, 2006).

The advanced stage includes the commencement of sport-specific agility work, skills and game drills that are compounded with power neuromuscular exercises, functional stability programmes and functional activity. Most of these exercises are a continuation of the intermediate stage of injury management. Exercises performed in this stage allow a player to achieve early gains in their joint range of motion, maximize quadriceps control and minimize gait deviations (Medvecky, Zazulack & Hewell, 2007). Furthermore, exercises in this stage are sport specific as such they are more appropriate for the player who is trying to return to active participation. Return to sports includes the practice of contact sports in order to reduce

the fear and motivate players to full participation (Myer, Paterno, Ford, Quatman & Hewett, 2006; Podlog & Eklund, 2005).

A player may be psychologically affected soon after an injury. An injured player who is psychologically affected may be stressed and may develop muscular tension that may take longer to recover. Therefore, the psychological factors that may affect football players' have to be treated for the players to recover quickly (Quinn, 2012). A player may also become emotional as a result of an injury. This may cause psychological tension because of the painful injured body part and may result in generalized tension. The tension can be reduced by talking to other athletes who have had injuries before and recovered successfully. Keeping in touch with the teammates, coaches and friends has also been shown to motivate football players to return to participation. Involvement of a player in daily football planning activities helps them to have a feeling of connection to their community (Quinn, 2012). In addition, Podlog and Eklund (2007) recommended that comprehensive football injury management should also include a psychologist, especially in decision-making regarding the player's return to active participation.

The relationship between a coach, an athlete and a sports medicine therapist has been described by Ruth (2012) who reported that it is essential for clinicians to develop good relationships with athletes as well as coaches. There must be mutual trust among these stakeholders so that players may develop confidence to confide in a clinician, and vice versa for the athlete to comply with treatment. Furthermore, athletes regard a physiotherapist as a main treatment provider with whom they can share and discuss their injury and returning to participation (Arvinen-Barrow, 2009). They also trust that a physiotherapist can treat them

until full recovery. Therefore, a physiotherapist should be involved in the decision-making process regarding the return of a football player to active participation.

2.7 FACTORS INFLUENCING RETURN TO PLAY

There are several factors that may influence a players' full return to active participation. These include early diagnosis and management of the injuries using evidence based practice, having suitable rehabilitation, good nutrition, socioeconomic factors, stress and fear of movement, fear of losing their position in the team, lack of support, lack mental and physical fitness.

Early diagnosis: Early diagnosis and continuation of proper injury management of common football injuries have been shown to be a factor in the return of players to participation (Orchard, et al., 2008). Early diagnosis and management prevents further damage to the already injured tissues. Players who have been treated from the early stages have shown to have quick recovery and early return to full participation (Jacobsson, et al., 2012; Orchard, et al., 2008). As such, treatment must begin soon after the injury and that players must follow all the treatment guidelines in the management of the injury in order to achieve a quick recovery (Myer, et al., 2006).

Use of evidence based: Use of evidence based practice in the management of an injury by graduate physiotherapists and physiotherapists working in private practice and hospitals have shown to have better outcome in the management of injuries (Iles & Davidson, 2006). Physiotherapists are one of the allied health professionals who have been recommended to manage sports injuries. They use techniques that are effective in the management and rehabilitation of an injury (Zachazewski & Magee, 2012). Use of current evidence helps them in making proper decisions in the use of current effective techniques in treating the

musculoskeletal and neurological conditions (Sherrington, Moseley, Herbert & Maher, 2002). McCluskey and Lovarini (2005) indicated that allied health personnel should focus more on workshops and skill development in the establishing new skills.

Inadequate rehabilitation and suitable rehabilitation: Some players may return to participation before completing the rehabilitation programme. Kofotolis, Kellis and Vlachopoulos and (2007) suggested that players should be given adequate time to rest to allow proper healing of the injured tissues before they return to play in competitive matches. Kofotolis, Kellis and Vlachopoulos (2007) observed that players who had an injury and returned to participation after inadequate rehabilitation have also shown to have a recurrence of injuries compared to those who have had adequate rehabilitation. In this case, the player may take longer to get full recovery and return to participation. After a player has received suitable rehabilitation he may return to participation physically fit. Thus we may conclude that suitable rehabilitation helps in the effective returning of a football player as evidenced in those who have had an injury before and returned successfully (Gobbi & Fransisco, 2006).

Fear of losing position: Some players return to participation because they fear losing their position in the team. This occurs when a player is injured and is replaced by another player who may not be a regular player. The injured player, who has been replaced, may feel insecure that his position may be filled permanently and consequently may return to active participation to secure his position before completing the rehabilitation program (Fuller and Walker, 2006).

Fear of losing income: Football players may return to participation because they may not want to lose their income (Torgler & Schmidt, 2007). Players who play professional football are paid for playing (Roderick & Waddington, 2000). For example, in the English premier league a player may receive £100 000 per week. In addition, they also get money for

advertisements (Murphy & Waddington, 2007). A player's income may be reduced following an injury and he may, therefore, want to return to participation sooner in order to continue receiving an income. A player's lifestyle may be negatively affected due to reduced income as a result of absence from participation.

Stress and fear of movement: Stress affects the return of players to active participation. Injured players may not want to go through the painful experience of re-injury hence they do not return to play (Lee, Karim & Chong Chang, 2008). Stress may have a negative effect on the healing process of an injury and is regarded as a major contributor to football re-injuries (Steffen, Pensgaard & Bahr, 2009). In addition, stress from other sources can lead to reduced concentration thereby causing in-coordination which may result in re-injury (Häggglund et al, 2013). Thus, complete management of injuries has to include stress management for the effective return of players to full active participation (Hedgpeth & Sowa, 1998).

Sense of belonging: Many players return to active participation in their sport because they feel isolated. They return in order to regain a feeling of being part of a community, occupational identity, skill improvement and to have a chance of being connected to mainstream clubs (Mynard, Howie & Collister, 2009). However, others may return because they love the team and do not want the team to lose (Woods, Hawkins, Hulse & Hodson, 2002).

Call from coaches: Players may return to participation because coaches want to win matches to secure their jobs. As a result, they may call for players who have not finished the rehabilitation to return to active participation sooner than they should (Yard & Comstock, 2009). They may also pressurize a player to keep playing even if he has an injury, arguing that playing with pain shows that a player is strong and that he loves the team (Roderick, Waddington & Parker, 2000). However, a player has to be certified that he is mentally and physically fit by a qualified health care professional. Coaches who work to develop skills and

improve talent have a better approach to football injury management than coaches whose sole aim is to win matches and to secure their jobs. They ensure that athletes' physiological, psychological and social needs are met in order for the player to successfully return to participation (Reynolds, 2000 ; Podlog & Dionigi, 2010).

Reduced fear of re-injury: In some cases, players may have returned to full participation earlier and performed well. They may, therefore, have less fear of re-injury due to their previous similar experiences. However, those who went through a painful experience during the injury do not return to sports because they are stressed and may have fear of re-injury (Lee, Karim & Chong Chang, 2008).

Nutrition: The nutritional status of a football player may affect their recovery. Strenuous activities deplete the energy stores that are needed for the body's functional activities. Thus, good nutrition helps in quicker recovery following an illness (Buford, et al., 2007) and a player may return to participation within the shortest time possible. An injured football player needs proper nutrition as his body performs strenuous activities during football playing. Venter, Potgieter and Barnard (2010) advocated that athletes should include a well balanced diet after sporting activities in order to replace the energy which is depleted during sports activities. Replacing the lost nutrients after strenuous activities assist in maintaining the body's healing capacity (Buford, et al., 2007).

Lack of support: Lack of medical support and proper referral may delay a player from returning to participation (Arnason, Sigurdsson, Gudmundsson, Holme, Engebretsen & Bahr, 2004). Professional football players require employment benefits just like any other profession because playing professional football has a high risk of sustaining an injury. Therefore, players need legislation that protects them in the event of illness or an injury

resulting from participation (Hawkins & Fuller, 1999; Fuller, 1995). Players who have medical cover may get adequate treatment and return to participation unlike those players who do not have medical cover as they may not be able to pay for the medical costs for the management of the injury. Medical cover may assist in paying other bills such as medications and other investigations that may not be performed by a team doctor and may need to be referred to other health professionals.

Mental and physical fitness: For players to return to participation they need to be mentally and physically fit to avoid re-injuries. In order for the players to successfully return to participation their physiological, psychological and social needs need to be met (Podlog & Dionigi, 2010). In addition, a qualified health care professional must confirm that they have full muscle strength, stability, neuromuscular control, and functional ability (Barber-Westin & Noyes, 2011). Lack of this may result in the occurrence of re-injuries. Players who have been confirmed to be mentally and physically fit may successfully return to sport.

In addition to the factors discussed above, return to participation may also be influenced by other factors such as the type of injury sustained (Velmar, Bailey & Smrkolj, 2009). This can influence the time an injured player would take to return to participation. For instance, it takes an average of 19 days for a player who sustains an injury for the first time, an average of 24 days with subsequent injury (Hawkins, Hulse, Wilkinson, Hodson & Gibson, 2001). An ankle injury takes an average of 21 days to return to active participation (Nelson et al., 2007) while surgical knee cartilage repair takes an average of 7 to 18 months (Mithoefer, Hambrey, Logerstedt, Ricci Silvers & Della Villa, 2012). The time to return may also depend on the time between injury and the start of treatment, as well as the severity of tissue damage (Mithoefer & Della, 2011). Age may also affect time to return to active participation. For

instance, older players who are above 28 years with recurrent hamstring injuries may need longer time of rehabilitation than younger players (Woods, Hawkins, Maltby, Hulse, Thomas & Hodson, 2004).

2.8 CONCLUSION

In conclusion, it has been observed that most football injuries occur in both competitive and training matches. More injuries occur in competitive matches. More injuries occur in African countries than European countries. There are many preventive measures that can be employed to minimise the occurrence of injuries. Football injuries are well managed using evidence based practices, and multidisciplinary team approaches. Football injuries need to be managed by qualified health care professionals, people who have the knowledge, experience and skills in the management of football injuries. Physiotherapists play an essential role in the process because they are trained in the management and rehabilitation of players who sustain football injuries (Bwabwah & Rodgers, 2008). In addition, the physiotherapist must work closely with a range of other skilled and experienced professionals including surgeons, athletic trainers and psychologists, all of whom play an important role in the management of players' injuries and their successful return to active participation. Good collaboration between players, team coaches, team doctors and physiotherapists may reduce the factors that affect the return of players to participation. However, the management of football injuries in Malawi has not been established and it is unknown whether these professional players have access to the kind of rehabilitation programmes and support that has been shown to affect the successful return to sport.

CHAPTER THREE

METHODS

3.1 INTRODUCTION

This chapter describes the method that was used in this study. It includes a description of the study setting, study design, population and sample. This is followed by a description of the issues regarding reliability and validity of the research instrument used. Furthermore, procedures that were used to collect and analyse the data are presented. Finally the ethical issues relating to the study are explained.

3.2 RESEARCH SETTING

The setting of the study was in Malawi, located in Sub-Saharan Africa. Malawi has three regions: Northern Region, Central Region and Southern Region. It has a population of 15 million (National Statistics Office, 2010). Malawi football is ranked 102nd on the Coca Cola ranking by the world football governing body Federation Internationale de Football Association (FIFA) (FIFA/Coca Cola ranking, 2012). Football in Malawi is governed by the Football Association of Malawi (FAM), which has been affiliated to FIFA since 1967 and to the Confederation of Africa Football since 1968. FAM joined the Confederation of Southern Africa Football Association in 1997. The Super League of Malawi (SULOM) is an organization which is responsible for the running of the top league in the country. This organization has 15 teams and is affiliated to FAM. It has two teams from the Northern Region, eight teams from the Central Region and five teams from the Southern Region. Each of these teams had a coach, team doctor and a team manager and they registered 25 to 30 players in 2012-2013 season per team (FAM, 2011).

3.3 STUDY DESIGN

This study employed a quantitative, cross-sectional design, which aimed to provide a representation of information across the geographical area (Mouton, 2007). This design was chosen because it was efficient and cost effective as the information was collected by a single researcher at one time. It also enabled the researcher to collect data from all the football teams across all the three regions of Malawi. It was necessary to use this design in order to have a representation of information from all football teams in the super league in the three regions.

3.4 POPULATION AND SAMPLING METHOD

The study population consisted of 15 soccer teams which included all football players, team doctors and team coaches in the Super League of Malawi. These teams had a maximum total of 450 football players, 15 team doctors and 15 team coaches who were registered in the 2012-2013 super league season. Out of the 450 players 149 sustained injuries in the 2012-2013 football season that resulted from a football match or football training, irrespective of the need for medical attention or time loss from football activities. These players were identified by the team doctors who were able to check their medical records. Players who did not receive medical treatment for their injuries informed the researcher directly of previous injuries. Injuries were confirmed by either the team doctors or team coaches. A total of 149 players were identified and invited to participate in the study. Only players who sustained injuries in the previous 2012-2013 season were recruited because the purpose of the study was to establish the current state of injury related care in Malawi. The number of participants has been shown in the table below

Table 3.4.1 Total number of participants per region and the percentages

Participants	Northern Region	Central Region	Southern Region	Total Number	%
Football players	10	64	75	149	73.3
Team doctors	1	5	4	10	33.1
Team Coaches	1	5	5	11	66.7

3.5 RESEARCH INSTRUMENT

3.5.1 Development and translation

The instruments used in the study were three different self-administered questionnaires for the players, coaches and team doctors respectively. Self-administered questionnaires were used because they have the advantage of providing a standardized, cost-efficient means of gathering information, as well as the ability to assess events of the past and present (Goldstein, 2003). The questionnaires were developed based on literature from studies which were conducted similar to this study (Jelsma, Dawson, Smith, Satumba & Madzivire, 1998; Hawkins & Fuller, 1998; Finch, Donohue & Garnham, 2002). Thereafter, the questionnaires were translated to Chichewa, the native language in Malawi, by a linguist who was fluent in both English and Chichewa. The back translation was performed by a different translator who was also fluent in both languages. Harkness and Schova-Glusberg (1998) suggested that in order to compare accuracy of the two versions, the translated text can be assessed through back translation of the target text back into the source language. The back-translated questionnaire was compared with the original English version and the items in the questionnaires were asking the same things (Appendix, P, Q and R).

3.5.2 Reliability and Validity

Reliability is the ability of an instrument to yield a similar result when repeated under the same conditions (Bless & Higson-Smith, 2000). To check the reliability, intra rater reliability was conducted. Football players' questionnaires were administered to a sub sample of players, team doctors' questionnaire to a team doctor and team coaches' questionnaire to a team coach from a junior league in the Southern Region of Malawi. The same questions were administered two weeks later to the same sub group of players, the team doctor and the coach. The reliability of the questionnaire was tested by Cronbach alpha. A score of 0.7 is acceptable reliability coefficient (Nunnally, 1978). The results of the reliability tests that were conducted to test the questionnaires in the pilot study are shown in the Table 3.5 2. 1 below. It is evident that the instruments were found to be reliable. Test re-test method was measured using the Cronbach alpha (α) coefficient. Validity is an overall evaluative judgment of the adequacy and appropriateness of inferences drawn from test scores (Messick, 1980). The researcher also assessed the face validity of the items to check if the instrument was applicable for the population and clarity of the wording. To determine the content validity of the instrument all three questionnaires were sent to three physiotherapists, two rehabilitation technicians and one clinical officer working in the field and who deal with the management of football injuries. They commented that some of the questions were not clear and recommended the following changes to the team doctors' questionnaire: instead of indicating a specific qualification for them to tick, it was suggested that participants should write their qualifications because some may have different qualifications not listed on the questionnaire. Two questions from the players' questionnaire were removed because the people who work in the field felt that the questions were for team doctors and not players and would not be able to

give a response according to the objectives. No necessary changes were suggested for the coach's questionnaire.

Table: 3.5 2. 2 Reliability Test

Questionnaire	Cronbach Alpha	Standardized Items	Number of Items
Football players	0.8	.894	36
Team doctors	0.7	.699	38
Team coach	0.8	.847	17

3.5.3 Football players questionnaire

The football players' questionnaire consisted of five sections. The first section sought players' demographic data and included the team name, age and the duration the players have been playing in the super league. Weight and height of the participants were measured by the researcher at the training ground using a scale and a tape measure before the player started completing the questionnaires. The second section sought data on time taken to return, type of treatment and support received in the previous season (2012 to 2013). Only history from the previous season was requested to make sure that the recall bias was minimized. The third section sought data on the duration that football players took to return to sports participation after the injury. Time to return to participation was divided into four categories namely, less than one week, more than one week and less than two weeks, more than two weeks and less than three weeks as well as more than three weeks and more. The fourth section of the questionnaire requested information about the type of treatment football players received for their injuries from the team doctor and other sources and was adapted from Jelsma, Dawson, Smith, Masaya & Madzivire (1997). The fifth section asked whether players received medical or financial support after an injury which was adapted from the instrument used by Finch, Donohue & Garnham (2002) (Appendix M). The types of football injury was not included in

the questionnaire because football players are necessarily reliable when it comes to diagnosing their injuries (Jacobson & Tegner, 2007), this was also done to limit recall bias. In addition, football players are not trained to diagnose their injuries, therefore questions regarding their knowledge of the injuries were not included in the instrument. The Cronbach alpha reliability of the questions was 0.8 at 95 % confidence interval.

3.5.4 Team doctors questionnaire

The team doctors' questionnaire consisted of four sections. The first section gathered information on demographic characteristics such as the name of the club, professional qualification, experience of working as a team doctor, sports medicine courses attended and the year they were attended. Section two asked for the type of treatment techniques used in the management of sports injuries from the time a player sustained an injury until the player's return to active participation (Senger, 2012). Section three asked for the team doctors to indicate other sources of treatment which they advised players to get after sustaining an injury. Section four asked for other responsibilities they had in the prevention and management of the injuries including advice regarding nutrition (Appendix N). This was adopted from the instrument used by Hawkins & Fuller (1998). The Cronbach alpha reliability of the questions was 0.7 at 95 % confidence interval.

3.5.5 Football coach questionnaire

The football team coach's questionnaire consisted of two sections. Section one asked for demographic characteristics such as coaching qualification and work experience. Section two gathered information on the responsibilities that coaches have regarding the management of the players' injuries. The questionnaire sent to the football coaches also asked about financial and medical support because the coaches do most of the team management, as they are

usually employed full time as opposed to team managers and doctors in Malawi. This section consisted of 15 questions with options for answers including; Never = 0 %, Sometimes = 25 %, Often = 50 %, Very often = 75 %, Always = 100 % (Appendix O). The Cronbach alpha reliability of the questions was 0.8 at 95 % confidence interval.

3.6 PILOT STUDY

A pilot study was conducted in the premier league in order to determine if the questionnaires were clear and unambiguous and that they, could be used to collect the required data for the study. It was also to determine the average time taken to complete the questionnaire (Baker & Risley, 1994). This was done to assist the researcher to foresee if data could be collected without affecting the daily football routines during the collection of data. The pilot study was done after obtaining ethical clearance from the University of Western Cape and the College of Medicine Ethics Committee of Malawi. Permission was also requested and obtained from the Southern Region Premier League General Secretary to conduct the study in the premier league division. The general secretary suggested two teams from this league where the pilot study could be conducted. Letters were written to these teams requesting permission to participate in the pilot study. One team granted the permission. The other declined because they had not yet started preparation for the current season. A test-retest method was conducted with the team that agreed to participate in the study. This team chose that data should be collected from their training grounds because this is where players, coaches and team doctors gather for training. Twenty players who had a history of injury from the previous season were purposively selected with the help of the team doctor who checked his records and confirmed the injuries. These players were issued with the information sheet followed by oral explanations of the nature and objectives of the study and the purpose of the

pilot study. After reading and understanding the purpose of the study they signed a consent form. In the event that the participant needed clarification, the researcher was present and was able to assist. Completed questionnaires were collected immediately by the researcher. Two weeks later the questionnaires were administered again to the same players, the team doctor and the coach (Singh, et al., 2011).

3.7 PROCEDURE OF THE STUDY

Data collection was done after getting approval from the Research Grants and Study Leave Committee of the University of the Western Cape, College of Medicine Research and Ethics Committee (COMREC). A request for ethical approval was made to COMREC through the Head of Physiotherapy Department at the College of Medicine, University of Malawi.

