

## RESEARCH ASSIGNMENT

### PROJECT TITLE

A comparison of injuries sustained on artificial and natural soccer turfs among premier soccer league football players in Zimbabwe.

#### **Student:**

**Dr E Chagonda**

Division Family Medicine and Primary Care

Department Interdisciplinary Sciences

Faculty of Medicine and Health Sciences

University of Stellenbosch

#### **Supervisor**

**Dr Michael Pather**

Senior lecturer

Division Family Medicine and Primary care

Department Interdisciplinary Sciences

Faculty of Medicine and Health Sciences

University of Stellenbosch

[mpather@sun.ac.za](mailto:mpather@sun.ac.za)

## **Declaration**

I, Dr Edward Chagonda the undersigned, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for a degree. I also declare that ethical approval for the study was obtained from the Health Research Ethics Committee of Stellenbosch University (Reference number: S12/11/286).

-----

**Signed:**

Dr Edward Chagonda

**Date:**30/11/14



UNIVERSITEIT · STELLENBOSCH · UNIVERSITY  
jou kennisvenoot · your knowledge partner

**\*Declaration**

I, the undersigned, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for a degree. I also declare that ethical approval for the study was obtained from the Health Research Ethics Committee of Stellenbosch University (Reference number S12/11/286).

Signature: .....

A handwritten signature in black ink, appearing to be 'JA'.

Date: .....

A handwritten date in black ink, '27/02/2015'.

## **LIST OF ABBREVIATIONS**

1.	AT	Artificial Turf
2.	CAF	Confederation of African Football
3.	FIFA	International Football Federation
4.	HREC	Health Research and Ethics Committee
5.	MRCZ	Medical Research Council of Zimbabwe
6.	NT	Natural Turf
7.	PCMA	Pre-competition Medical Assessment
8.	Phrs	Player hours
9.	PSL	Premier Soccer League
10.	ZIFA	Zimbabwe Football Association

## **ABSTRACT**

### **Background:**

The International Football Federation (FIFA), through their Goal project, renovated Rufaro stadium from natural turf (NT) to artificial turf (AT). This was met with mixed feelings especially with regard to injuries sustained by football players. There is no published scientific data on football injuries in Zimbabwe.

### **Aim:**

To determine the frequency of injuries on AT and NT among Premier Soccer League (PSL) players in Zimbabwe.

### **Objectives:**

To determine the attitudes of players regarding the different football playing surfaces, and the incidence, severity and injury types on AT and NT.

### **Methods:**

The 2013 season's 16 PSL teams were selected to complete questionnaires and injury report forms. Injuries recorded during matches on AT and NT were analyzed. Outcome measures were injury incidence (injuries/1000 player hours (Phrs) of exposure) compared for AT and NT using rate ratios (95% confidence intervals). All statistical significance were set at  $p < 0.05$ .

### **Results:**

A total of 325 players responded and 295 (90.8%) preferred playing on NT. Of these, 250 (76.9%) believed that AT was associated with more injuries. A total of 364 injuries occurred during 4455 phrs of exposure giving an injury incidence of 81.7 injuries/1000 phrs. A total of 69 games (1138.5 phrs) on AT revealed an injury incidence of 85.2 injuries/1000 phrs while 201 games (3316.5 phrs) on NT revealed an overall incidence of 80.51 injuries/1000-hrs. This analysis showed no statistically significant difference in the incidence of injury between AT and NT surfaces during matches played, [RR= 1.06; 95% CI: 0.84 – 1.34]. With regard to injury severity, the highest

incidence occurred on the AT (31.62/1000phrs in the mild category) and the lowest incidence was on the NT (1.81/1000 phrs in the severe category) .The rate ratios for the severity were however not statistically significant. Comparison of the injuries according to body part injured largely revealed insignificant rate ratios.

**Conclusion:**

Football players believe that the AT is associated with increased risk of injury. There was no significant difference in injury incidence rates and severity between the AT and NT during the 2013 PSL season in Zimbabwe. The incidence of injury in this study was much higher than comparable European studies and is a need for further studies to explore the underlying reasons for this.

## **INTRODUCTION:**

Football is a very popular sport if not the most popular sport in the world.<sup>1</sup> Zimbabwe, like most African countries is a football crazy country with well over 5000 registered players<sup>2</sup> and a much larger amateur and recreational population playing football. There is no formal published research information about football injuries in Zimbabwe. There has been a drive by the International Federation of Football Associations(FIFA), as part of its FIFA Goal Project, to erect a minimum of one free third generation turf throughout Africa and Asia and in 2006,<sup>3</sup>as a result, one of Zimbabwe's homes of football, the Rufaro Stadium, was changed from a natural turf (NT) to an artificial turf (AT).