Letters requesting permission to conduct the study were written to the football bodies FAM, SULOM, SRFL General Secretary and the respective football teams. Written permission to conduct the study was granted by all of the above mentioned bodies. Data collection was done at the training grounds before the start of training sessions. Players who had a history of injury from the previous season were purposively selected with the help of the team doctors who checked their records and confirmed the injury for both players who received medical treatment as well as those players who did not receive medical treatment for injuries. Injuries were confirmed by either the team doctors or team coaches. Participants were issued with the information sheet and oral explanations of the nature and objectives of the study were made to the selected players at their training grounds. Thereafter, a signed consent form was obtained from all the participants. The researcher measured weight and height of the players using a scale and a tape measure before the player started completing the questionnaires. In

the event that the participant needed clarification, the researcher was present and was able to assist. Completed questionnaires were collected immediately.

3.8 DATA ANALYSIS

Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 21.0. Descriptive statistics were employed to summarise the demographic data of the participants and was expressed as frequencies, percentages, means, and standard deviations presented in tables in the next chapter. According to Gratton and Jones (2010) descriptive statistics are used when measuring traits or characteristics of a group without any intention to generalise beyond that group. Inferential statistics (cross tabulation) were used to determine if there was any association between BMI and return to sport, type of treatment given to a player and return to sport and type of support and returning to sport. Significant differences were tested using Chi-square tests. Statistical significance was set at an alpha level of 5 %. A score of less than 0.05 after the calculation meant that there was an association between the variables.

3.9 ETHICAL CONSIDERATIONS

Ethical approval was first obtained from the Research Grants and Study Leave Committee of the University of Western Cape, and College of Medicine Research and Ethics Committee (COMREC). The participants were informed of the name of the researcher, aim and objectives of the study, and the associated benefits and risks (Appendix K). The participants were informed that their participation in the study was voluntary and that they had a right to withdraw at any time without any negative consequences.

Participants were asked to sign a consent form before completing the self-administered questionnaire. The participants' anonymity was maintained by not using any names, only

questionnaire numbers were used. The questionnaires were collected and locked away in a filing cabinet and the key was only accessible to the researcher.

The results of the study will be made available to Football Association of Malawi, Super League of Malawi and the football team doctors and team managers. The results will be disseminated through the Research Dissemination Conference that takes place annually at the College of Medicine, a constituent college of the University of Malawi.

3.10 CONCLUSION

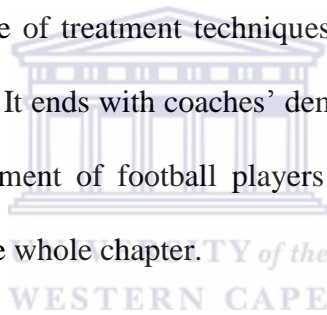
In conclusion, permissions were obtained from relevant authorities to conduct this study. A total of 170 participants from all the three regions consented to participate in the study. Out of 170 participants 149 were football players, 10 were team doctors and 11 were team coaches. A pilot study was conducted to assist the researcher to determine the average time of completing the questionnaire. The reliability was tested using a cronbach alpha and content validity was checked by sending the questionnaires to experts who work in the field. Self-administered questionnaires were used to collect data at a convenient time for the participants. Only injured football players were purposively selected with the assistance from the team doctor who confirmed the injuries and those who did not receive treatment informed the researcher. Participants were free to withdraw from the study and anonymity was maintained. Results of the study are presented in Chapter 4.

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

This chapter presents the results of the study in the form of tables and graphs, frequencies, percentages, means and standard deviations. It begins with the demographic characteristics of the football players, the number of days they took to return to participation, the type of treatment and support they received and the outcome of the Chi square tests for the association between age, body mass index (BMI), type of treatment players received and the type of support players received following an injury. It is followed by the presentation of team doctors' demographics, type of treatment techniques they used in the management of injuries and their responsibilities. It ends with coaches' demographics and the responsibilities that coaches had in the management of football players who presented with injuries. It concludes with an overview of the whole chapter.



4.2 FOOTBALL PLAYERS

Table 4.1 below depicts characteristics of the football players in the study.

Table 4.1 Characteristics of football players (n=149)

Variables	Range	Minimum	Maximum	M±SD
Age	18	18	36	22.2±4.0
Height in cm	44	150	194	171.6±7.5
Weight in kg	40	50	90	66.0±6.8
Football playing experience in years	14	1	15	3.7±2.9

M=mean, SD= standard deviation

Table 4.1 above presents the demographic characteristics of the football players. Most players were in their early twenties (22.2±4.0) and had an average of 3.7±2.9 years of experience playing in the super league.

Table 4.2 below presents the Body Mass index of players in the study.

Table 4.2 Body Mass Index (n=149)

Category	N	%
Underweight	1	0.7
Normal	131	87.9
Overweight	17	11.4
Obese	0	0.0

n=frequency in a category (n=149)

The bulk of the participants in the study were within normal BMI rating (87.9%) according to the scale used, with 11.4% found to be overweight.

Time taken to return to full participation, type of treatment and support received.

This section presents the amount of time that players took to return to participation, the type of treatment they received and the medical and financial support they received following an injury.

4.2.1 Number of days taken to return to sports participation

Table 4.3 below shows the time taken for players to return to active participation. Active participation was defined as an athlete's actual return to full competitive play. The majority of players (43 %) took 3-4 weeks or more to return to active participation.

Table 4.3 Time taken to return to active participation (n=149)

Weeks	Number of football players	%
0 to less than 1 week	26	17.4
1 to less than 2 weeks	31	20.8
2 to less than 3 weeks	28	18.8
3 to 4 weeks or more	64	43.0

4.2.2 Treatment type

Players reported on the different types of treatment they received for their respective injuries.

These are summarised in table 4.4 below.

Table 4.4 Treatment types (n=149)

Treatment type	Number	%
Ice	107	(71.8)
Wound care	85	(57.0)
Elevation	80	(53.6)
Advice	78	(52.3)
Exercise therapy (strength and stability exercises)	71	(44.7)
Compression	69	(46.3)
Power neuromuscular exercises	57	(24.8)
Game drills	54	(36.2)
Splinting/ Strapping	52	(34.9)
Massage	52	(34.9)
Agility neuromuscular exercises	51	(32.2)
Agility work	50	(33.6)
Referral	49	(32.9)
Functional activity exercises	41	(27.5)
Joint mobilization	41	(27.5)
Heat	38	(25.5)
Crutch walking	37	(24.8)
Isometric	20	(13.4)
Electrical equipment	17	(11.4)

As indicated in the table above the majority (71.8 %) of players reported to have received ice as a treatment modality. More than half (57 %) of the participants received wound care.

Table 4.5 below shows the other treatment modalities that players received.

Table 4.5 Treatment from other sources (n=149)

Type of support	Number	%
Medication only	139	(93.3)
Treatment from teammates	98	(65.8)
Surgical (hospital treatment)	78	(52.3)
Physiotherapy treatment	71	(47.7)
Traditional treatment	27	(18.1)

Other treatment modalities that players reported included medication (93.3 %) and treatment from teammates (65.8 %) as summarized in table 4.5. Less than half (47.7%) of the study sample reported physiotherapy treatment.

4.2.3 Medical and financial support

Table 4.6 below shows the number of players who were supported medically and financially when they sustained an injury.

Table 4.6 Number of players who received support (n=149)

Characteristic	Number	%
Medical support	117	(78.5)
Financial support	46	(30.9)

4.2.4 Association between categorical variables

In order to determine if there was any association between categorical variables a Chi square test at 5% significant level of significance was used. A p value of less than 0.05 indicates that there was an association between the variables, those with greater than 0.05 show that there

was no significant association. The variables that were calculated using a Chi square were body mass index, age, type of treatment and medical and financial support.

Table 4.7 below shows the results of Chi square between body mass index and age and returning to sport. BMI categories included players who were Overweight, Normal weight and Underweight. Ages were grouped into three groups. These groups were decided based on a bigger proportion of the ages players had. Time was also divided into two categories, players who returned to participation in less than two weeks and players who returned after two weeks.

Table 4.7 Test for association between Body Mass Index and Age (n=149)

Variable	2 weeks and less		2 weeks or more		P value
	Frequency	%	Frequency	%	
BMI					
Overweight	5	(29.4)	12	(70.6)	0.3
Normal	51	(38.9)	80	(61.1)	
Underweight	1	(100.0)	0	(0.0)	
Age group					
28 and more	6	(35.3)	11	(64.7)	0.7
23-27	10	(24.4)	31	(75.6)	
18-22	41	(45.1)	50	(54.9)	

Table 4.7 above showed that there was no association between returning to participation and body mass index and age in less than two weeks or more than two weeks as indicated by the p value ($p > 0.05$ which is above 5% level of significance).

Table 4.8 shows the results of the calculation of the Chi Square between types of treatment received and return to participation. It presents the calculation of number of players returned before two weeks and those who returned after 2 weeks or more

Table 4.8 below presents the time taken in weeks for players to return to sport and the type of treatment that they received.

Table 4.8 Returning to sport and the type of treatment (n=149)

Treatment	2 weeks and less		2 weeks or more		P value
	N	%	N	%	
Ice	52	(37.4)	87	(62.6)	0.4
Wound care	41	(38.3)	66	(61.7)	0.9
Advice	40	(38.1)	64	(61.5)	0.9
Compression	36	(37.5)	60	(62.5)	0.7
Exercise therapy	36	(38.7)	57	(61.3)	0.8
Massage	35	(43.2)	46	(56.8)	0.8
Game drills	31	(38.3)	50	(61.7)	0.9
Stability	30	(44.1)	38	(55.9)	0.1
Agility work	30	(41.1)	43	(58.9)	0.4
Agility Neuromuscular exercises	30	(41.1)	43	(58.9)	0.4
Splinting	30	(37.5)	50	(62.5)	0.8
Mobilization	29	(40.8)	42	(59.2)	0.5
Referral	29	(39.7)	44	(60.3)	0.7
Elevation	22	(47.8)	24	(52.2)	0.1
Power	22	(36.1)	39	(63.9)	0.6
Heat	25	(42.4)	34	(57.6)	0.4
Crutch	20	(33.3)	40	(66.7)	0.3
Isometric	19	(46.3)	22	(53.7)	0.2
Electrical	13	(36.1)	23	(63.9)	7.0

N= number of players.

Table 4.8 above indicated that there was no association between treatment received by football players and returning to full participation.

Table 4.9 Returning to sport and treatment with other modalities (n=149)

Treatment type	Less than 2 weeks		More than 2 weeks		P value
	N	%	N	%	
Drugs	56	(40.3)	83	(59.7)	3.6
Treatment from parents	41	(39.4)	63	(60.6)	0.3
Treatment from teammates	37	(37.8)	61	(62.2)	0.03
Surgery (hospital treatment)	29	(37.2)	49	(62.8)	0.80
Physiotherapy treatment	26	(36.6)	45	(63.4)	0.15
Traditional treatment	14	(51.9)	13	(48.1)	2.5

N= number of players

The results showed that there was an association between getting treatment from team mates and returning to participation, as shown by the p value of 0.03.

Returning to active participation and support

Table 4.10 below shows the results of the test for association between returning to sport and receiving financial or medical support.

Table 4.10 Returning to sports and financial or medical support (n=149)

Type of support	2 weeks and less		more than 2 weeks		P value
	N	%	N	%	
Medical support	41	(35.0)	76	(65.0)	0.1
Financial support	21	(45.7)	25	(54.3)	0.2

N= number

The result showed no association between returning to participation and receiving medical and financial support.

4.3 TEAM DOCTORS

Team doctors' demographics included their qualification, number of years working as a team doctor in the super league and number of sports medicine courses attended.

Table 4.11 below presents the team doctors qualifications.

Table 4.11 Team doctors qualifications (n=10)

Qualification	n
Orthopedic Clinical Officer	5
Clinical Officer	2
Medical Assistant	1
Medical Assistant/Dermatology Officer	1
Medical Doctor	1

n=frequency of doctors within specific qualification

In Table 4.11 above, most team doctors (5) in the super league were found to be orthopedic clinical officers.

Table 4.12 below presents participants' working experience in years and the number of sports medicine courses they had attended.

Table 4.12 Team doctors work experience and courses attended (n=10)

Years/courses	Minimum	Maximum	M±SD
Average number of years working as a team doctor	1	20	7.10±6.6
Average number of sports medicine courses attended	0	2	1.00±0.8

M=mean, SD= standard deviation

The number of sports medicine courses attended was 2 as indicated in table 4.12.

4.3.1 Management of injuries by team doctors

The following section presents the types of treatment techniques that team doctors use in the management of sports injuries. It also presents other forms of treatment and the responsibilities that team doctors have in the management of football players' injuries.



Treatment used by team doctors

Figure 1 below presents the types of treatment that team doctors mostly used.

**Figure 4.1 Treatment types
(n=10)**

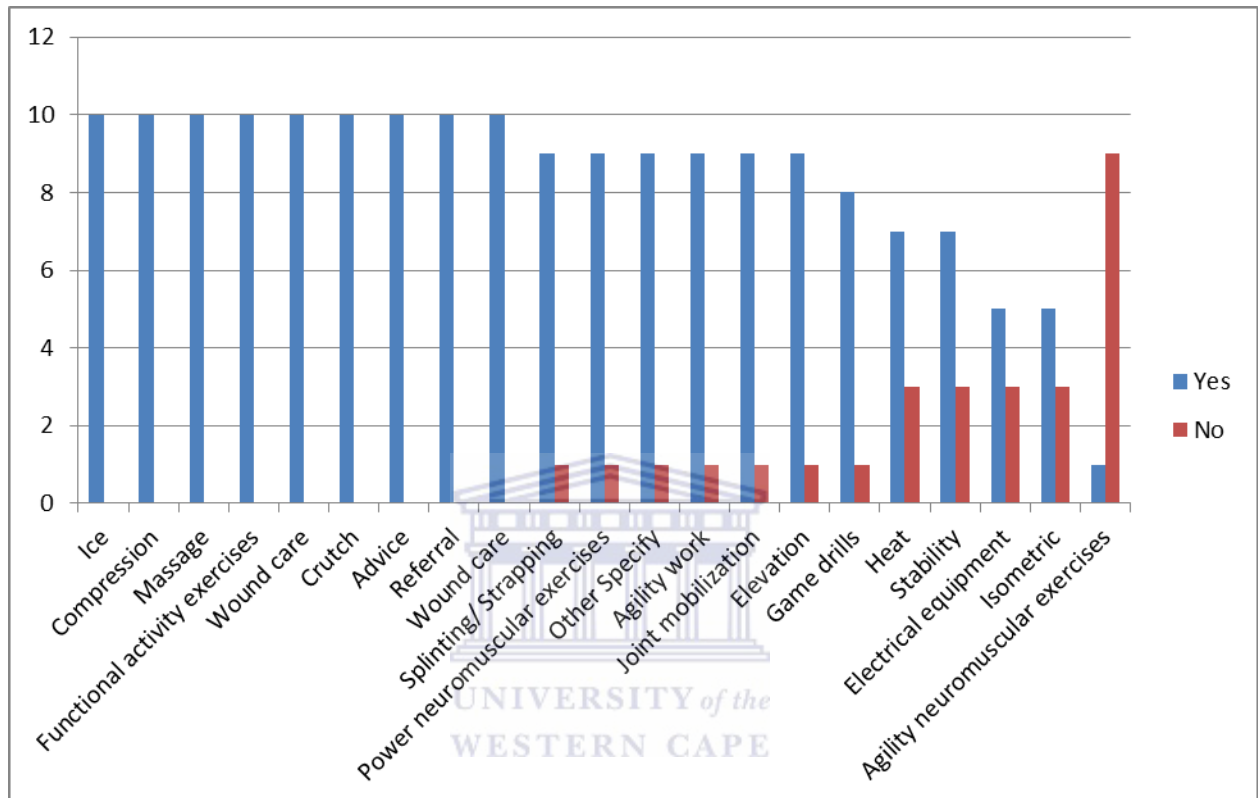
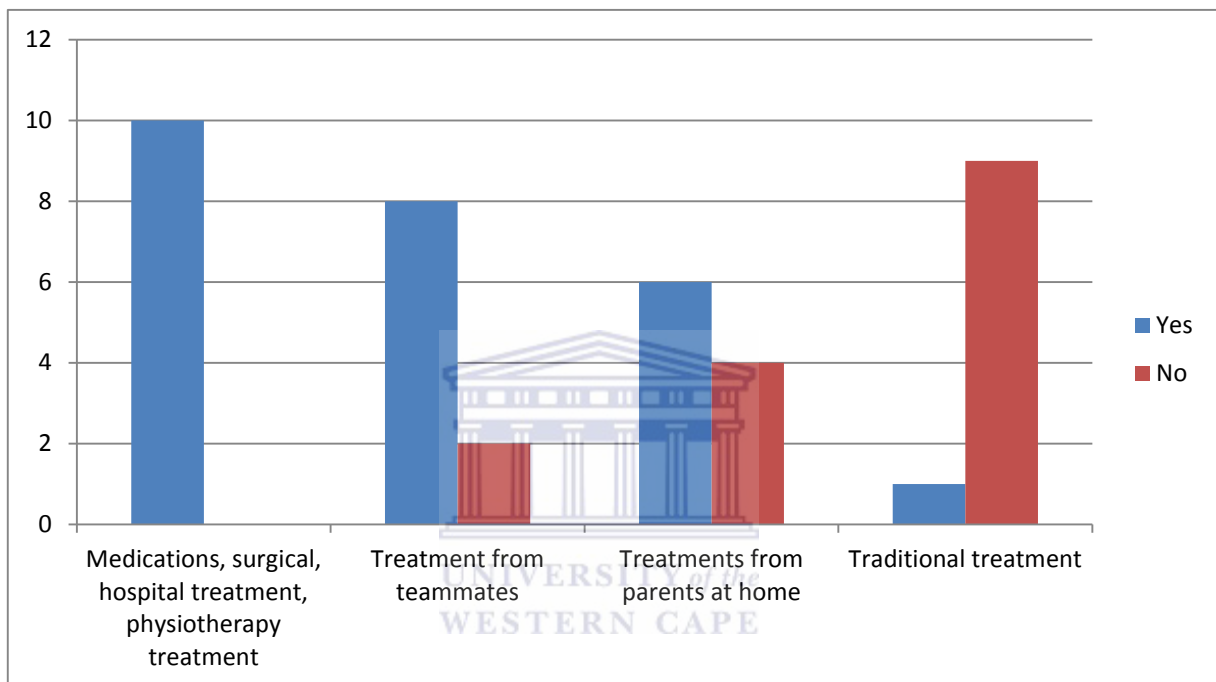


Figure 1 above shows that all 10 team doctors use ice, compression, massage, functional activities, crutches and exercise therapy. They also care for any wounds that players sustain, and they refer players to alternative service providers when necessary.

Other sources of treatment which team doctors use to manage injuries

Figure 2 below presents the types of treatment from other sources that team doctors use in the management of football injuries, in addition to their usual treatment.

Figure 4.2 Types of treatment from other sources (n=10)

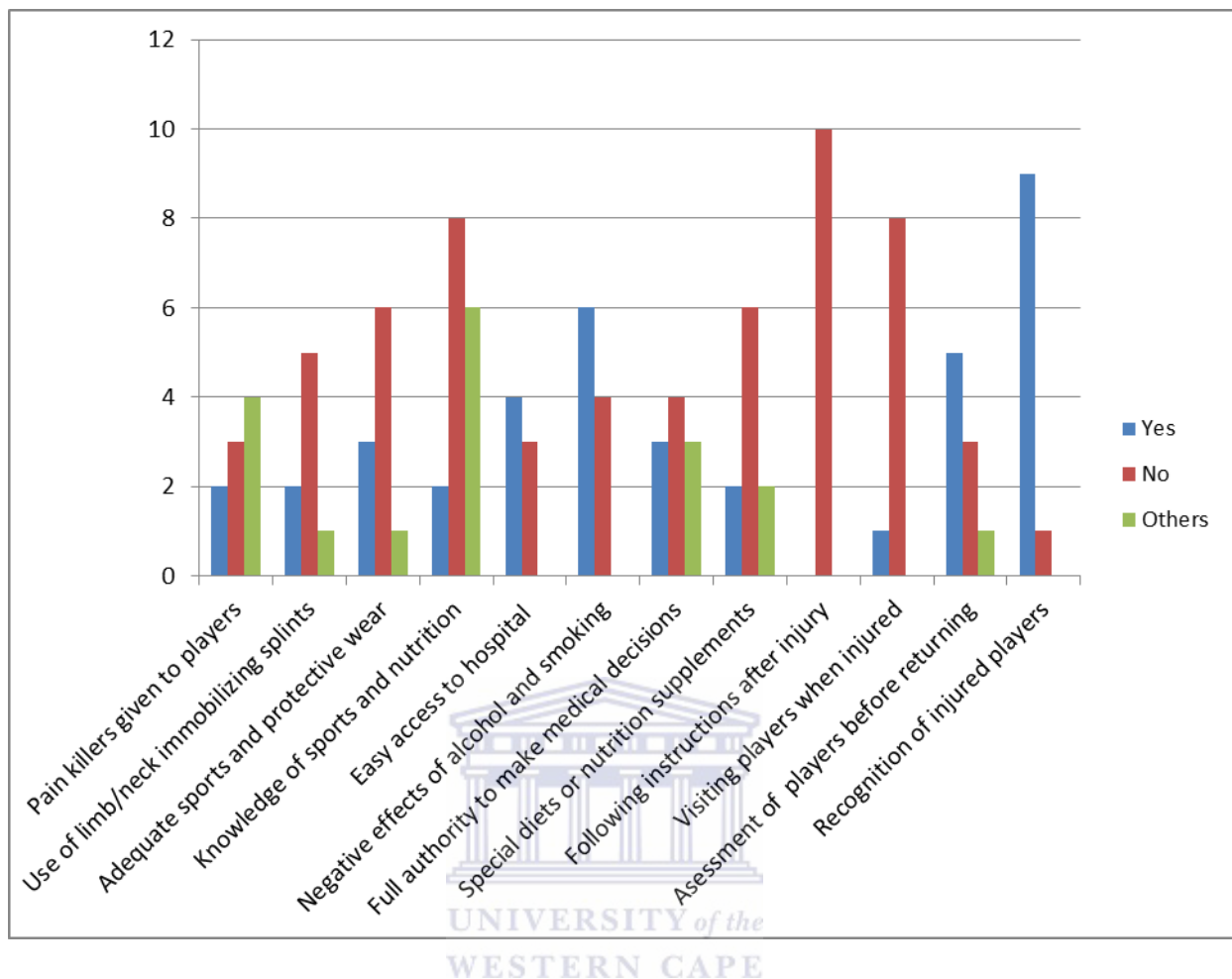


The results showed that all the team doctors use medication, surgical treatment, hospital referrals and physiotherapy techniques. Eight doctors ask players to treat each other (teammates) and one doctor uses traditional medicine.

4.3.2 Team doctors responsibilities regarding the management of injuries.

Team doctors were asked to indicate what their responsibilities were in the management of players with football injuries.

Figure 4.3 Team doctors responsibilities (n=10)



Two team doctors gave pain killers to players to allow them to play, four team doctors did not have authority to make decisions regarding return of players. Three team doctors do not assess players when returning to sport.

Summary of treatment techniques

All ten team doctors indicated that they use ice, compression, massage, functional activity exercise, wound care and refer players. Ten doctors indicated that they prescribe medication and eight get the players' fellow teammates to provide treatment. Two team doctors give pain killers to players to allow them to keep playing, and eight team doctors do not have the authority to make decisions regarding the return of players to active participation.

The results from the team doctors indicated that they treat players in the initial stage. One doctor uses traditional treatment. They also indicated that they refer players for physiotherapy. Eight team doctors indicated that they do not have full authority to make a decision regarding players return to duties but five doctors assess players before they return to duties.



4.4 TEAM COACHES

Football coaches' demographics have been presented in the form of their qualifications and years of working as a team coach.

Table 4.13 below presents the coaching qualifications that coaches possess.

Table 4.13 Coaching qualifications (n=11)

Qualification	Number of coaches
No coaching qualification	3
CAF B license	3
Diploma UEFA B Professional preparatory	2
International license in coaching	1
Class C license	1
Preparatory coaching course	1

The number of years which team coaches worked with the clubs was calculated and has been expressed as a minimum, maximum, mean and standard deviations and presented in the table below.

Table 4.14 Football coaches work experience in years (n=11)

Category	Minimum	Maximum	M±SD
Years	1	7	3.27±1.95

M=mean, SD= standard deviation

The maximum numbers of years in coaching was 7 years.

4.4.1 Coaches responsibilities regarding the management of football injuries

Table 4.15 below shows the frequency of some of the responsibilities of coaches regarding the management of injuries. Coaches were asked to give a response using a Likert scale with the following items; Always, Very Often, Often, Sometimes and Never.

Table 4.15 Coaches responsibilities (n=11)

	Always	Very often	Often	Sometimes	Never
How often do players do warm- up and stretching?	11	0	0	0	0
How often do you ask for cool-down and stretching after matches?	4	2	0	3	2
How often do you encourage players to wear shin pads?	9	1	0	0	1
How often do you discuss with the team doctor about the return of a player to active participation?	7	1	1	1	1
How often do you ask for the recovery progress of a player when he is injured?	7	3	0	0	1
How often do you visit players when injured?	4	2	3	2	0
How often do you ask players to stop playing if they are injured?	8	1	2	0	0
How often do you discuss with the player about their injury?	8	1	0	2	0
Do you discuss an injured player with the team management?	7	2	1	1	0
How often do you call back football players to active participation without consulting a team doctor?	3	1	2	1	4
How often do you ask for skilled players to return to active football if you have crucial matches before injury is healed?	2	1	2	1	5
How often do you give medical support to players when injured?	8	1	1	1	0
How often do you give financial support to players when injured?	5	1	1	3	1

Table 4.15 above indicated that six coaches call for players to return to participation without consulting team doctors and ask for skilled players to return if they have crucial matches. Three coaches indicated that they sometimes give financial support and one indicated that he never does so.

4.5 CONCLUSION

This chapter has presented the data from 149 football players, 10 team doctors and 11 team coaches from five football teams from the south, five teams from the central and one from the northern region who were registered in 2012-2013 football season. A total of 170 participants consented to take part in the study. Most of the football players were in their early twenties and had three years playing experience in the super league. A total of 131 players (87%) had normal body mass index and 17 players (11.4%) were overweight. Players returned to participation after an average of 21 days or more following an injury. Even though their injuries don't seem to be managed carefully, players returned after three weeks. This has been regarded as normal in relation to other studies that have proper treatment of the injuries. However, players are “encouraged” to return to play early. Although they are back to participation in 3 weeks, this may not be because they are actually ready, but rather because they have been pressured into an early return. The majority of players were treated in the initial stages and only 49 (32.9 %) were referred. Players who received medications were 139 (93.3 %) and those who used traditional medicine were 27 (18.1). Those who received financial support were (30.9 %). There was association between getting treatment from teammates and returning to sports with a p value of < 0.03 . This could be because players had a feeling of belonging because the types of treatment used by football players to manage their friends were not determined. There was no association between returning to sport and receiving medical and financial support.

Football teams generally employed orthopaedic clinical officers as their part time team doctors. These team doctors had an average of seven years' experience in the super league and had attended a maximum of two sport medicine courses within seven years. Team doctors manage injuries in the initial stages. They advise players to get medication from other

sources and one team doctor indicated that he encouraged players to take traditional medication. Two team doctors give pain killers to players and allow them to play before they are fully rehabilitated. Doctors also do not have the authority to make decisions regarding players return to full participation and did not give advice on their nutrition.

Out of the 11 coaches who participated in the study, three had no coaching qualifications. Between them they had an average of three years coaching experience. Three coaches call back players without consulting the team doctor and ask for skilled players to return to participation if they have crucial matches.



CHAPTER FIVE

DISCUSSION

5.1 INTRODUCTION

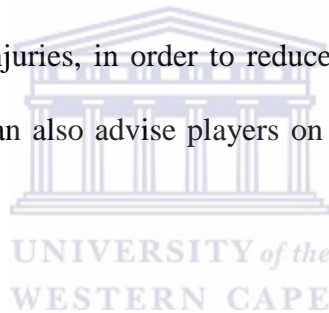
This chapter discusses the findings of this study in relation to the broader literature. It contains a discussion on the football players characteristics, the average number of days players took to return to active participation and the type of treatment they received following an injury. It also contains discussion on the medical and financial support that players receive following an injury and the association between returning to sport and the type of treatment. This is followed by the team doctors' characteristics, types of treatment and responsibilities in the management of football players' injuries. The chapter ends with the coaches' characteristics and their responsibilities regarding sports injuries.

5.2 FOOTBALL PLAYERS

The results in this study showed that the majority of players who were registered in the 2012-2013 super league season were in their early twenties. They had played for an average of 3.7 years. Out of 149 players 17 players were overweight. Players in the early twenties are influenced by many factors to participate in sports. Some of the factors are an increased desire to play in competitive matches (Bell, Mangione, Hemenway, Amoroso & Jones, 2000), and to be identified and be chosen to play in the professional football leagues (le Gall, Carling, Williams & Reilly, 2010). In Ghana amateur players work hard to be identified and participate in professional football because they want to receive an income and be independent in their daily living. They also want to show that they are capable of achieving something in their life to the point that some drop out of school to concentrate on football (Esson, 2013). In Nigeria, boys participate in sports activities from the age of 18 to 20 and

progress to the early twenties with an idea of becoming professional sportsmen (Yusuf, Mijinyawa, Musa, Gezawa & Uloko, 2013).

Previous studies have shown that football players who are overweight have an increased risk of sustaining ankle injuries (Tyler, McHugh, Mirabella, Mullaney & Nicholas, 2006). This is one of the common injuries players sustain in football playing (Waldén, Hägglund & Ekstrand, 2013). Overuse and groin injuries are also common in overweight players (Faude, Rößler & Junge, 2013). These injuries may lead to the players' frustration, anger and depression which may result to decreased motivation to return to participation (Roderick et al., 2000). This study showed that 17 players had overweight and team doctors do not advise players on nutrition. A physiotherapist may play a role in giving advice to players on the effects of obesity and football injuries, in order to reduce the occurrence of injuries which may result from obesity. They can also advise players on the different ways of maintaining their level of physical fitness.



5.2.1 Number of days taken to return to active participation

The results in this study showed that out of 149 players, 26 players (17%) returned to participation after an injury in less than one week and 64 returned after 21 days or more. It may be possible that those who returned in less than 7 days might have sustained minor injuries. However, the management of these injuries was not done by a sports medicine therapist who is trained to manage these injuries. The management of these injuries was not known although players returned to participation in less than 7 days. It is possible that the players who returned in less than 7 days returned to participation because coaches call them to play as indicated in the results above. It has been observed that sports medicine therapists have knowledge of the phases of the management of injuries and may certify that a player has recovered before he returns to participation. In addition, this study did not classify the frequency and severity of the injury which players sustained. Therefore, it is difficult to conclude whether the players returned earlier before complete recovery or if they were properly managed before they returned to participation. In the English Premier League, players usually return to participation after 21 days (Nelson, et al., 2007). In other studies, it has been shown that players return to active participation after 24 days (Hawkins, et al., 2001). Returning to sports may depend on the time treatment was started after injury, as well as the type and severity of the injury (Mithoefer, Della Villa, Silvers & Mandelbaum, 2009). Players who sustain common injuries such as ankle sprains may return to sports after an average of 19 days (Miller, Downie, Johnson, Schmidt, Nordwall, Kijek & Carpenter, 2012). This may be possible when adequate facilities and personnel are available to manage these injuries. In this study, players returned to participation after 21 or more days. Despite the finding that injuries were managed by unqualified personnel, players returned to participation

after 4 weeks similar to other findings in other studies where injuries are managed by qualified personnel.

5.2.2 Types of treatment players received when an injury was sustained

The outcome of the study has shown that out of 149 players who participated in the study, 107 (71.8%) received ice treatment. Ice treatment is necessary to prevent further damage to the already injured soft tissue in the early stages of soft tissue injury. This helps to arrest swelling by constricting blood vessels in the damaged area. The management of injuries using ice treatment has been shown to enhance wound healing. In addition, the results showed that 69 players (46.3%) were treated with compression and 80 (53.6%) with elevation. Compression helps to arrest bleeding or hold the injured structures in place so that healing can take place. An injury which has not been stabilized may take longer to heal. This may also affect the normal healing of the wound. However, the type of treatment they received is commonly accepted to be appropriate although the injuries were not managed by a physiotherapist. Nevertheless, this does imply that a physiotherapist is not important in the management of football injuries. He still has a central role to play in the management of football injuries. This is evident in the way the players were managed. For instance, the findings that 42 (28%) players did not receive ice treatment and 80 (53.7%) were not treated with compression show that the current management of football injuries is lacking. These treatment techniques are important in the early stages of an injury. Using ice and compression is very important in the management of acute injuries so that players receive proper treatment and return to participation fully recovered. If these treatment techniques were not used but players returned to participation it is not known if the players returned fully recovered.

The results also indicated that 64 players (43.0%) had open wounds but were not cared for by the team doctor. However, the study did not establish the type of wounds players sustained. Team doctors are responsible for the management of wound and a physiotherapist has to take part in ensuring proper healing of the injuries in all the phases of healing. Inadequate care in the management of the wounds may risk players as they can develop complications and deformities if a physiotherapist is not involved in rehabilitating the players. This may also prolong the healing time of the wounds (Guo & Dipietro, 2010), increase cost for the management of the injuries and lead to club and football player s income loss (Drawer & Fuller, 2002).

An injured body part may need to be protected from further damage by using external devices such as splints, braces and taping (Ng, 2005). The results in this study showed that the injuries of 97 (65.1%) players were not supported using splints. However, it was not possible to conclude in this study whether all the injuries required splinting.

Seventy eight players (53.3%) were given functional activity exercises which means 71 players (44.7%) were not given. Literature has indicated that doing functional exercises may help to improve disability, fear of avoidance, pain relief and quality of life (Monticone, et al., 2013). In addition, performing functional exercises allows the body to be relaxed and to be more flexible (Sheerin, Hume & Whatman, 2012). Functional exercises also remind the brain about the functions of an injured part which may be reduced when it has not been used for a prolonged period (Hutchison, Comper, Mainwaring & Richards, 2011).

The results also showed that 112 (75.2%) players did not do power neuromuscular exercises. Power neuromuscular exercises improve the motor functions of the lower limbs, especially if a player had a knee injury (Eitzen, et al., 2010). Neuromuscular exercises help to normalise

soft tissue healing and improve coordination. Coordination is important in the performance of skills while playing football when a player returns to participation. Lack of these may result in players sustaining recurrent injury. In addition, players who return to participation with poor coordination are at risk of re-injury. Therefore, it is necessary that these exercises are performed in the early management of football injuries by a physiotherapist who has the knowledge of these techniques.

Ninety eight players (65.8%) did not perform agility exercises and 51 (32.2%) performed these exercises. The importance of agility exercises and sport oriented exercises has been highlighted by Heiderscheit, Sherry, Silder, Chumanov and Thelen (2010) who stated that these exercises help a player in regaining the quick movements which are important when a player is participating in football. Lack of agility exercises may delay regaining the endurance which is necessary when a player is participating in football matches. A physiotherapist may incorporate other exercises that can help a player to perform these exercises and allow players to return to participation. Game drills are performed to achieve certain goals when players are about to return to participation. As such, the management of injuries by a physiotherapist include performing skills that are sports specific. The results in this study showed that 95 players (63.8%) did not perform game drills. Although it may be possible that players may not have lost their skills, doing game drills towards the return to participation may allow a player to achieve early proprioceptive input in the joints that improve fine motor control necessary for skilful playing. In addition, these exercises help to achieve maximum quadriceps control and maximizing optimum function (Medvecky, Zazulack & Hewell, 2007). This helps a player to regain his skills before returning to participation.

The results showed that 108 players (72.5%) did not perform joint mobilization. However, this study did not determine the type of treatment which was required for a specific injury, therefore, it is difficult to determine if joint mobilisation was required. Mobilization of joints especially in the lower limbs increases the proprioceptive input in the joints. Reduced proprioceptive input may increase the chance of sustaining a recurrent injury in the ankle and knee joints (Zazulak, Hewett, Reeves, Goldberg & Cholewicki, 2007). This may occur especially when a player returns to participation. A physiotherapist uses wobble board and joint loading exercises to improve proprioception in the management of the injuries.

The high number of players who did not perform isometric exercises 129 (86.6%) is problematic when looking at return to active participation, since isometric exercises increase the flow of blood to the injured area which enhances healing of the injured tissue and helps muscles to remain strong if not performing usual activities. Players who get injured and do not perform these activities may have difficulties when they return to participation. Therefore, a physiotherapist has a role to play in the rehabilitation programme since he is trained to perform isometric exercises while considering the healing of an injury as such he may play a major role in addressing the missing treatment techniques in the management of the injuries.

The number of players who did not get advice regarding their injury was 71 (47.7%). In the management of an injury, a physiotherapist sets short and long term goals. As such, a player can have up to date information on what he can and cannot perform during the recovery process of the healing of the injury. The management of football injuries includes prevention of further damage by giving advice. Furthermore, referral is one of the important approaches to management of football injuries, especially when the health professionals in the team lack

the relevant experience to appropriately manage the injury. This is one of the multidisciplinary team approaches. The results in this study showed that 100 (67.1%) players were not referred to other services despite the limited experience of the team doctors. This might indicate a problem regarding the rehabilitation strategies provided. The study also showed that 112 (75.2%) players were not issued with crutches. However, it is not easy to draw conclusion from this study since we may not know what type of injuries were sustained and required the use of crutches. Electrical equipment and heat were not used by 132 (88.6%) and 111 (74.5%) respectively although no much evidence has been available to prove the effectiveness of electrical equipment in physiotherapy management of injuries. A combination of different types of treatment techniques by a physiotherapist in the management of injuries has been recommended from the initial stages until full recovery (Watson, 2000). However, only 71 (47.7%) players indicated to have received physiotherapy treatment. Most of the injuries are treated in the initial stages by the team doctors.

Football players indicated that they get treatment from other sources. A physiotherapist uses different techniques in managing injuries as such, it is important that he should be involved in the management of a football team to apply all these techniques.

The results of this study showed that 139 players (93.3%) received medication from sources other than the team doctor. Getting medication from other sources without the knowledge of the team doctor may put a player at risk because they may not have a complete understanding of the way the medication works, or of the side effects. Suzic Lazic, Dikic, Radivojevic, Mazic, Radovanovic, Mitrovic et al. (2011) recommended that a player should consult a team doctor before taking any drug. In addition, there are different views regarding the use of drugs in the acute stages of injuries as some drugs have been shown to delay the healing

process of an injury (Hertel, 1997). A physiotherapist does not prescribe medications but he has knowledge of how medications affect performance and could give appropriate advice to the players.

Twenty seven (18%) players indicated that they had received treatment from traditional healers. The researcher could not find the literature that reported on traditional healers managing football injuries. However, in Rwandan elite female football players, Niyonsenga (2011) found that players sometimes use traditional treatment for their injuries. This shows the severity of lack of proper management of football injuries to an extent that players look for traditional medicines whose effectiveness has not been established in the management of sports injuries.

To conclude, the findings of this study indicate that the majority of players receive ice and wound care treatment in the initial stage of management following an injury, and more than half of the players did not receive treatment in the intermediate and advanced stages. These stages include treatment modalities, such as proprioception, agility, neuromuscular and other types of exercises that are an essential component of an effective rehabilitation programme. There is a concern that the absence of a physiotherapist, who is trained in the assessment and appropriate management of sports injuries, may have a negative effect on players' long term careers, as they are at risk for recurrent injury. Due to lack of specific treatment modalities for the injuries, players receive medication from other sources apart from their team doctor so that they can return to participation. These players treat each other and return to participation. More than half of the players were not referred to a physiotherapist nor were they referred to other facilities. Twenty seven players (18.1%) used traditional treatment. Despite

recommendations by several authors regarding management of injuries there is still lack of proper care as shown in the discussion above.

5.2.3 Medical and financial support

The results in this study showed that out of the 149 players 32 players did not get medical support when they had an injury. Football players are prone to many risks such as injuries during soccer activities. Following an injury they need to get proper treatment so that they can return to participation fully recovered. Since this is a profession just like other professions which have benefits like medical scheme (Hawkins, et al., 2001) players also need to be on medical scheme as recommended by Fuller (1995) who suggested that professional sports players should also benefit from health and safety at work regulations. In addition, Podlog and Eklund (2007) recommended that players should have adequate financial and medical support from the team management so that they can continue enjoying the game of football and reduce the psychological factors that may affect them in the event that they have an injury. This study has shown that the number of players who were not supported financially were less than those who were supported. A player who may not have adequate support when injured may be psychologically affected because of the anxiety which he may have regarding his return to participation and continue to play. Financial support may help players to pay for other types of treatment from other sources such as physiotherapy treatment especially if the football team does not have a physiotherapist.

5.2.4 Association between the categorical variables

There was an association between returning to participation and getting treatment from fellow teammates. The study has shown that there was no association between returning to sports

and the type of treatment received by football players and the medical and financial support which could be observed if players used these resources to manage their injuries.



5.3 TEAM DOCTORS

The results of this study indicated that among the 10 teams, five had their team doctors who were qualified as Orthopaedic Clinical Officers (OCO) with seven years working experience and were employed on a part time basis. Within those seven years they had attended a maximum of two sports medicine courses. Medical practitioners in Malawi have to attend continuous professional education to update their skills in the delivery of health services (Muula, Misiri, Chimalizeni, Mpando, Phiri & Nyaka, 2005). However, medical practitioners need to register so that the number of courses attended should be reflected in the Continuous Personal Development (CPD) handbook and the Medical Council of Malawi checks the attendance in the CPD handbook for every medical practitioner. Attending two seminars in a period of 7 years shows that the team doctors do not update their skills in the management of the injuries. Thus, the management of injuries in this study is questionable since not all the stages of football injury management are followed as recommended by Krajicek (2009) and Vormittag, et al. (2009). In addition, Mamelodi, a FIFA representative, gave a warning to FAM against employing medical assistants and clinical officers as team doctors as this may put the players at risk since the management of football injuries may be questionable (Ndovi, 2012). This study adds further literature to this topic, and builds on previous research. In addition, these team doctors perform physiotherapy techniques. This may put players at risk because it has not been established whether they perform these techniques correctly. Furthermore, many players do not receive the full range of appropriate treatment techniques, and that this predisposes them to an increased risk of recurrent injury. By including a physiotherapist in a proper rehabilitation programme, they could ensure that these techniques are included and therefore reduce the risk to players. The results show that players return to full participation in the same time as those players receiving proper rehabilitation. We may

argue that players are being pressured to return to play early as stated from above that six coaches call for skilled players, two team doctors give pain killers and allow players to play. However, their injuries are not being properly managed, they are at increased risk for re-injury in the future.

Having a full time and experienced sports injury medical personnel such as physiotherapists may help in the management of injuries because they may spend more time treating and managing patients from acute stages of an injury until they return them to their duties. They may have a responsibility of taking care of the injured player and make sure that he is physically fit before he returns to play (Christkou & Lavalley, 2009). A full time team doctor may spend more time with a player and may have opportunities to discover other problems which a player may have regarding his injury such as social and psychological problems.

The results in this study showed that team doctors worked for an average of seven years and within this period they only attended a maximum of two sports medicine workshops. This may have a negative effect on players and may put players at a disadvantage because the injuries sustained may not be managed using the current evidence. The management of injuries requires practitioners to use an evidence based approach (Christkou & Lavalley, 2009). Gianotti, Humeb and Tunstall (2010) recommended that knowledge of the management of football injuries can improve if a team doctor attends sports medicine courses. It is not surprising that football injuries are managed in the initial stages making the management of injuries more questionable since they are not trained in the management of sports injuries and they did not maintain their continuing professional development.

In conclusion, football teams employed OCOs as part time team doctors. These professionals attended few sports medicine courses and are not specialists in the management of football

injuries. It is not surprising that football injuries are managed in the initial stages making the management of injuries more questionable since they are not trained in the management of sports injuries and they did not maintain their continuing professional development.

5.3.1 Management of injuries by team doctors

This study has shown that most of the team doctors manage injuries in the initial stage of the management of the injuries as grouped by (Krajicek, 2009). However, the management of injuries needs a comprehensive approach that includes integration of the best current evidence. An early start of treatment has shown to have a quicker recovery in the injuries sustained (Orchard, et al., 2008). Late initiation of treatment in musculoskeletal conditions has been shown to have a poor clinical outcome (Kramer, Pace, Jarrett, Zurakowski, Kocher & Micheli, 2013). Ten team doctors indicated that they use medications from other sources, eight use fellow teammates to provide treatment and one team doctor uses traditional treatment. In addition, two team doctors indicated that they give pain killers to players to enable them to continue playing if they have crucial matches. There are negative consequences in using treatment types from other sources without the recommendations of a team doctor. Literature has indicated the dangers of using drugs in the management of acute soft tissue injuries. Use of pain killers such as NSAIDs in the acute stage has shown to delay the healing of the wound (Paoloni & Orchard, 2005). Therefore, the use of drugs to reduce pain and allow players to continue playing has negative effects. The benefit of taking medication in acute stages of soft tissue injuries has to be weighed against the negative effects which may occur. Team doctors have to take precautions before administering drugs to players (Paoloni, Milne, Orchard & Hamilton, 2009). Regardless of the negative effects of using drugs, a study in Ghana showed that most of the sports participants use drugs to have a

higher performance in football activities and athletes take pain killers to reduce pain (Gorski, et al., 2011). This shows that this practice is not only unique to Malawi. Although this is the practice, players do not have knowledge of the effects of excessive use of these drugs (Brown, 2012) much as they return to participation after using medication. This practice shows lack of proper care in the management of injuries.

A player has to be properly assessed for physical fitness before returning to participation (Rogalski, Dawson, Heasman & Gabbett, 2013). The results in this study showed that eight team doctors do not have authority to make a decision regarding return of players. In this case players may return to participation before full recovery as they are not certified that they are fit to return to sports. In relation to this, a qualified sports medicine therapist such as a physiotherapist may advise the team management on the negative effects of participating in matches before complete recovery of the injuries since he sets goals according to the healing of the injury. Therefore, there must be collaboration between a player, a coach, a team doctor and a physiotherapist when a player is returning to participation (Ruth, 2012).

Eight team doctors indicated that they do not give nutrition education and six team doctors indicated that they do not give nutrition supplements to players. Since they could not do this they could refer them to other professionals. This finding suggests that players are not properly managed because they are not referred for nutrition and also they are not given nutrition supplements which are important for their well being. Players with good diet have been shown to have quick recovery and return to sports (Hespel, Maughan & Greenhaff, 2006). Those with poor diet are prone to opportunistic infections (Duzova, et al., 2012). The claim that team doctors refer players to other professionals contradicts with what players indicated. As observed above 100 (67.1%) players indicated that they are not referred. This

contradiction raises suspicion that players lack adequate treatment and that they do not receive all the necessary treatment. Comprehensive treatment of an injury requires a multidisciplinary team approach. If a player is managed by a qualified sports medicine therapist such as a physiotherapist would be referred to other professions who can manage the other conditions.

Eight doctors use fellow teammates to treat their friends. However, as already stated, the type of treatment which these players use was not established. This finding suggests that football injuries are not properly managed because players are not qualified to manage injuries. The injured players managed by fellow players may have returned to participation not because they were properly managed because fellow teammates are not skilled to manage football injuries they also need education on football injuries (Junge, et al., 2002). This could be as a result of feeling of isolation (Ruth, 2012).

One team doctor asks players to use traditional treatment. The use of traditional medicine in the management of sports injuries has been observed in Rwandan female football (Niyonsenga, 2011). However, the effectiveness of using traditional medicine in the management of injuries has not been established. Therefore, it cannot be concluded that players return to participation because they received proper treatment.

5.4 TEAM COACHES

The results in this study showed that out of the 11 coaches, three had no coaching qualifications. They had a maximum of seven years experience working as coaches in the same teams. This finding suggests that some coaches were not qualified. Singh and Surujlal (2010) emphasised the importance of employing qualified coaches. A coach who is qualified ensures that players have conducive environment by taking into consideration the football

players' welfare. Coaches who may consider the welfare of football players may think first before calling players to return to participation despite the pressure they have to win matches. Therefore, the importance of trained coaches may have a greater impact in the running of a football team as well as football players' well-being (Gianotti, Humeb & Tunstall, 2010). Cunningham (2002) emphasized that it is important for coaches to have basic knowledge of first aid for them to be able to be responsible throughout the management of football injuries. The importance of this knowledge has been demonstrated in the Australian youth football development where coaches who did not have adequate knowledge had problems in performing their duties. They suggested that their training should include the basic management of injuries (Twomey et al., 2009). In addition, in South African youth development in sports, coaches were responsible for the management of injuries and they recommended that their training should include prevention of injuries and treatment of minor injuries (Coopoo & Fortuin (2012). This study showed that three team coaches had no coaching qualifications and one coach only attended a preparatory coaching course. As such they even call for injured skilled players to participation if they have crucial matches.

To conclude, it is necessary that football coaches should have the basic knowledge in the management of football injuries. In this case, a qualified coach may be able to identify his boundaries before making decisions about an injured player. They may consider consulting a physiotherapist so that the athlete's interest are considered first before the team's interest as previously recommended by Reynolds (2000).

5.4.1 Coaches responsibilities regarding the management of football injuries

The results showed that six coaches ask for skilled players to return to participation if they have crucial matches without consulting a team doctor if a player could return to active participation. This suggests that players return to participation before they are assessed. This shows lack of proper management of football injuries. Literature has indicated that a player has to be assessed before returning to participation (Rogalski, et al., 2013). A health care professional has to certify that a player is mentally and physically fit before returning to participation. A football team which can discuss the return of player with a team doctor may minimize the number of the recurrence of injuries and the tendency of allowing a player to return to participation before full recovery and the football player's welfare may be considered (Reynolds, 2000).

One coach indicated that team management sometimes give medical support. Players who may be given medical support may successfully return to participation fully recovered as they may be able to access almost all the treatment that may be required. Three coaches indicated that team management sometimes give financial support. It is, however, not easy to conclude if the financial support given was used in the treatment of the injuries sustained. One coach indicated that the team does not give financial support. Lack of adequate support may jeopardize the standard of care of an injury.

In conclusion poor decisions such as giving players medication and allowing them to continue playing following an injury, call up players to active participation for crucial matches before finishing the rehabilitation may put the players at increased risk of re-injury. Including medical personnel who is trained in the management of sports injury such as a physiotherapist in the decision-making process may help to reduce those risks.

CHAPTER SIX

SUMMARY, RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

This chapter provides a summary of the key issues established by the study in relation to the management of football injuries in Malawi super league. It also suggests various recommendations ranging from recruitment of qualified personnel in the management of injuries to and the adherence of the treatment guidelines. It highlights limitations of this study and suggests areas that need further research. This chapter ends with the conclusion regarding the management of the football injuries in the Malawi super league.

6.2 SUMMARY

The study looked at the current state of injury related care for Malawi super league football players and the management of football injuries. Literature has shown that a physiotherapist has a major responsibility in the management of sports injuries and should form part of the football team. They set goals in the management of football injuries and use different types of treatment techniques in the management of injuries, throughout all the healing phases from initial injury until return to full participation. However, football injuries in Malawi are managed by personnel who are not specifically trained in sports medicine. This led to the formation of the question “What is the current state of injury related care for Malawi super league football players?” No published material, related to the current state of injury related care for Malawi super league football players was found.

After receiving approval and permission from the relevant authorities data was collected from the football players, coaches and team doctors in the Malawi super league. Only players who

sustained injuries in 2012-2013 football season were purposively selected to complete the questionnaires. The study used a closed ended, self-administered questionnaire to collect data. These questionnaires were developed from the literature using previous instruments which had been used to gather information similar to this study. The validity and reliability of the instruments was tested and improved using a pilot study. Content validity was tested by sending the questionnaires to the professionals who work in the field who commented on the content and suggested changes were made. Reliability of the instruments was checked by asking football players, a team doctor and a coach from the premier league to complete. After two weeks they were asked to complete again. There was no difference on the results when the players completed in the first and second time. The items were tested by SPSS and the Cronbach Alpha score was more than 0.7. It was observed that the instruments were valid and reliable to be used in the collection of data. In addition, the researcher used scale to measure the weight of the players and a tape measure to measure the height of the players. Data was analysed using a statistical package SPSS 20.1. Chi square at 5 % level of significance was used to determine the association between returning to sport and the type of treatment players received and the support which they received following an injury.

The results showed that football players return to participation after 21 days. The majority of them received treatment in the initial stages of the management of injuries. In this stage they received ice, wound care, elevation and functional exercises. Most of them did not get treatment in the intermediate and the advanced stages and were not referred to other professionals. Most of this treatment is done by the team doctors who are not sports medicine therapists. Only a few of them attended maximum number of 2 sports medicine courses, over a 7 year period and they use physiotherapy techniques, in which they are not trained, such as neuromuscular exercises and exercise therapy in the management of football injuries. They

advise players to treat each other and return to participation. However, the type of treatment which is used by these players to treat each other was not identified. In addition, players get medication from sources other than the team doctor and return to participation.

Two doctors give pain killers to players if they have crucial matches and allow them to play before they are ready and eight team doctors do not have full authority in decision making regarding the return of a player to full participation. Six team doctors do not give advice to players regarding diet. The majority of the team doctors did not perform agility neuromuscular exercises, joint mobilization and isometric exercises which are the important exercises in the rehabilitation of a football injury. Six coaches call for skilled players if they have crucial matches without consulting a team doctor. Although most of the players indicated that they get financial support following an injury it is not known if the players use the financial support to assist in the management of the injuries sustained.

Football players in Malawi are mostly managed in the initial stages and players return to participation before they complete the rehabilitation. The players also use medications so that they continue playing. The team doctors do not have full authority regarding the management of football injuries. This shows that football players in the super league are at risk of recurrent injuries and that there is inadequate management of football injuries in the super league of Malawi.

6.3 RECOMMENDATIONS

Football players who sustain injuries during matches should be managed by an appropriately trained health care professional, like a physiotherapist, who should be involved at all levels of the rehabilitation process to ensure that players receive evidence-based care which physiotherapists use in the management of the injuries.

Stakeholders should employ full time physiotherapists in the management plan, in order to reduce the risk of re-injury other than letting players go and look for other types of treatment such as traditional medicine.

The use of medication such as analgesics, in the early stages of management of football injuries in order to relieve pain to allow players to continue playing is evidence of poor decision making that places players at risk. Football players should not take medication without the knowledge of the team doctor for them to continue playing before they are fully recovered.

A player who is returning to participation should be fully assessed by a qualified health care professional who should manage injuries in all stages and have authority to confirm that players are mentally and physically fit before returning to participation other than giving players medications and allowing them to continue playing in the matches.

Football teams should employ qualified coaches who are qualified and should not allow coaches to call for skilled players to return to play if they have crucial matches without consulting a team doctor. Coaches and team doctors should work hand in hand before calling players to participation.

Fédération Internationale de Football Association (FIFA) should enforce the rule that football teams should employ qualified personnel to manage football activities and the Malawi football governing body (FAM) should make sure that football teams have qualified medical practitioners. The governing body should continuously organize seminars, sports medicine courses and workshops for coaches, team doctors, team administrators, staff, managers and team owners to update them on the running of football activities.

The use of traditional medicine in the management of football injuries should be explored further.

The use of fellow teammates in treating each other and the types of treatment used by players needs more investigations.

6.4 LIMITATIONS

The use of cross-sectional method in this study collected the retrospective data at one point in time. It was not able to follow up the management of consecutive injuries. To this end prospective study could be considered and used in the future;

The information collected was from the previous season which could mean that the information reported was prone to recall bias. This could have implications for timelines and types of treatment received. This should be considered in the future studies;

The self-administered questionnaire that was used to collect data collected self-reported information and players may not give the correct information by marking in any box during completion of the questionnaire;

This study did not specify the types and severity of injuries to establish if they could influence players to return to participation. This should be considered for further studies. Finally, the study did not establish the knowledge of football injuries among the football players, which may have provided additional insight into the management of injuries by players themselves.

6.5 CONCLUSION

This study aimed at determining the current state of injury related care for Malawi super league football players. The results indicated that football players are only treated in the initial and intermediate stages and return to active participation after four weeks which is similar to other studies. After getting treatment in the initial stages they are given medication so that they can continue playing. They are also called back to active participation before completing the rehabilitation if they have crucial matches. This shows lack of proper management of football injuries in the super league. These injuries need to be properly managed until the advanced stages, which include isometric, neuromuscular, agility joint mobilization exercises and game drills, which are important in preparation of a football player in returning to sports are practiced by the players. Therefore, football teams should employ a physiotherapist, who is trained in the use of the above mentioned techniques and who has a role to play in decision-making with regards to appropriate rehabilitation plans for players who are injured. The majority of the players do not receive advice regarding their injuries which is one of the prerequisites in the management of an injury as it helps a player to plan for himself and accept the situation he is in.

Players do not receive treatment from electrical modalities. Almost all the football players look for medication from other sources and some of them used traditional medicine for their injuries. This shows that there is lack of proper care of football injuries.

Players get financial support when they are injured which suggests that they are assisted in the event that they are injured. However, the study could not conclude if the support is used for its intended purpose.

The association which was observed that players returned to participation after getting treatment from teammates could be a result of the feeling of connectedness because the type of treatment which these fellow teammates used could not be established.

Team doctors perform activities which are not part of their curricula. They use physiotherapy techniques, in which they are not trained. This may put a risk to football players they are not properly managed.

Most team doctors attended few sports medicine courses which suggest that they do not use evidence based techniques. They give players medication and allow them to continue playing. They do not give the players advice in the event that they are injured and allow football players to treat each other when they are injured. This further threatens the welfare of football players. Team doctors do not have full authority in the management of football injuries consequently, there is a poor follow up of treatment regimes.

Most of the coaches were not qualified coaches. They call players back to participation without consulting the team doctor. They also call players back if they have crucial matches.

Football injuries are managed in the initial stages only. Injured players do not complete the rehabilitation process. As such, football players are at risk of getting recurrent injuries because they return to participation before completing the rehabilitation. They take pain killers so that they should continue playing because they have been called by the coach or they want to have more income and even coaches wants them to play if they have crucial matches. Others use traditional medicine to treat their injuries so that they can return to play. In order to address these problem, football teams in Malawi should employ physiotherapists, who are trained to make this kind of decisions that the current management seems unable to.

REFERENCES

- Argus, C. K., Gill, N., Keogh, J. & Hopkins, W. G. (2010). Effects of a short-term pre-season training programme on the body composition and anaerobic performance of professional rugby union players. *Journal of Sports Sciences*, 28(6), 679-686.
- Arnason, A., Sigurdsson, S. B., Gudmundsson, A., Holme, I., Engebretsen, L. & Bahr, R. (2004). Risk factors for injuries in football. *American Journal of Sports Medicine*, 32(5), 5s-16s.
- Arvinen-Barrow, M. (2009). *Psychological rehabilitation from sport injury: issues in training and development of chartered physiotherapists*. Unpublished Doctoral dissertation: The University of Northampton.
- Bahr, H. (2009). Principles of injury prevention. In P. K. Brukner, *Brukner & Khan Clinical Sports Medicine* (pp. 113-121). Noth Ryde NSW2113: McGraw-Hill Australian Pty Ltd.
- Baker, T. L. & Risley, A. J. (1994). *Doing Social Research*. New York: McGraw-Hill.
- Barber-Westin, S. D. & Noyes, F. R. (2011). Factors used to determine return to unrestricted sports activities after anterior cruciate ligament reconstruction. *Arthroscopy. The Journal of Arthroscopic & Related Surgery*, 27(12), 1697-1705.
- Bauman, J. (2005). Return to play. The mind does matter. *Clinical Journal of Sports Medicine*, 432-435.
- Bell, N. S., Mangione, T. W., Hemenway, A. & Jones, B. H. (2000). High injury rates among female army trainees: a function of gender? *Journal of Preventive Medicine*, 18(3), 141-146.
- Bleakley, C., McDonough, S. & MacAuley, D. (2004). The use of ice in the treatment of acute soft-tissue injury a systematic review of randomized controlled trials. *The American Journal of Sports Medicine*, 32(1), 251-261.
- Bless, C. & Higson-Smith, C. C. (2000). *Foundamentals of Social Research Methods*. Capetown: Juta Publishers.
- Bone, J. B. & Fry, M. D. (2006). The influence of injured athletes perceptions and social support from certified athletic trainers on their believes about rehabilitation. *Journal of Sports Rehabilitation*, 15(2), 156-167.
- Brand, S., Beck, J., Gerber, M., Hatzinger, M. & Holsboer, E. (2009). 'Football is good for your sleep' : Favorable sleep patterns and psychological functioning of adolescent male intense football players compared to controls. *Journal of Health Psychology*, 14(8), 1144-1155.

- Brewer, B. W., Andersen, M. B. & Van Raalte, J. L. (2002). Psychological aspects of sport injury rehabilitation: Toward a biopsychosocial approach. In D. Mostofsky & L. Zaichkowsky, *Medical aspects of sport and exercise* (pp. 41–54). Morgantown: Fitness Information Technology.
- Britoa, J., Figueiredoa, P., Fernandes, L., Seabraa, N., Soares, J. M., Krstrup, P., et al. (2010). Isokinetic strength effects of FIFA's "The 11+" injury prevention training programme. *Isokinetics and Exercise Science*, 18, 211-215.
- Brown, A. A. (2012). Use of Painkillers in a Small Group of Secondary School Sportsmen in Ghana. *Novel Science International Journal of Medical Sciences*, 16(1), 178-182.
- Buford, T. W., Kreider, R. B., Stout, J. R., Greenwood, M., Campbell, B., Spano, M., et al. (2007). International Society of Sports Nutrition position stand: creatine supplementation and exercise. *Journal of the International Society of Sports Nutrition*, 4(6), 6.
- Bwabwah, T. J. & Rodgers, R. (2008). The team physician in football: what skills are important? *International Sports Medicine Journal*, 9(3), 108-115.
- Chandrasekaran, S., Anbanandan, A., Krishnaswamy, S. & Balakrishnan, A. (2012). A study of selective motor fitness components empowers on playing ability among low and high performers of state level football players. *International Multidisciplinary Research Journal*, 2(3), 54-60.
- Chia, M. & Mukherjee, S. (2012). Hydration status of heat-acclimatized youth team players during competition. *Science & Sports*, 27(5), e51-e54.
- Christkou, A. & Lavallee, D. (2009). Rehabilitation from sports injuries: from theory to practice. *Perspect Public Health*, 129(3), 120-126.
- Coopoo, Y. & Fortuin, C. S. (2012). Scientific support for youth football development programmes. *African Journal for Physical, Health Education, Recreation and Dance*, 2, 149-160.
- Cunningham, A. (2002). An audit of first aid qualifications and knowledge among team officials in two English youth football leagues: a preliminary study. *British Journal of Sports Medicine*, 36(4), 295-300.
- Drawer, S. & Fuller, C. W. (2002). An economic framework for assessing the impact of injuries in professional football. *Safety Science*, 40(6), 537–556.
- Dreyer, L. (2011). *Hosting an Olympic Games: Implications for the public sector*. Halfway House: Development Planning Division.

- Dupont, G., Nedelec, M., McCal, A., McCormack, D., Berthoin, S. & Wisløff, U. (2010). Effect of 2 Soccer matches in a week on physical performance and injury rate. *American Journal of Sports Medicine*, 38(9), 1752-1758.
- Duzova, H., Erdogan, H., Fadillioglu, E. & Emre, M. H. (2012). Effects of maximal anaerobic exercise on neutrophil oxidants/antioxidants in among the sportsmen trained at various levels. *Medicine Science International Medical Journal*, 1(2), 77-89.
- Dvorak, J. & Junge, A. (2000). Football Injuries and Physical Symptoms A Review of the Literature. *The American Journal of Sports Medicine*, 28(5), 3-9.
- Eitzen, I., Moksnes, H., Snyder-Mackler, L. & Risberg, M. A. (2010). A progressive 5-week exercise therapy program leads to significant improvement in knee function early after anterior cruciate ligament injury. *The Journal of Orthopaedic and Sports Physical Therapy*, 40(11), 705-721.
- Ekstrand, J., Hägglund, M. & Waldén, M. (2011). Epidemiology of muscle injuries in professional football (Soccer). *The American Journal of Sports Medicine*, 39(6), 1226-1232.
- Ekstrand, J., Hägglund, M. & Waldén, M. (2010). Injury incidence and injury patterns in professional football: the UEFA injury study. *British Journal of Sports Medicine*, 45, 553-558.
- Esson, J. (2013). A body and a dream at a vital juncture: Ghanaian youth, uncertainty and the allure of football. *Geoforum*, 47, 84-92.
- FAM. (2011). *Historical back ground*. Retrieved April 30, 2011, from <http://www.fam.mw/mission.html>
- Faude, O., Rößler, R. & Junge, A. (2013). Football injuries in children and adolescent players: Are there clues for prevention? *Sports Medicine*, 43(9), 819-837.
- FIFA. (2007). *Big count:270 million people active in football*. Zurich: FIFA Communications Division, Information Services.
- FIFA. (2012). *FIFA/Coca Cola ranking*. Retrieved June 14, 2012, from <http://www.fifa.com/worldranking/rankingtable/index.html>
- Finch, C., Donohue, S. & Garnham, A. (2002). Safety attitudes and beliefs of junior Australian football players. *Injury Prevention*, 8(2), 151-154.
- Fong, D. T., Hong, Y., Chan, L., Yung, P. S. & Chan, K. (2007). A systemic review on ankle injury and ankle sprain in sports. *Injury Clinic*, 37(1), 73-94.

- Francis, S. R., Andersen, M. B. & Maley, P. (2000). Physiotherapists' and male professional athletes' views on psychological skills for rehabilitation. *Journal of Science and Medicine in Sport*, 3(1), 17-29.
- Fuller, C. W. (1995). Implications of health and safety legislation for the professional sportsperson. *British Journal of Sport Medicine*, 29(1), 5-9.
- Fuller, C. W. & Walker, J. (2006). Quantifying the functional rehabilitation of injured football Players. *British Journal of Sports Medicine*, 40, 151–157.
- Fuller, C. W., Dick, R. W., Corlette, J. & Schmalz, R. (2007). Comparison of the incidence, nature and cause of injuries sustained on grass and new generation artificial turf by male and female football players. Part 1: match injuries. *British Journal of Sports Medicine*, 4(1), i20-i26.
- Fuller, C. W., Ekstrand, J., Junge, A., Andersen, T. E., Bahr, R., Dvorak, J., et al. (2006). Consensus statement on injury definitions and data collection procedures in studies of football (soccer) injuries. *British Journal of Sports Medicine*, 16(2), 93-92.
- Gabbe, B. & Finch, C. (2000). Injury countermeasures in Australian football. *Journal of Science and Medicine in Sport*, 3(2), 31-40.
- Gabbett, T. J. (2001). Severity and cost of injuries in amateur rugby league: A case study. *Journal of Sports Sciences*, 19(5), 341-347.
- Gianotti, S., Hume, A. & Tunstall, H. (2010). Efficacy of injury prevention related coach education within netball and soccer. *Journal of Science and Medicine in Sport*, 13(1), 32-35.
- Gobbi, A. & Fransico, R. (2006). Factors affecting return to sports after anterior cruciate ligament reconstruction with patellar tendon and hamstring graft: a prospective clinical investigation. *Knee Surgical Sports Traumatology Arthroscopy*, 14(10), 1021-1028.
- Goldstein, I. (2003). Self-Administered Questionnaires in the International. *Journal of Impotence Research*, 15, 151.
- Gorski, T., Cadore, E. L., Pinto, S. S., da Silva, E. M., Correa, C. S., Beltrami, F. G., et al. (2011). Use of NSAIDs in triathletes: prevalence, level of awareness and reasons for use. *British Journal of Sports Medicine*, 45(2), 85-90.
- Gratton, C. & Jones, I. (2010). *Research methods for sports studies*. New York: Taylor & Francis.
- Guo, S. & Dipietro, L. A. (2010). Factors affecting wound healing. *Journal of Dental Research*, 89(3), 219-229.

- Häggglund, M., Waldén, M. & Ekstrand, J. (2005). Injury incidence and distribution in elite football—a prospective study of the Danish and the Swedish top divisions. *Scandinavian Journal of Medicine & Science in Sports*, 15(1), 21-28.
- Häggglund, M., Waldén, M. & Ekstrand, J. (2013). Risk factors for lower extremity muscle injury in professional soccer the UEFA injury study. *The American Journal of Sports Medicine*, 41(2), 327-335.
- Häggglund, M., Waldén, M., Magnusson, H., Kristenson, K., Bengtsson, H. & Ekstrand, J. (2013). Injuries affect team performance negatively in professional football: an 11-year follow-up of the UEFA Champions League injury study. *British Journal of Sports*, 1-5.
- Harkness, J. & Schoua-Glusberg, A. (1998). A Questionnaire in Translation. *ZUMA-Nachrichten Spezial*, 3(1), 87-126.
- Hartfiel, N., Burton, C., Rycroft-Malone, J., Clarke, G., Havenhand, J., Khalsa, S. B., et al. (2012). Yoga for reducing perceived stress and back pain at work. *Occupational Medicine*, 62(8), 606-612.
- Hassabi, M., Mortazavi, S. M., Giti, M. R., Hassabi, M., Mansournia, M. A. & Shapouran, S. (2010). Injury profile of a professional soccer team in the premier league of Iran. *Asian Journal of Sports Medicine*, 1(4), 201-208.
- Hawkins, R. D. & Fuller, C. W. (1999). A prospective epidemiological study of injuries in four English professional football clubs. *British Journal of Sports Medicine*, 33(3), 196-203.
- Hawkins, R. D. & Fuller, C.W., C. W. (1998). A preliminary assessment of professional footballers' awareness of injury prevention strategies. *British Journal of Sports Medicine*, 32(4), 140-143.
- Hawkins, R. D., Hulse, M. A., Wilkinson, C., Hodson, A. & Gibson, M. (2001). The association football medical research programme: an audit of injuries in professional football. *British Journal of Sports Medicine*, 35(1), 43–47.
- Hedgpeth, E. G. & Sowa, C. J. (1998). Incorporating stress management into athletic injury rehabilitation. *Journal of Athletic Training*, 33(4), 372.
- Heiderscheit, B. C., Sherry, M. A., Silder, A., Chumanov, E. S. & Thelen, D. G. (2010). Hamstring strain injuries: Recommendations for diagnosis, rehabilitation and injury prevention. *The Journal of Orthopaedic and Sports Physical Therapy*, 40(2), 67-81.
- Helgerud, J., Engen, L. C., Wisloff, U. & Hoff, J. (2001). Aerobic endurance training improves soccer performance. *Medicine and Science in Sports and Exercise*, 33(11), 1925-1931.

- Hertel, J. (1997). The role of nonsteroidal anti-inflammatory drugs in the treatment of acute soft tissue injuries. *Journal of Athletic Training*, 32(4), 350-358.
- Hespel, P., Maughan, R. J. & Greenhaff, P. L. (2006). Dietary supplements for football. *Journal of Sports Sciences*, 24(7), 749-761.
- Hutchison, M., Comper, P., Mainwaring, L. & Richards, D. (2011). The influence of musculoskeletal injury on cognition implications for concussion research. *The American Journal of Sports Medicine*, 39(11), 2331-2337.
- Iaia, F. M., Hellsten, Y., Nielsen, J. J., Fernstrom, M., Sahlin K, K. & Bangsb, J. (2009). Four weeks of speed endurance training reduces energy expenditure during exercise and maintains muscle oxidative capacity despite a reduction in training volume. *Journal of Applied Physiology*, 106, 73-80.
- Iles, R. & Davidson, M. (2006). Evidence based practice: a survey of physiotherapists' current practice. *Physiotherapy Research International*, 11(2), 93-103.
- Jacobson, I. & Tegner, Y. (2007). Injuries among Swedish female elite football players: a prospective population study. *Scandinavian Journal of Medicine Science Sports*, 17, 84-91.
- Jacobsson, J., Timpka, T., Kowalski, J., Nilsson, S., Ekberg, J. & Renström, P. (2012). Prevalence of musculoskeletal injuries in Swedish elite track and field athletes. *The American journal of sports medicine*, 1(40), 163-169.
- Janssen, K. W. & Kamper, S. J. (2013). Ankle taping and bracing for proprioception. *British Journal of Sports Medicine*, 47(8), 527-528.
- Järvinen, T. A., Järvinen, T. L., Kääriäinen, M., Äärimaa, V., Vaittinen, S., Kalimo, H., et al. (2007). Muscle injuries: optimising recovery. *Best Practice & Research Clinical Rheumatology*, 21(2), 317-331.
- Jelsma, J., Dawson, H., Smith, G., Satumba, C. & Madzivire, D. (1997). Provision of physiotherapy services at the sixth All Africa Games. *British Journal of Sports Medicine*, 31(3), 246-248.
- Johnson, U., Ekengren, J. & Andersen, M. B. (2005). Injury prevention in Sweden: Helping soccer players at risk. *Journal of Sport & Exercise Psychology*, 27, 32-38.
- Jovanovic, M., Sporis, G., Omrcen, D. & Fiorentini, J. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. *The Journal of Strength & Conditioning Research*, 25(5), 1285-1292.

- Junge, A., Rösch, D., Peterson, L. & Graf-Baumann, T. (2002). Prevention of soccer injuries: A prospective intervention study in youth amateur players. *The American Journal of Sports Medicine*, 30(5), 652-659.
- Kofotolis, N. D., Kellis, E. & Vlachopoulos, S. P. (2007). Ankle sprain injuries and risk factors in amateur soccer players during a 2-year period. *American Journal of Sports Medicine*, 35(3), 458-466.
- Krajicek, R. (2009). Principles of rehabilitation. In P. Brukner & K. Khan, *Brukner and Khan Clinical Sports Medicine* (pp. 243-244). North Ryde NSW 2113: McGraw-Hill Australia Pty Ltd.
- Kramer, D. E., Pace, J. L., Jarrett, D. Y., Zurakowski, D., Kocher, M. S. & Micheli, L. J. (2013). Diagnosis and Management of Symptomatic Muscle Herniation of the Extremities A Retrospective Review. *The American Journal of Sports Medicine*, 41(9), 2174-2182.
- Krist, M. R., van Beijsterveldt, A., Backx, F. J. & Ardine de Wit, G. A. (2013). Preventive exercises reduced injury-related costs among adult male amateur soccer players: a cluster-randomised trial. *Journal of Physiotherapy*, 59(1), 15-23.
- Krix, M., Weber, M. A., Kauczor, H. U., Delorme, S. & Krakowski-Roosen, H. (2010). Changes in the micro-circulation of skeletal muscle due to varied isometric exercise assessed by contrast-enhanced ultrasound. *European Journal of Radiology*, 76(1), 110-111.
- Kvist, J. (2004). Rehabilitation following anterior cruciate ligament injury. *Sports Medicine*, 34(4), 269-280.
- Langan, E., Blake, C. & Lonsdale, C. (2013). Asystematic review of the effectiveness of intrepersonal coach education intervention on athlete outcome. *Psychology of Sports and Exercise*, 14(1), 37-49.
- le Gall, F., Carling, C., Williams, M. & Reilly, T. (2010). Anthropometric and fitness characteristics of international, professional and amateur male graduate soccer players from an elite youth academy. *Journal of Science and Medicine in Sport*, 13(1), 90-95.
- Lee, D. Y., Karim, S. A. & Chong Chang, H. (2008). Return to sports after anterior cruciate ligament reconstruction – A review of patients with minimum 5-year follow-up. *Annals Academy of Medicine*, 37(4), 273-278.
- McCluskey, A. & Lovarini, M. (2005). Providing education on evidence-based practice improved knowledge but did not change behaviour: a before and after study. *BMC Medical Education*, 5(1), 40.

- Malcolm, D. & Scott, A. (2011). Professional relations in sport healthcare: Workplace responses to organisational change. *Social Science & Medicine*, 72, 513-520.
- Medvecky, M. J., Zazulak, B. T. & Hewett, T. E. (2007). A multi-disiplinary approach to the evaluation, reconstruction and rehabilitation of the multi-ligament injured athlete. *Sports Medicine*, 37(2), 162-187.
- Melvin, J. L. (1980). Interdisciplinary and multidisciplinary activities and the ACRM. *Archives of Physical Medicine and Rehabilitation*, 61(8), 379.
- Messick, S. (1980). Test validity and the ethics of assessment. *American Psychologist*, 35(11), 1012-1027.
- Meyers, W. C., McKechnie, A., Philippon, M. J., Horner, M. A., Zoga, A. C. & Devon, O. N. (2008). Experience With “Sports Hernia” Spanning Two Decades. *Annals of Surgery*, 248(4), 656-665.
- Miller, B. S., Downie, B. K., Johnson, P. D., Schmidt, P. W., Nordwall, S. J. & Kijek, T. G. (2012). Time to Return to Play After High Ankle Sprains in Collegiate Football Players A Prediction Model. *Sports Health: A Multidisciplinary Approach*, 4(6), 504-509.
- Mithoefer, K. H., Hambrey, K., Logerstedt, D., Ricci, M., Silvers, H. & Villa, S. D. (2012). Current concept for rehabilitation and return to sport after knee articular cartilage repair in the athlete. *Journal of Orthopaedic and Sports Physical Therapy*, 42(3), 254-273.
- Mithoefer, K., Della Villa, S., Silvers, H. & Mandelbaum, B. R. (2009). Return to sports participation after articular cartilage repair in the knee scientific evidence. *The American Journal of Sports Medicine*, 37(1), 167S-176S.
- Mkandawire, N. & Killowe, C. (2005). Knowledge, attitudes, skills regarding sports medicine among football players and team doctors in the football Super League in Malawi. *Malawi Medical Journal*, 17(1), 9-11.
- Mkandawire, N., Ngulube, C. & Lavy, C. (2008). Orthopaedic clinical officer program in Malawi: a model for providing orthopaedic care. *Clinical Orthopaedics and Related Research*, 466(10), 2385-2391.
- Monticone, M., Ferrante, S., Rocca, B., Salvaderi, S., Fiorentini, R., Restelli, M., et al. (2013). Home-based functional exercises aimed at managing kinesiophobia contribute to improving disability and quality of life of patients undergoing total knee arthroplasty: A randomized controlled trial. *Archives of Physical Medicine and Rehabilitation*, 9(4), 231-239.
- Mouton, E. B. (2007). *The Practice of Social Research*. Capetown: Oxford University Press Southern Africa.

- Murphy, D. F., Connolly, D. A. & Beynnon, B. D. (2003). Risk factors for lower extremity injury: A review of the literature. *British Journal of Sports Medicine*, 37(1), 13-29.
- Murphy, P. & Waddington, I. (2007). Are elite athletes exploited?. *Sport in Society*, 10(2), 239-255.
- Muula, A. S. (2009). Case for clinical officers and Medical Assistants in Malawi. *Croatian Medical Journal*, 50(1), 77.
- Muula, A. S., Misiri, H., Chimalizeni, Y., Mpando, D., Phiri, C. & Nyaka, A. (2005). Access to continued professional education among health workers in Blantyre, Malawi. *African health sciences*, 4(3), 182-184.
- Myer, G. D., Paterno, M. V., Ford, K. R., Quatman, C. E. & Hewett, T. E. (2006). Rehabilitation after anterior cruciate ligament reconstruction: criteria-based progression through the return-to-sport phase. *Journal of Orthopaedic & Sports Physical Therapy*, 36(6), 385-402.
- Mynard, L., Howie, L. & Collister, L. (2009). Belonging to a community-based football team: An ethnographic study. *Australian Occupational Therapy Journal*, 56, 266–274.
- Naidoo, M. A. (2007). *The epidemiology of soccer injuries sustained in a season of a professional soccer team in South Africa*. Unpublished Masters Thesis. University of Western Cape, Bellville, South Africa.
- National Statistical Office. (2010). *Malawi Demographic and Health Survey*. Zomba: MEASURE DHS.
- Ndovi, J. (2012, December 10). Fifa for qualified team doctors. *The Daily Times*, p.10.
- Nelson, A. J., Collins, C. L., Yard, E. E., Field, S. & Comstock, R. D. (2007). Ankle injuries among united states high school sports athetes,2005-2006. *Journal of Athletic Training*, 42(3), 381-387.
- Ng, G. (2005). Effects of fore arm brace tension on neuromuscular perfomance in subjects with lateral humeral epicondylosis: a review. *Internatonal Sports Medicine Journal*, 6(2), 124-129.
- Niyonsenga, J. D. (2011). *Factors associateed with soccer injuries amang first division female soccer players in Rwanda*. University of the Western Cape, Department of Physiotherapy. Bellville: UWC.
- Norrefalk, J. R. (2003). How do we define multidisciplinary rehabilitation. *Journal of Rehabilitation Medicine*, 35(2), 100-101.
- Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

- Orchard, J. W., Best, T. M., Mueller-Wohlfahrt, H., Hunter, G., Hamilton, B. H., Webborn, N., et al. (2008). The early management of muscle strains in the elite athlete: best practice in a world with a limited evidence basis. *British Journal of Sports Medicine*, 42(3), 158-159.
- Owoeye, O. B. (2010). Pattern and management of sports injuries presented by Lagos state athletes at the 16th National Sports Festival (KADA games 2009). *Owoeye Sports Medicine Arthroscopy*, 2(3), 1-6.
- Paoloni, J. A. & Orchard, J. W. (2005). The use of therapeutic medications for soft-tissue injuries in sports medicine. *Medical Journal of Australia*, 183(7), 384-388.
- Paoloni, J. A., Milne, C., Orchard, J. & Hamilton, B. (2009). Non-steroidal anti-inflammatory drugs in sports medicine: guidelines for practical but sensible use. *British Journal of Sports Medicine*, 43(11), 863-865.
- Petersen, W., Braun, C., Bock, W., Schmidt, K., Weimann, A. & Drescher, W. (2005). A controlled prospective case control study of a prevention training program in female team handball players: the German experience. *Archive Orthopaedic Trauma Surgery*, 125(9), 614-621.
- Podlog, L. & Dionigi, R. (2010). Coach strategies for addressing psychosocial challenges during the return to sport from injury. *Journal of Sports Sciences*, 28(11), 1197-1208.
- Podlog, L. & Eklund, R. C. (2005). Return to sport after serious injury: A retrospective examination of motivation and psychological outcomes. *Journal of Sport Rehabilitation*, 14(1), 20-34.
- Podlog, L. & Eklund, R. C. (2007). A longitudinal investigation of competitive athletes return to sport following serious injury. *Journal of Applied Sport Psychology*, 18(1), 44-68.
- Podlog, L. & Eklund, R. C. (2007). Professional coaches perspectives on the return to sport following serious injury. *Journal of Applied Sport Psychology*, 19(2), 207-225.
- Podlog, L. & Eklund, R. C. (2007). The psychosocial aspects of a return to sport following serious injury: A review of the literature from a self-determination perspective. *Psychology of Sport and Exercise*, 8(4), 535-566.
- Quinn, A. (2012). Psychology. In P. Brukner & K. Khan, *Clinical Sports Medicine* (4 ed., pp. 247-249). North Ryde NSW 2113: McGraw-Hill Australian Pty Ltd.
- Reid, K. J., Baron, K. G., Lu, B., Naylor, E., Wolfe, L & Zee, P. C. (2010). Aerobic exercise improves self-reported sleep and quality of life in older adults with insomnia. *Sleep Medicine*, 11(9), 934-940.

- Reuter, J. M. & Short, S. E. (2005). The relationship among three components of perceived risk of injury previous injury and gender in contact and non-contact/limited sports athletes. *Journal of Sports Psychology*, 7(1), 20-42.
- Reynolds, M. J. (2000). The theoretical exploration of the relationship between the expectations of sports coaches and the physical and the emotional health of athletes. *Journal of Science and Athletes in Sports*, 3(2), 51-57.
- Rhea, M. R., Lavinge, D. M., Robbins, P., Esteve-Lanao, J. & Hultgren, T. L. (2009). Metabolic conditioning among soccer players. *Journal of Strength & Conditioning Research*, 23(3), 800-806.
- Roderick, M., Waddington, I. & Parker, G. (2000). Playing hurt managing injuries in English professional football. *International Review for the Sociology of Sport*, 32(5), 165-180.
- Rogalski, B. D., Rogalski, B., Dawson, B., Heasman, J. & Gabbett, T. J. (2013). Training and game loads and injury risk in elite Australian footballers. *Journal of Science and Medicine in Sport*, 16(6), 499-503.
- Ruth, B. (2012). Sports and exercise Medicine: the team approach. In P. Brukner & K. Khan, *Brukner and Khan Clinical Sports medicine* (4 ed., pp. 6-10). Waterloo Road North Ryde NSW 2113: Mc Graw-Hill Australia Pty Ltd.
- Sanders, T., Foster, N. E., Bishop, A. & Ong, B. N. (2013). Biopsychosocial care and the physiotherapy encounter: physiotherapists' accounts of back pain consultations. *BMC Musculoskeletal Disorders*, 14(1), 65.
- Schwenk, M., Zieschang, T., Oster, P. & Hauer, K. (2010). Dual-task performances can be improved in patients with dementia: A randomized controlled trial. *Neurology*, 74(24), 1961-1968.
- Senger, J. (2012). Recovery underway-Ice bath filling,beer in hand. In P. Brukner & K. Khan, *Brukner and Khan Clinical Sports Medicine* (4th ed., pp. 138-139). Noth Ryde NSW 2113: MaGraw-Hill Australia Pty Ltd.
- Sheerin, K. R., Hume, P. A. & Whatman, C. (2012). Effects of a lower limb functional exercise programme aimed at minimising knee valgus angle on running kinematics in youth athletes. *Physical Therapy in Sport*, 13(4), 250-254.
- Sherrington, C., Moseley, A. M., Herbert, R. D. & Maher, C. G. (2002). Evidence for physiotherapy practice: a survey of the physiotherapy evidence database (PEDro). *Australian Journal of Physiotherapy*, 41(3), 43.

- Siahkoughian, M., Khodadadi, D. & Shahmoradi, K. (2013). Effects of high-intensity interval training on aerobic and anaerobic indices: Comparison of physically active and inactive men. *Science & Sports*, 28(5), e119-e125.
- Singer, J. N. (2008). Benefits and detriments of African American male athletes' participation in a big-time college football program. *International Review for the Sociology of Sport*, 43(4), 399-408.
- Singh, A. S., Vik, F. N., Chinapaw, M. J., Uijtdewilligen, L., Verloigne, M., Fernández-Alvira, J. M., et al. (2011). Test-retest reliability and construct validity of the ENERGY-child questionnaire on energy balance-related behaviours and their potential determinants: the ENERGY-project. *International Journal of Behavioral Nutrition and Physical Activity*, 8(1), 136.
- Singh, C. & Surujlal, J. (2010). Risk management practices of high school sport coaches and administrators. *South African Journal for Research in Sport*, 32(1), 107-119.
- Solomon, D. S., Ott, S. D. & Lovell, M. R. (2011). Long-term neurocognitive dysfunction in sports : What is the evidence? *Clinical Sports Medicine*, 30(1), 165-177.
- Steffen, K., Myklebust, G., Olsen, O. E., Holme, I. & Bahr, R. (2008). Preventing injuries in female youth football – a cluster-randomized controlled trial. *Scandinavian Journal of Medicine Science in Sports*, 1-7.
- Steffen, K., Pensgaard, A. M. & Bahr, R. (2009). Self-reported psychological characteristics as risk factors for injuries in female youth football. *Scandinavian Journal of Medicine & Science in Sports*, 19(3), 442-451.
- Suzic Lazic, J., Dikic, N., Radivojevic, N., Mitrovic, N., Lazic, M., Zivanic, S., et al. (2011). Dietary supplements and medications in elite sport – polypharmacy or real need? *Scandinavian Journal of Medicine Science in Sports*, 21(2), 260-267.
- Tegnander, A., Olsen, O. E., Mohaltdt, T. T., Engebretsen, L. & Bahr, R. (2008). Injuries in Norwegian female elite soccer: a prospective one season cohort study. *Knee Surgery, Sports Traumatology, Arthroscopy*, 16(2), 194-198.
- Torgler, B. & Schmidt, S. L. (2007). What shapes player performance in soccer? Empirical findings from a panel analysis. *Applied Economics*, 39(18), 2355-2369.
- Twizere, J. (2004). *Epidemiology of soccer injuries in Rwanda A need for physiotherapy intervention*. Doctoral dissertation, University of the Western Cape, Bellville, South Africa.

- Twomey, D., Finch, C., Roediger, E. & Lloyd, D. G. (2009). Preventing lower limb injuries: Is the latest evidence being translated into the football field? *Journal of Science and Medicine in Sport*, 12(4), 452–456.
- Tyler, T. F., McHugh, M. P., Mirabella, M. R., Mullaney, M. J. & Nicholas, S. J. (2006). Risk Factors for Noncontact Ankle Sprains in High School Football Players The Role of Previous Ankle Sprains and Body Mass Index. *The American Journal of Sports Medicine*, 34(3), 471-475.
- Velnar, T., Bailey, T. & Smrkolj, V. (2009). The wound healing process: an overview of the cellular and molecular mechanisms. *Journal of International Medical Research*, 37(5), 1528-1542.
- Venter, R. E., Porgieter, J. R & Barnard, J. G. (2010). The use of recovery modalities by elite South African team athletes. *South African Journal for Research in Sport*, 32(1), 133-145.
- Verrall, G. M., Slavotinek, J. P., Fon, G. T. & Barnes, P. G. (2007). Outcome of conservative management of athletic chronic groin injury diagnosed as pubic bone stress injury. *The American Journal of Sports Medicine*, 35(3), 467-474.
- Vormittag, K., Calonje, R. & Briner, W. W. (2009). Foot and ankle injuries in the barefoot sports. *Sports*, 8(5), 262-266.
- Waddington, I., Roderick, M. & Naik, R. (2001). Methods of appointment and qualifications of club doctors and physiotherapists in English professional football: some problems and issues. *British Journal of Sports Medicine*, 53, 48–53.
- Häggglund, M., Waldén, M. & Ekstrand, J. (2013). Risk Factors for Lower Extremity Muscle Injury in Professional Soccer The UEFA Injury Study. *The American Journal of Sports Medicine*, 41(2), 327-335.
- Waldén, M., Häggglund, M., Magnusson, H. & Ekstrand, J. (2011). Anterior cruciate ligament injury in elite football: a prospective three-cohort study. *Knee Surgery Sports Traumatology Arthroscopy*, 19(1), 11-19.
- Waldén, M., Häggglund, M., Orchard, J., Kristenson, K. & Ekstrand, J. (2011). Regional differences in injury incidence in European professional football. *Scandinavian Journal of Medicine and Science in Sports*, 1-7.
- Warden, S. J., Creaby, M. W., Bryant, A. L. & Crossley, K. M. (2007). Stress fracture risk factors in female football players and their clinical implications. *British Journal of Sports Medicine*, 41(1), i38–i43.

- Watson, T. (2000). The role of electrotherapy in contemporary physiotherapy practice. *Manual therapy*, 5(3), 132-141.
- WHO (World Health Organisation). (2007). *International qualification of function disability and health(CFI)*. Retrieved September 28, 2013, from <http://www.who.int/classifications/icf/en/>
- Wollin, M. & Lovell, G. (2006). Osteitis pubis in four young football players: A case series demonstrating successful rehabilitation. *Physical Therapy in Sport*, 7(3), 153-160.
- Wong, P. L., Chamari, K. & Wisløff, U. (2010). Effects of 12-week on-field combined strength and power training on physical performance among U-14 young soccer players. *The Journal of Strength & Conditioning Research*, 34(3), 644-652.
- Woods, C., Hawkins, R. D., Maltby, S., Hulse, M., Thomas, A. & Hodson, A. (2004). The Football Association Medical Research Programme: an audit of injuries in professional football—analysis of hamstring injuries. *British Journal of Sports Medicine*, 38, 36-41.
- Woods, C., Hawkins, R., Hulse, M. & Hodson, A. (2002). The Football Association Medical Research Programme: an audit of injuries in professional football—analysis of preseason injuries. *British Journal of Sports Medicine*, 36(6), 436-441.
- Yard, E. E. & Comstock, R. D. (2009). Compliance with return to play guidelines following concussion in US high school athletes, 2005–2008. *Brain Injury*, 23(11), 888–898.
- Young, V. (2012). Principles of physical activity promotions for clinicians. In Brukner P & K. Khan, *Brukner & Khan Clinical Sports Medicine* (pp. 257-258). North Ryde NSW 2113: McGraw-Hill Australia Pty Ltd.
- Yusuf, S. M., Mijinyawa, M. S., Musa, B. M., Gezawa, I. D., & Uloko, A. E. (2013). Overweight and obesity among adolescents in Kano, Nigeria. *Journal of Metabolic Syndrome*, 2(126), 1-5.
- Zachazewski, J. E. & Magee, D. J. (2012). *Sports Therapy* (Eds.). Edmonton, Canada: John Wiley & Sons, Ltd.
- Zazulak, B., Hewett, T. E., Reeves, N. P., Goldberg, B., & Cholewicki, J. (2007). The effects of core proprioception on knee injury A prospective biomechanical-epidemiological study. *The American Journal of Sports Medicine*, 35(3), 368-373.
- Zhang, X. & World Health Organization (WHO). (2000). *General guidelines for methodologies on research and evaluation of traditional medicine*. Retrieved May 05, 2014, from <http://www.who.int/medicines/areas/traditional/definitions/en/>

APPENDICES

APPENDIX A ETHICAL CLEARANCE FROM UWC



**OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT**

11 March 2013

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and ethics of the following research project by:
Mr I Chapweteka (Physiotherapy)

Research Project: Factors influencing return to play after sustaining football injury in Malawi.

Registration no: 13/2/31

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: pjosias@uwc.ac.za
www.uwc.ac.za

A place of quality,
a place to grow, from hope
to action through knowledge

APPENDIX B LETTER TO COMREC

COMREC

02.04.13

To whom it may concern

THE CURRENT STATE OF INJURY RELATED CARE FOR MALAWI SUPER LEAGUE FOOTBALL PLAYERS

I am writing to support the research project that will be conducted under the Physiotherapy Department in collaboration with the University of the Western Cape by Isaac Chapweteka.

The researcher will conduct a quantitative descriptive study on the above subject. It is hoped that the results of the study will help the in improving football management in Malawi.

As collaborator, I fully support Isaac's research project. I hope that the study will not only foster a research culture in the department, but that the findings will inspire additional studies in the chosen field. Our young profession needs to be informed by research in efforts to improve the health and functioning of football players and their coaches in the country.

Sincerely yours,



Margaret Wazakili (PhD)

APPENDIX C ETHICAL CLEARANCE CERTIFICATE


**CERTIFICATE OF ETHICS
APPROVAL**

This is to certify that the College of Medicine Research and Ethics
Committee (COMREC) has reviewed and approved a study entitled:

**P.03/13/1371 – Factors Influencing Return to Play after Sustaining Football
Injuries in Malawi by Mr. I. Chapweteka**

On 7th May 2013

*As you proceed with the implementation of your study, we would like you to adhere to international ethical
guidelines, national guidelines and all requirements by COMREC as indicated on the next page*

UNIVERSITY OF MALAWI
College of Medicine

107 MAY 2013

(COMREC)
Research and Ethics Committee

Dr. G. Kalanda- Chairperson (COMREC)

Date 07 May 2013

APPENDIX D PERMISSION LETTER TO FAM

8th April 2013

To: The General Secretary, Football Association of Malawi.

From : Isaac Chapweteka, University of the Western Cape, Private Bag X17, Bellville 7535 Cape town, South Africa.

Through: COMREC Secretariat, College of Medicine, Private Bag 360, Chichiri, Blantyre 3, Malawi,

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT A STUDY AMONG SUPER LEAGUE FOOTBALL CLUBS.

I am Isaac Chapweteka currently registered for MSc Physiotherapy degree at the University of Western Cape in South Africa. I would like to conduct a research study among Malawian super league football clubs which participated in the 2012-2013 season. The title of the study is **“The current state of injury related care for Malawi Super League football players.”** The proposed duration of the study is between the months of May 2013 and June 2013. I am, therefore, asking for permission from your office to conduct the study and also to request your office to inform the respective football clubs about the study.

The results of the study may be used to highlight the need for Physiotherapy intervention in the management of football injuries and help teams reduce medical costs. The results may also be used in planning and implementation of programs targeting injury prevention and rehabilitation.



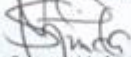



Find enclosed a copy of the ethical clearance letter from the University of the Western Cape.

I hope this communication will meet your favorable consideration.

Yours faithfully,

Isaac Chapweteka.

APPENDIX E LETTER OF ACCEPTANCE

	FOOTBALL ASSOCIATION OF MALAWI
	OFF CHIWEMBE ROAD P.O. BOX 51657, LIMBE TEL: +265 (0) 1 987 201 / +265 (0) 1 987 207 FAX: +265 (0) 1 875 109 EMAIL: fam@africa-online.net
8 th April 2013	
The General Secretary Super League of Malawi Lilongwe	
Dear Sir	
RE: <u>FACILITATION FOR A MEDICAL RESEARCH</u>	
Hereto find attached a self explanatory letter on a Medical Research.	
We need you to facilitate that the study should be conducted among the Super League clubs as this will assist in Physiotherapy intervention in the management of football injuries.	
Your assistance in this matter will be highly appreciated.	
Yours faithfully Football Association of Malawi	
 Suzgo Nyirenda <u>GENERAL SECRETARY</u>	
Affiliated to:   	

APPENDIX F LETTER TO SFRL

To: The General Secretary, Southern Region Football League.

From : Isaac Chapweteka, University of the Western Cape, Private Bag X17, Bellville 7535
Cape town, South Africa.

Through: COMREC Secretariat, College of Medicine, Private Bag 360, Chichiri, Blantyre 3,
Malawi,

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT A PILOT STUDY IN SOUTHERN REGION FOOTBALL LEAGUE TEAM.

I am Isaac Chapweteka currently registered for MSc Physiotherapy degree at the University of Western Cape in South Africa. I would like to conduct a pilot study among in one of the teams in the league which is currently participating in the 2012-2013 season. The reason for the pilot study is to test its reliability and validity before conducting main study in the Super League of Malawi. The title of the study is “The current state of injury related care for Malawi Super League football players.” I am therefore asking permission to conduct the study.

The results of the study may be used to highlight the need for Physiotherapy intervention in the management of football injuries, and help stake holders to make informed choices when returning players to their duties. The results may also be used in improvement in the management of football injuries.

This proposed duration of the study is two weeks in the months of May 2013 and June 2013.

Find enclosed copy of the Ethical clearance letters, permissions letters from Football Association and Super league of Malawi.

I hope this communication will meet your favorable consideration.

Yours faithfully,

Isaac Chapweteka.

APPENDIX G PERMISSION LETTER FROM SRFL

SOUTHERN REGION FOOTBALL LEAGUE
P/BAG 1010.
BLANTYRE,

15TH MAY, 2013.

Isaac Chapweteka,
University Of Western Cape,
p/bag 17,
Cape Town.

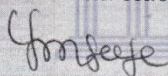
RE: REQUEST TO CONDUCT A STUDY

The above matter refers.

We are pleased to kindly inform you that permission has been granted to conduct the study in our league.

Hope our communication is in order.

Yours Faithfully,
Kingsley Simbeye
Vice General Secretary.



SOUTHERN REGION FOOTBALL LEAGUE
P.O. BOX 1010
BLANTYRE - MALAWI

APPENDIX H LETTER TO SULOM REQUESTING FOR PERMISSION

8th April 2013

To: The General Secretary, Super League of Malawi, P O Box 51657, Limbe, Malawi.

From : Isaac Chapweteka, University of the Western Cape, Private Bag X17, Bellville 7535 Cape town, South Africa.

Through: COMREC Secretariat, College of Medicine, Private Bag 360, Chichiri, Blantyre 3, Malawi,

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT A STUDY AMONG SUPER LEAGUE FOOTBALL CLUBS.

I am Isaac Chapweteka currently registered for MSc Physiotherapy degree at the University of Western Cape in South Africa. I would like to conduct a research study among Malawian super league football clubs which participated in the 2012-2013 season. The title of the study is **“The current state of injury related care for Malawi Super League football players.”**

The proposed duration of the study is between the months of May 2013 and June 2013. I am, therefore, asking for permission from your office to conduct the study and also to request your office to inform the respective football clubs about the study.

The results of the study may be used to highlight the need for Physiotherapy intervention in the management of football injuries and will help stake holders to make informed choices when returning players to their duties. The results may also be used in improvement in the management of football injuries in Malawi.

Find enclosed a copy of the ethical clearance letter from the University of the Western Cape.

I hope this communication will meet your favorable consideration.

Yours faithfully,

Isaac Chapweteka.



APPENDIX I ACCEPTANCE LETTER FROM SULOM

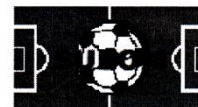
SUPER LEAGUE OF MALAWI



tnm
**SUPER
LEAGUE**

(SULOM)

BOX E66,
POST DOT NET,
BLANTYRE



Affiliated to Football Association of Malawi

9th April, 2013

To: Isaac Chapweteka
University of Western Cape
P/ bag 17
Belville 7535
Cape Town

Re: Request for permission to conduct a study among Super League Football Clubs

The above captioned subject matter refers. We are pleased to inform you that permission has been granted for you to conduct the said study as scheduled. We hope that you will find this in order.
Yours faithfully,

B.C Mhango
For General Secretary

Any correspondences regarding this matter must be addressed to the General Secretary

APPENDIX J LETTER TO FOOTBALL TEAMS

From : Isaac Chapweteka, University of the Western Cape, Private Bag X17, Bellville 7535
Cape town, South Africa.

Through: COMREC Secretariat, College of Medicine, Private Bag 360, Chichiri, Blantyre 3,
Malawi,

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT A STUDY AMONG SUPER LEAGUE FOOTBALL CLUBS.

I am Isaac Chapweteka currently registered for MSc Physiotherapy degree at the University of Western Cape in South Africa. I would like to conduct a research study among Malawian super league football teams which participated in the 2012-2013 season. The title of the study is **“The current state of injury related care for Malawi Super League football players.”** I am therefore asking permission to collect data from your club.

The results of the study may be used to highlight the need for Physiotherapy intervention in the management of football injuries and will help stake holders to make informed choices when returning players to their duties. The results may also be used in improvement in the management of football injuries in Malawi.

This proposed duration of the study is between the months of May 2013 and June 2013.

Find enclosed copy of the ethical clearance letter from Football Association and Super league of Malawi.

I hope this communication will meet your favorable consideration.

Yours faithfully,

Isaac Chapweteka.



APPENDIX K ENGLISH INFORMATION SHEET

INFORMATION SHEET

Project Title: The current state of injury related care for Malawi Super League football players

What is this study about?

This is a research project being conducted by Isaac Chapweteka at the University of the Western Cape. We are inviting you to participate in this research project because we think you participate in football activities and we assume you have the knowledge and experience regarding football activities. The purpose of this research project is to establish the current state of injury related care for Malawi Super League football players. This can help to achieve better management of football injuries thereby improving football in Malawi.

What will I be asked to do if I agree to participate?

You will be asked to sign this sheet to show that you have read and understood the contents on this sheet, and then you will be asked to sign a consent form. You will be asked to be at an identified place convenient for you where you will be comfortable, preferably training grounds, where you will be asked to complete a questionnaire. This questionnaire will have the following sections: your team name, weight and height, history of injuries sustained, time taken to return to active participation after injury and your knowledge regarding sports injuries, type of support given to players after an injury. We expect that it will take approximately 30 minutes for you to complete the questionnaire. You will be allowed to ask the researcher questions if the question is not clear. This study will involve all the super league teams which are located in all the three regions of Malawi. In case you have a problem that needs to be attended to during the study you will be referred for appropriate service.

Would my participation in this study be kept confidential?

We will do our best to keep your personal information confidential. To protect your confidentiality, numbers/codes instead of names will be placed on the questionnaires in the data identification section. Only the researcher will have the knowledge of the identification key to identify you as the one who has completed the questionnaire. You are not expected to share the information with others. The questionnaire will be collected immediately after completion and will be kept in a filing cabinet that will be kept locked. Only the researcher will be accessible to the filing cabinet keys.

If we write a report or article about this research project, your identity will be protected to the maximum.

What are the risks of this research?

There may be some risks from participating in this research study. In case there is a risk in your participation in the study appropriate procedures will be followed to avoid them.

However, there are no known risks associated with participating in the current research project.

What are the benefits of this research?

The benefits to you include having the knowledge of the factors which influence your return to active football participation after sustaining an injury so that you can make informed choice when deciding to return to active football participation after sustaining an injury.

This research is not designed to help you personally, but the results may help the investigator to learn more about factors influencing the return to active soccer. We hope that, in the future, other people might benefit from this study through improved understanding of football injuries.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Is any assistance available if I am negatively affected through participating in this study?

In case of injuries or you are negatively affected you will be referred to appropriate service.

What if I have questions?

This research is being conducted by Isaac Chapweteka from Physiotherapy Department of at the University of the Western Cape. If you have any questions about the research study itself, please contact Isaac Chapweteka at: the Faculty of Community and Health Sciences: Department of Physiotherapy, University of the Western Cape, Private Bag X17, Bellville 7535. Telephone number 0784146216, Email 3260539@uwc.ac.za or isachapwe@yahoo.com

Should you have any questions regarding this study as your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of Department: Professor Rhoda Anthea

Dean of the Faculty of Community and Health Sciences: Professor Hester Kloppers

University of the Western Cape

Private Bag X17

Bellville 7535

COMREC secretariat,

College of Medicine,

P Bag 360,
Chichiri, Blantyre 3,
Malawi.

Tel 01989766

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee and College of Medicine COMREC.



APPENDIX L ENGLISH CONSENT FORM

CONSENT FORM

Title of Research Project: The current state of injury related care for Malawi Super League football players

The study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name

Participant's signature.....

Witness.....

Date.....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Study Coordinator's Name: Dr. Michael Rowe

University of the Western Cape

Private Bag X17, Belville 7535

Telephone:

Cell:

Email-michaelrowe@uwc.ac.za

APPENDIX M ENGLISH FOOTBALL PLAYERS QUESTIONNAIRE

Questionnaire number.....

FOOTBALL PLAYERS QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi Super League football players

My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the Department of Physiotherapy at University of the Western Cape in South Africa. I kindly request your participation in this study by completing the questionnaire by giving your views according to the statement of the question in the questionnaire.

Instructions: All questions are strictly confidential. Please be as truthful as possible. Tick one box per question unless otherwise indicated.

Give the information from year 2012 and 2013

Section 1

Identification

1. Team name
2. Age
3. Height
4. Weight
5. How long have you been playing in the Super League

Section 2

Time taken to return, type of treatment and support received.

Injuries sustained during 2012- 2013 season

Did you sustain any injury that made you absent from matches in the mentioned years? ☐

If yes, when?

Section 3

Time taken to return to active participation

How long did it take you to return to active participation? (Tick the appropriate box)

- Less than 1 week (7days) ☐
- 1 to 2 weeks (more than 7days to 14days) ☐
- 2 to 3 weeks (more than 14days to 21days) ☐
- 3 to 4 weeks or more ☐

Section 4

Type of treatment received by football players

Which of the following treatment did you receive

	Yes	No
1. Ice,		
2. Compression,		
3. Elevation		
4. Heat		
5. Electrical equipment		
6. Joint mobilization/		
7. Isometric		
8. Massage,		
9. Exercise therapy (Strength and stability exercises)		
10. Agility/ neuromuscular exercises		
11. Agility work		
12. Game drills		
13. Power neuromuscular exercises		
14. Functional activity exercises		
15. Splinting or Strapping		
16. Wound care		
17. Crutch walking		
18. Advice		
19. Referral		
20. Other (specify)		
Did you get this type of treatment from other sources		
1. Surgical, Hospital treatment		
2. Traditional treatment		
3. Drugs only		
4. Physiotherapy treatment		
5. Treatment from teammates		
6. Treatment from parents at home		

Section 5

Type of support received after an injury

What type of financial or medical support did you receive when you got injured?

Did you receive:	Yes	No	Others
1. Medical support			
2. Financial support			



APPENDIX N ENGLISH TEAM DOCTORS QUESTIONNAIRE

Questionnaire number.....

TEAM DOCTORS QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi Super League football players

My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the Department of Physiotherapy at University of the Western Cape in South Africa. I kindly request your participation in this study by completing the questionnaire by giving your views according to the statement of the question in the questionnaire.

A questionnaire on factors influencing return to play after sustaining football injury in Malawi

Section 1

1. Name of the club

2. Profession

3. How many years have you been working with a football team as a team doctor?

4. Have you ever attended any sports medicine course?

5. If yes when



Section 2

Management of sports injuries

Treatment and rehabilitation of sports injuries.

The most common type of treatment used when treating injured players. (Tick against the appropriate box)

Which of the following treatment do you use	Yes	No
1. Ice		
2. Compression		
3. Elevation		
4. Heat		
5. Electrical equipment		
6. Joint mobilization		
7. Isometric		
8. Massage		
9. Exercise therapy /Strength /stability exercises/functional activities		
10. Agility/ neuromuscular exercises		
11. Agility work		
12. Game drills		
13. Power neuromuscular exercises		
14. Functional activity/ stability		
15. Splinting/ Strapping		
16. Wound care		
17. Crutch walking		
18. Advice		
19. Referral		
20. Other (specify)		

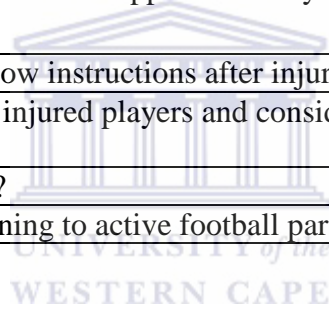
Section 3

Which of the following treatment from other sources did you use	Yes	No
1. Surgical, Hospital treatment		
2. Traditional treatment		
3. Drugs only		
4. Physiotherapy treatment		
5. Treatment from teammates		
6. Treatment from parents at home		

Section 4

Responsibilities of team doctors regarding management of sports injuries. (Tick the appropriate box).

Dou you	Yes	No
1. give pain killers to players so that they can continue to play if you have crucial matches?		
2. use limb/neck immobilizing splints at the field of play when a player needs this type of treatment?		
3. make sure that players have adequate sports and protective wear?		
4. have full authority to make medical decisions regarding your players?		
5. have easy access (ambulance) to hospital referrals for injured players?		
6. explain to your players about the negative effects of alcohol and smoking on sports?		
7. have adequate knowledge on sports and nutrition that you to give to players?		
8. have any special diets or nutrition supplements to your players when they are injured?		
9. make sure that players follow instructions after injury?		
10. management recognise all injured players and consider that he may come back?		
11. visit players when injured?		
12. assess players before returning to active football participation?		



APPENDIX O ENGLISH TEAM COACH QUESTIONNAIRE

Questionnaire number.....

COACH QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi Super League football players

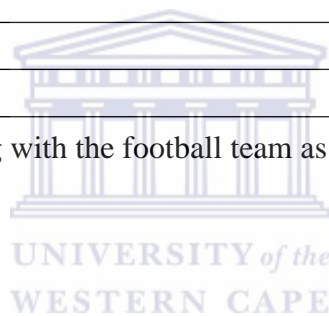
My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the department of Physiotherapy at University of Western Cape in South Africa. I kindly request your participation in this study by completing the questionnaire with your views according to the statement of the questionnaire.

Section 1

Name of team

Professional qualification

How long have you been working with the football team as a team coach?



Section 2

Responsibilities in the management of injuries

How often	Always (100%)	Very often (75%)	Often (50%)	Sometimes (75%)	Never (0%)
1. do players do warm- up and stretching?					
2. do you ask for cool-down and stretching after matches?					
3. do you encourage players to wear shin pads?					
4. do you discuss with the team doctor about the return of a player to active participation?					
5. do you ask for the progress of a player when he is injured?					
6. do you visit players when injured?					
7. do you ask for skilled players to return to active football if you have important competitive matches before injury is healed?					
8. do you ask players to stop playing if they are injured?					
9. do you give medical support to players when injured?					
10. do you give financial support to players when injured?					
11. do you bring back players?					
12. do you discuss their injury with the players?					
13. does the management ask for players' injury record?					
14. do you discuss an injured player with the team management?					

APPENDIX P FOOTBALL PLAYERS QUESTIONNAIRE BACK TRANSLATED

Questionnaire number.....

FOOTBALL PLAYERS QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi Super League football players

My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the Department of Physiotherapy at University of the Western Cape in South Africa. I kindly request you to participate in this study by giving your views according to the statement of the question in the questionnaire through completion of the questionnaire.

Instructions: All questions are strictly confidential. Please be as honest as possible. Tick one box per question unless otherwise indicated.

Give the information from year 2012 and 2013

Section 1

Identification



UNIVERSITY of the
WESTERN CAPE

1. Name of your Team
2. Your Age
3. Your Height
4. Your Weight
5. For how long have you been playing in the Super League

Section 2

Time taken to return, type of treatment and support received.

Injuries sustained during 2012- 2013 season

Did you sustain any injury that made you absent from matches in the mentioned years?

If yes, when?

Section 3

Time taken to return to active participation

How long did it take you to start playing again? (Tick the appropriate box)

Less than 1 week (7days) ☐

1 to 2 weeks (more than 7days to 14days) ☐

2 to 3 weeks (more than 14days to 21days) ☐

3 to 4 weeks or more ☐



Section 4

Support that you received after sustaining an injury

Type of treatment you received

Instructions: tick the right box

Which of the following treatment did you receive	Yes	No
1. Ice		
2. Compression		
3. Elevation		
4. Heat application		
5. Electrical equipment		
6. Joint mobilization		
7. Underwent exercises that make muscles to move without movement of body part		
8. Was massaged		
9. Did exercises that give strength and stability		
10. Underwent activity exercises that make a body part to start functioning again/physical and mental conditioning		
11. Underwent strengthening exercises that improve coordination, speed, power		
12. Did game drills		
13. Underwent powerful physical and mental conditioning		
14. Underwent activity exercises that make a body part to start functioning again		
15. Was splinted or Strapped		
16. Wound care		
17. Given Crutches		
18. Was advised		
19. Was referred		
20. Other (specify)		
Did you get this type of treatment from other sources		
1. Operation, Hospital treatment		
2. Local treatment		
3. Drugs only		
4. Physical exercise therapy		
5. Treatment from teammates		
6. Treatment from parents at home		

Section 5

Type of support received after an injury

What type of financial or medical support did you receive when you got injured?

Did you receive:	Yes	No	Others
1. Medical support			
2. Financial support			



APPENDIX Q TEAM DOCTORS QUESTIONNAIRE BACK TRANSLATED

Questionnaire number.....

TEAM DOCTORS QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi Super League football players

My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the Department of Physiotherapy at University of the Western Cape in South Africa. I kindly request your participation in this study by completing the questionnaire by giving your views according to the statement of the question in the questionnaire.

Section 1

1. Name of the club

2. Profession

3. How many years have you been working with a football team as a team doctor?

4. Have you ever attended any sports medicine course?

5. If yes when

Section 2

Management of sports injuries

Treatment and rehabilitation of sports injuries.

The most common type of treatment used when treating injured players. (Tick against the appropriate box)

Which of the following treatment did you use	Yes	No
1. Ice		
2. Compression		
3. Elevation		
4. Heat application		
5. Electrical equipment		
6. Joint mobilization		
7. Underwent exercises that make muscles to move without movement of body part		
8. Was massaged		
9. Did exercises that give strength and stability		
10. Underwent activity exercises that make a body part to start functioning again/physical and mental conditioning		
11. Underwent strengthening exercises that improve coordination, speed, power		
12. Did game drills		
13. Underwent powerful physical and mental conditioning		
14. Underwent activity exercises that make a body part to start functioning again		
15. Was splinted or Strapped		
16. Wound care		
17. Given Crutches		
18. Was advised		
19. Was referred		
20. Other (specify)		

Section 3

Other types of treatment

Did players get this type of treatment?

Which of the following treatment did you use	Yes	No
1. Operation, Hospital treatment		
2. Local treatment		
3. Drugs only		
4. Physical exercise therapy		
5. Treatment from teammates		
6. Treatment from parents at home		

Section 4

Responsibilities that team doctors have in the management of sports injuries. (Tick the appropriate box).

Dou you	Yes	No
1. give pain killers to players for them to continue to playing when you have important matches?		
2. use limb/neck immobilizing splints at the field of play when a player needs this type of treatment?		
3. make sure that players have adequate sports and protective wear?		
4. have authority to make medical decisions about your players?		
5. have easy access to hospital referrals for injured players?		
6. give information to your players about the dangers of alcohol and smoking in sports?		
7. have enough knowledge on sports and nutrition that you to give to players?		
8. have any specific diets or nutrition supplements to your players when they are injured?		
9. make sure that players follow instructions after injury?		
10. recognise all injured players and consider that he may come back?		
11. visit players when injured?		
12. examine players before returning to active football participation?		

APPENDIX R ENGLISH TEAM COACH QUESTIONNAIRE BACK TRANSLALED

Questionnaire number.....

COACH QUESTIONNAIRE

A questionnaire on the current state of injury related care for Malawi super league football players

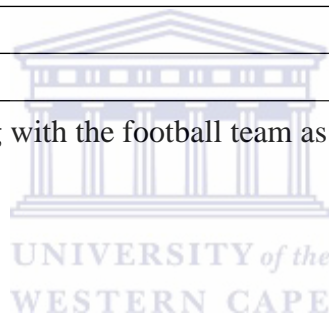
My name is Isaac Chapweteka. I am a postgraduate physiotherapy student enrolled in the department of Physiotherapy at University of Western Cape in South Africa. I kindly request your participation in this study by completing the questionnaire with your views according to the statement of the questionnaire.

Section 1

Name of team

Professional qualification

How long have you been working with the football team as a team coach?



Section 2

Responsibilities in the management of injuries

How often	Always (100%)	Very often (75%)	Often (50%)	Sometimes (75%)	Never (0%)
1. do players do warm- up and stretching?					
2. do you ask for warm-down and stretching after match?					
3. do you encourage players to put on shin pads?					
4. do you discuss with the team doctor if a player has to start playing again?					
5. do you ask for the recovery progress of a player when he is injured?					
6. do you go to check on players when injured?					
7. do you ask for skilful players to come back and play if you have competitive matches before injury is healed?					
8. do you remove and stop players from playing if they are injured?					
9. do you give medical support to players when injured?					
10. do you give financial support to players when injured?					
11. do you call back players to participation?					
12. do you discuss player's injury with them?					
13. does the management ask for players' injury information?					
14. do you discuss an injured player with the team administrators?					

APPENDIX S CHICHEWA INFORMATION SHEET

ZOYENERA KUDZIWA

Mutu wa Kafukufuku: Chithandizo chomwe ovulala akumalandira akavulala pamasewero a mpira mu Supa Ligi ku Malawi.

Kafukufuku ameneyi ndi okhudza chiyani?

Kafukufuku ameneyi akupangidwa ndi Isaac Chapweteka a ku Yunivesite ya Western Cape. Tikukupemphani kuti mutenge mbali mu kafukufuku ameneyu chifukwa ndinu amene tikuwona ngati mumatenga mbali mu zochitika za mpira wa miyendo ndipo tikukhulupilira kuti mumadziwa ndiponso mwakhala mukuchita zinthu zokhudzana ndi mpira wa miyendo. Cholinga cha kafukufuku ameneyi ndi kudziwa chithandizo chomwe ovulala akumalandira akavulala pamasewero a mpira mu Supa Ligi ku Malawi. Izi tikupanga ndi cholinga chakuti tingathandize kasamalalidwe ka bwino ka kupweteka kwa anthu mu mpira. Izi zitithandiza kupititsa patsogolo mpira wa miyendo m'Malawi.

Ndiuzidwa kuti ndichite chiyani ngati ndikufuna kutenga nawo mbali?

Muwuzidwa kuti musayine pepala ili lowonetsa kuti mwawerenga ndikumvetsetsa zonse zimene zalembedwa mumenemu. Kenako mupemphedwa kuti mu sayine fomu ya chilolezo. Muzapephedwanso kuti mukhale ku malo amene azasankhidwa kuti ndi a bwino ndi oyenera kwa inu makamaka ma bwalo okonzekera kusewera mpira. Kumeneko muzafunsidwa kuti muyankhe mafunso. Pepala la mafunso lizakhala ndi magawo awa: dzina la timu yanu, kulemela ndi kutalika kwanu, ndiponso mbiri ya kuvulala kumene kunakuchitikirani, nthawi imene munatenga kuti muyambirensa kusewera mpira ndiponso zimene mukudziwa zokudzana ndi chithandizo chimene chimaperekedwa kwa osewera mpira akapweteka. Tikuyembekezera kuti zikutengerani pafupifupi mphindi makumi atatu kuti mumalize

kuyankha mafunso. Mukhala oloedwa kuwafunsa opanga kafukufuku ngati simukumvetsetsa chimene funso likufuna kuti inu muyankhe. Kafukufuku uyu akhudzanso ma timu ena a supa ligi amene ali mu zigawo zitatu zonse za Malawi. Ngati muli ndi vuto limene mukufuna kuti liwonedwe nthawi ya kafukufukuyi muzalondolozedwa ku chithandizo choyenera.

Kodi kutenga kwanga mbali mu kafukufuku ameneyi kuzakhala kwa chinsinsi?

Tizayesetsa kusunga chilichonse chokhudza inu ngati munthu mwa chinsinsi. Kuti titeteze chinsinsi chanu tigwiritsa ntchito ma nambala osati mayina amene ayikidwe pa ma pepala a mafunso mu gawo la chizindikiro cha anthu. Ndi opanga kafukufuku yekha amene adziwe nambala imene ikukuzindikiritsani inu ngati amene munayankha mafunso a pa pepala limenelo. Sitikuyembekezera kuti muwuza ena za mu kafukufuku ameneyu. Ma pepala a mafunso azatengedwa nthawi yomweyo mwamaliza kuyankha ndipo azasungidwa mu ma dirowa ndikukiyidwa. Ndi opanga kafukufuku yekha amene azakhale ndi ma kiyi a dirowa imeneyi.

Ngati tilembe lipoti kapena nkhani yokhudza kafukufuku ameneyi, mayina anu azatetezedwa koposa.

Molingana ndi zofunika pa malamulo/komanso zoyenereka pa ntchito, tizaulula kwa anthu oyenera/ kapena awudindo oyenera nkhani ina iliyonse ingatipeze yokhudza nkhanza kwa ana kapena kulekeleledwa komanso chiwopsyezo chilichonse kwa inu kapena kwa anthu ena.

Ziphinjo za kafukufuku ameneyu ndi chiyani?

Patha kukhala ziphinjo zina chifukwa chotenga mbali mu kafukufuku ameneyi. Ngati pali chiopsyezo chilichonse pa kutenga nawo mbali, zoyenerezeka zonse zizatsatidwa kuti ziopsyezo zimenezi zipewedwe.

Palibe ziphinjo zodziwika zokhudzana ndi kutenga mbali mu kafukufuku ameneyi.

Kodi ubwino wa kafukufuku ameneyu ndi chiyani?

Ubwino wa kafukufuku kwa inu ndi wakuti muzidziwa zinthu zimene zimakupangitsa inu kuti muyambilenso kutenga nawo mbali mu mpira pamene mwavulala. Zimenezi zikuthandizani kuti muzipanga zisankho zoyenera mukaganiza zoyambilanso ku sewera mpira pamene mwapweteka. Kafukufuku uyu sanakonzedwe kuti akuthandizeni inu nokha ngati munthu koma zotsatira zake zitha kuthandiza opanga kafukufuku kuti adziwe zifukwa zimene zimapangitsa munthu kuti ayambilenso kusewera mpira. Tikhulupilira kuti mutsogolo muno, anthu ena atha kupindulapo mu kafukufuku ameneyi chifukwa cha kumvetsetsa kwa anthu za kuvulala kwa anthu mu mpira wa miyendo.

Kodi ndikuyenera kukhala mu kafukufuku ameneyi? Nanga kodi ndingathe kusiya kutenga nawo mbali pa nthawi ina iliyonse?

Kutenga kwanu mbali ndikosakakamiza. Mutha kusankha kusatenga nawo mbali mu kafukufuku ameneyi. Ngati musankhe kutenga nawo mbali, muli ndi ufulu osiya kutenga mbali pa nthawi ina iliyonse. Ngati muganize zosatenga nawo mbali kapena ngati mungaganize zosiya pa nthawi ina iliyonse, simuzalangidwa komanso simuzataya mwayi uliwonso umene inu muli oyenera kulandira.

Pali chinthandizo china chilichonse chimene ndingalandire nditakhudzidwa moyipa chifukwa chotenga nawo mbali mukafukufuku ameneyi?

Ngati mwapweteka kapena mwakhudzidwa mu njira ina iliyonse yoipa muzalondolozedwa ku chithandizo choyenera.

Bwanji ngati ndili ndi mafunso?

Kafukufuku ameneyi akupangidwa ndi Isaac Chapweteka a ku dipatimenti ya ma fizo ku Yunivesite ya Western Cape. Ngati muli ndi mafunso okhudzana ndi kafukufuku ameneyi funsani a Isaac Chapweteka ku: the Faculty of Community and Health Sciences: Department

of Physiotherapy, University of the Western Cape, Private Bag X17, Bellville 7535. Nambala ya foni: 0784146216, Imelo 3260539@uwc.ac.za kapena isachapwe@yahoo.com

Ngati muli ndi mafunso okhudzana ndi kafukufuku ameneyi ndi ufulu wanu ngati otenga nawo mbali mu kafukufuku komanso ngati mukufuna kupereka dandaulo la mavuto amene mwakumana nawo okhudzana ndi kafukufuku ameneyi, lumikizani ndi:

Head of Department: Professor Rhoda Anthea

Dean of the Faculty of Community and Health Sciences: Professor Hester Kloppers

University of the Western Cape

Private Bag X17

Bellville 7535

COMREC Secretariat, College of Medicine, Private Bag 360, Chichiri Blantyre 3, Malawi

Tel 01989766

Kafukufuku ameneyi ndiovomelezedwa ndi a Komiti ya Seneti ya Yunivesite ya Western Cape yowona za Kafukufuku ndi Komiti yowona ndondomeko, makhalidwa ndi udindo pa ntchito za kafukufuku.

APPENDIX T CHICHEWA CONSERT FORM

FOMU YA CHILOLEZO

Mutu wa kafukufuku:

Ndalongosoledwa za kafufuku ameneyu muchiyankhulo chimene ndimamva ndipo ndalola kutenga nawo mbali mwaufulu ndi mopanda kukakamizidwa. Mafunso anga okhudza kafukufuka ameneyu ayankhidwa. Ndikumvetsetsa kuti dzina langa silizaululidwa ndipo kuti nditha kusiya kutenga nawo mbali mu kafufuku ameneyu osapereka chifukwa pa nthawi ina iliyonse ndipo kuti ndikatero sindidzakhudzidwa moyipa mu njira ina iliyonse.

Dzina la otenga mbali

Siginetcha ya otenga mbali.....

Mboni.....

Tsiku.....

Ngati muli ndi mafunso ena ali onse okhudza kafukufuku ameneyu kapenanso ngati mukufuna kunena za mavuto ena aliwonse amene munakomana nawo okhudzana ndi kafukufuku ameneyu, chonde lumikizani ndi Oyendetsa za kafukufuku:

Dzina la oyendetsa kafukufuku: Dr Michael Rowe

University of the Western Cape

Private Bag X17, Belville 7535

Nambala ya Foni:

Nambala ya selula:

Imelo: mrowe@uwc.ac.za

APPENDIX U CHICHEWA FOOTBALL PLAYERS QUESTIONNAIRE

Questionnaire number.....

Mndandanda wa Mafunso a osewera mpira

Mndandanda wa Mafunso okhuzana chithandizo chomwe ovulala akumalandira akavulala pamasewero a mpira mu Supa Ligi ku Malawi. Dzina langa ndine; Isaac Chapweteka. Ndikupanga maphunziro a ukachenjede wa Fiziyotherapi ku Dipatimenti ya Physiotherapy ku Yunivesite ya Western Cape ku South Africa. Ndikukupemphani kuti mutenge nawo gawo pa kafukufuku uyu popereka maganizo anu pa mafunso omwe ali mu mndandanda wa mafunsowa.

Mndandanda wa Mafunso okhuzana chithandizo chomwe ovulala akumalandira akavulala pamasewero a mpira mu Supa Ligi ku Malawi.

Malangizo: Mafunso onse ndi a chinsinsi. Chonde khali wowona mtima monga mungathere. Chongani bokosi limozi lokha pa funso lina lili lonse kufikira mutalangizidwa kuchita mosiyana.

Mupereke mfundo za muzaka za 2012 ndi 2013.

Gawo 1 Kukuzindikirani

1. Dzina la timu
2. Zaka zanu
3. Kutalika kwanu
4. Kulemera kwanu
5. Mwakhala mukusewera mu Super League kwa nthawi yayitali bwanji?

Gawo 2

Mbiri yokhuzana ndi Kuvulala

Kuvulala komwe munakhala nako mu sizoni ya 2012- 2013

Kodi munavulalapo mu chaka chomwe chatchulidwachi, zomwe zinapangisa kuti musasewere mpira mu chaka chimenechi?

Eya ☐

Ayi ☐

Ngati yankho lili eya, munavulala liti?

Gawo 3

Nthawi yomwe inadutsa musanayambenso kusewera

Munatenga nthawi yayitali bwanji musanayambenso kusewera? (Chongani bokosi loyenera)

Siyinakwane sabata imodzi ☐

Sabataimodzi mpaka ziwiri ☐

Masabata awiri mpaka anayi ☐

Masabata anayi mpaka asanu ndi imozi kapena oposera apo ☐

Gawo 4

Chithandizo chomwe munalandira mutavulala pa masewero

Thandizo la chipatala lomwe munalandira.

Malangizo: Chongani bokosi loyenerera

Ndi ati mwa mathandizo awa omwe munalandira?	Eya	Ayi
1. Ayisi, ,		
2. Kudinikiza		
3. Kutukula chiwalo mwamba		
4. Kuthowa		
5. Zipangizo za magesi		
6. Kuyendesa pang'onopang'ono malo omwe mafupa amalumikizana		
7. Masewera opangitsa minyewa kukhwinyata popanda kugwedezeke kowoneka ndi maso		
8. Kuisita kopangitsa malo a pathupi kumasuka, kutamula minyewa, Kuisita modinikiza kuti minyewa ya mkati imasuke		
9. Masewero omasula thupi, /kupatsa mphamvu/kukhazikitsa thupi mchimake/ /masewero opangisa chiwalo kugwiranso ntchito		
10. Kuyendetsa chiwalo mwachangu ndi mophweka/ Kupangitsa minyewa ndi mitsempha kumasuka		
11. Masewero opangitsa chiwalo kuyenda mwachangu ndi mophweka		
12. Masewero obwerezwereza othandiza kuti gawo la thupi liyambenso kugwira ntchito		
13. Kupangitsa minyewa ndi mitsempha kukhalanso ndi mphamvu		
14. masewero opangisa chiwalo kugwiranso ntchito/kukhazikitsa thupi mchimake		
15. Kumanga ndi chinthu cholimba choletsa kuyendayenda kwa mafupa		
16. Kusamalira bala/chilonda		
17. Kuyenda ndi ndodo		
18. Kupereka malangizo		
19. Kutumiza ku chipatala chachikuli		
20. Zina (Fotokozani)		
Chithandizo chochokera kwina		
1. Opaleshoni, chithandizo cha kuchipatala		
2. Chithandizo cha chikuda/makolo		
3. Mankhwala okha		
4. Kupangisa mafizo		
5. Chithandizo choperekedwa ndi osewera ena		
6. Chithandizo choperekedwa ndi makolo ku nyumba		

Gawo 5

Mtundu wa thandizo lomwe linalandiridwa pamene munavulala

Kodi munalandira mtundu wANJI wa thandizo la ndalama kapena la chipatala pamene munavulala?

	Munalandira:	Eya	Ayi	Zinthu zina
1.	Thandizo la chipatala			
2.	Thandizo la ndalama			



APPENDIX V CHICHEWA TEAM DOCTORS QUESTIONNAIRE

Questionnaire number.....

Mndandanda wa Mafunso wa othandiza osewera mpira akavulala

Mndandanda wa mafunso okhuzana chithandizo chomwe ovulala akumalandira akavulala pamasewero a mpira mu Supa Ligi ku Malawi.

Dzina langa ndine Isaac Chapweteka. Ndikupanga maphunziro a ukachenjede wa Fiziyotherapi ku Dipatimenti ya Physiotherapy ku Yunivesite ya Western Cape ku South Africa.

Ndikukupemphani kuti mutenge nawo gawo pa kafukufuku uyu popereka maganizo anu pa mafunso omwe ali mu mndandanda wa mafunsowa.

Gawo 1

1. Zina la kilabu
2. Zokuyenerezani
3. Mwakhala mukugwira ntchito ndi timu ya mpira wa miyendo ngati dokotala wa timuyo kwa zaka zingati?
4. Munayamba mwaphunzira maphunziro a chipatala okhuzana ndi zamasewero?
5. Ngati yankho lili eya, munaphunzira liti?

Gawo 2

Kuthandiza moyenera wina akavulala pa masewero

Thandizo la chipatala komanso kuthandizira kuti wosewera ayambenso kuchita zomwe amachita kale.

Thandizo la chipatala lomwe limaperekedwa kwa osewera omwe avulala

Chongani bokosi loyenerera

Ndi ati mwa mathandizo awa omwe mumapeleka	Eya	Ayi
1. Ayisi, ,		
2. Kudinikiza		
3. Kutukula chiwalo mwamba		
4. Kuthowa		
5. Zipangizo za magesi		
6. Kuyendesa pang'onopang'ono malo omwe mafupa amalumikizana		
7. Masewera opangitsa minyewa kukhwinyata popanda kugwedezeke kowoneka ndi maso		
8. Kuisita kopangitsa malo a pathupi kumasuka, kutamula minyewa, Kuisita modinikiza kuti minyewa ya mkati imasuke		
9. Masewero omasula thupi, /kupatsa mphamvu/kukhazikitsa thupi mchimake/ /masewero opangisa chiwalo kugwiranso ntchito		
10. Kuyendetsa chiwalo mwachangu ndi mophweka/ Kupangitsa minyewa ndi mitsempha kumasuka		
11. Masewero opangitsa chiwalo kuyenda mwachangu ndi mophweka		
12. Masewero obwerezabwereza othandiza kuti gawo la thupi liyambenso kugwira ntchito		
13. Kupangitsa minyewa ndi mitsempha kukhalanso ndi mphamvu		
14. masewero opangisa chiwalo kugwiranso ntchito/kukhazikitsa thupi mchimake		
15. Kumanga ndi chinthu cholimba choletsa kuyendayenda kwa mafupa		
16. Kusamalira bala/chilonda		
17. Kuyenda ndi ndodo		
18. Kupereka malangizo		
19. Kutumiza ku chipatala chachikuli		
20. Zina (Fotokozani)		

Gawo 3

Mitundu iyi ya chithandizo yomwe mumayigwiritsa ntchito

Chongani bokosi loyenerera

Ndi ati mwa mathandizo awa omwe mumapereka	Eya	Ayi
1. Opaleshoni, chithandizo cha kuchipatala		
2. Chithandizo cha chikuda/makolo		
3. Mankhwala okha		
4. Kupangisa mafizo		
5. Chithandizo choperekedwa ndi osewera ena		
6. Chithandizo choperekedwa ndi makolo ku nyumba		



Gawo 4

Mbali yomwe ma dokotala a matimu amatengapo wina akavulala pa masewero (Chongani bokosi loyenera)

	Eya	Ayi
1. Kodi mumawapatsa osewera mankhwala ochepesa ululu kuti apitirize kusewera ngati muli ndi mipikisano yofunika?		
2. zopangitsa kuti mwendo/mkono/khosi lisagwedezeke ngati wosewera akusowa chithandizo cha mtundu umenewu?		
3. Kodi osewera anu ali ndi zipangizo zokwanira zosewerera zowateteza posewera?		
4. Kodi muli ndi mphamvu zonse zopanga chigamulo chokhuzana ndi za chipatala pa osewera anu?		
5. Kodi mukakhala ndi mwayi opita ku chipatala chachikul oswela akavulala		
6. Kodi mumawafotokozera osewera anu za kuwopsa kwa mowa ndi fodya pa nkhani za masewero?		
7. Kodi mukuziwa zochuluka zokhuzana ndi madyedwe ndi masewero zomwe mumawawuza osewera anu?		
8. Kodi muli ndi zakudya zapadera kapena zowonjezera thanzi zomwe mumawapatsa osewera anu?		
9. Kodi mumawonetsetsa kuti osewera akutsatira malangizo		
10. Kodi kalabu imavomereza kuvulala kwa osewera onse ndi kuzindikira kuti osewera atha kuzabwereranso?		
11. Kodi osewera akavulala mumawayendera?		
12. Kodi osewera mumawawunika asanayambenso kusewera akavulala?		

APPENDIX W CHICHEWA TEAM COACH QUESTIONNAIRE

Questionnaire number.....

Mndandanda wa Mafunso wa ophunzitsa masewero a mpira

**Mndandanda wa Mafunso okhuzana ndi chithandizo chomwe ovulala akumalandira
akavulala pamasewero a mpira mu Supa Ligi ku Malawi.**

Dzina langa ndine Isaac Chapweteka. Ndikupanga maphunziro a ukachenjede wa Fiziyotherapi
ku Dipatimenti ya Physiotherapy ku Yunivesite ya Western Cape ku South Africa.

Ndikukupemphani kuti mutenge nawo gawo pa kafukufuku uyu popereka maganizo anu pa
mafunso omwe ali mu mndandanda wa mafunsowa.

Gawo 1

Zina la timu

Zokuyenerezani pa ntchitoyi

UNIVERSITY of the
WESTERN CAPE

Mwakhala mukugwira ntchito ngati kochi wa timuyi kwanthawi yayitali bwanji?

Gawo 2

Gawo lomwe kochi amatengapo pa masewero olimbitsa thupi komanso kupereka thandizo

wosewera akavulala

Mochuluka bwanji	Nthawi zonse (100%)	Kawirikawiri kwambiri (75%)	Kawirikawiri (50%)	Nthawi zina (75%)	Sizimachitika (0%)
1. Kodi osewera amachita masewera otakasa thupi ndi kuwongola/kumasul a minyewa?					
2. Kodi mumawafunsa kupanga masewera obwezeretsa thupi mu chimake ndi kuwongola/kumasul a minyewa?					
3. Kodi mumawalimbikisa osewera kuvala zigoba zotchinjiriza miyendo?					
4. Kodi mumakambirana ndi dokotala wa timu zokhuzana ndi wosewera yemwe wangochira kumene kuti ayambenso kusewera mowirikiza?					
5. Kodi mumafunsa kuti wosewera akupeza bwanji akavulala?					
6. Kodi mumawayendera osewera akavulala?					
7. Kodi mumawafunsa a katswiri omwe sanachiritsitse					

	atavulala kuti azasewere nawo pa masewero a mpikisano wofunika kwambiri?					
8.	Kodi mumawapempha osewera kuti asiye kaye kusewera akavulala?					
9.	Kodi mumawapasa chithandizo cha chipatala osewera akavulala?					
10.	Kodi mumapereka chithandizo cha ndalama kwa wosewera akavulala?					
11.	Kodi osewera omwe anavulala mumawalola kuyambanso kusewera?					
12.	Kodi mumakambirana ndi osewera za kuvulala kwawo?					
13.	Kodi mumakambirana za wosewera yemwe anavulala ndi woyang'anira timu?					
14.	Kodi woyendetsa timu amafunsa za mbiri ya kuvulala ya wosewera?					