To date this is the only artificial turf in Zimbabwe and is home to three PSL clubs therefore all the sixteen teams of our premier league will be exposed to at least three matches on the artificial turf in one season .There is an anecdotal belief amongst football players that playing football on an artificial turf is associated with more injuries as compared to playing on natural turf. This is not just a mere myth since there is supportive literature<sup>4</sup>, most of it more than ten years old, that states that playing on first and second generation ATs was associated with significantly more injuries<sup>4</sup> and that has led to the development of the current third generation ATs that are being used throughout the world. The third generation ATs are said to be closest to the NTs with regard to the injury rates but they seem to have some distinct differences in injury patterns with regards to thigh, knee and ankle injuries.<sup>4,5</sup>

There is also very little research activity along these lines from the whole of Africa<sup>6</sup> and most of the data and interventions are from Europe. This study is important because there is no published study in Zimbabwe that gives us information about injury rates either on the NT or on the newer AT, therefore this research will serve as important baseline research for this country.

The research evidence obtained would help this country to have baseline data about the injury rates and hence help in the development of quality improvement cycle.<sup>7</sup>Zimbabwe is a third world country and it is imperative that we should prioritise prevention, as there

are limited medical resources to manage football related injuries.<sup>8,9</sup>

Teams have been shunning playing matches<sup>10</sup> on the AT and the evidence obtained may also assist in dispelling the myth among the players about the attributable injury rates of the AT or NTs. Globally it will help in the ongoing developments on the ATs with minimal maintenance as engineers and biomechanical scientists seek to create a surface that is closest to the NTs.<sup>11</sup>

Currently , there is inconclusive evidence that the injury rates are the same for 3rd generation ATs as compared to NTs although there are distinct injury patterns that are developing in relation to the playing surface.<sup>5,11-13</sup> There were 1st generation then 2nd generation and now 3rd generation ATs and these have been constantly improved in terms of padding, hence the associated friction.<sup>5</sup> This has also been associated with a progressive reduction in injury rates and the ultimate aim would be to have ATs that are safer than NTs.<sup>5,11</sup> It has been determined that injury rates are higher during competitive matches as compared to friendly matches and this is also true for practice games which recorded the lowest injury rates.<sup>12-14</sup> Whereas the incidence of injuries seem to be generally similar in various studies,<sup>5,15-17</sup> there is need to look into the mechanisms and severity of the injuries and also to look at confounding factors like weather, shoe type,<sup>18</sup> gender and protective clothing<sup>12-15</sup> and indeed the stage of play.

## **AIM**

To determine the frequency of injuries on AT and NT among Premier Soccer League (PSL) players in Zimbabwe.

## **OBJECTIVES**

- To explore the attitudes of players regarding the different playing surfaces.
- To determine the incidence of football injuries on an artificial turf in Zimbabwe.
- To determine the incidence of football injuries on a natural turf in Zimbabwe.
- To describe the severity and injury types amongst the footballers.



## **METHODS**

### **Study design:**

A prospective longitudinal cohort study of Zimbabwean PSL teams conducted during the 2013 season.

### **Setting:**

The study was conducted at all designated PSL football match playing grounds distributed throughout Zimbabwe. Ten teams had medical doctors working with them for the season and only two teams had physiotherapists. All 16 teams had an unregistered medic (first aiders) working for them, three teams had state registered nurses and five had rehabilitation technicians.

### **Study population:**

All sixteen premier league teams' registered players for the year 2013 were included in the study. Each team has between twenty five and thirty registered players annually, making them between 400 and 480 players.

### **Data Collection:**

Data was collected as returns from all the premier leagues' medical personnel (doctors and physiotherapists). The research also used a questionnaire for the player's opinion about their preferred playing surface. Anthropometric data for all the players was collected from the Pre Competition Medical Assessment (PCMA) forms that were distributed to all football teams. As for the injury reports, the research used the current FIFA injury report form. This ensured standardization of the observations and made comparisons with the current football injuries from within and across the globe easier.<sup>19</sup> The FIFA injury data collection form was used with an induction talk to all the team medical personnel in order to ensure that there was uniform understanding of the data collection forms.<sup>19</sup> We did a pilot study to standardize the tools with one team and made no changes to the tools.

## Data analysis

The data were exported from excel and analyzed using STATA version 12.0 (College Station, Texas, USA) by a local statistician. Means and standard deviations for the players' anthropometric measurements were calculated. Outcome measures were injury incidence (injuries/1000 phrs of exposure). For analysis, injury incidences for AT surfaces were aggregated and compared with aggregated data for NT surfaces. Injury incidences were compared between groups using rate ratios (95% confidence intervals). Statistical significance was conventionally set at  $p < 0.05$ .

## Operational definitions

---

Training session	Team training under the supervision of the coaching staff that involved physical activity
Match	Competitive or friendly match against another team
Injury	Injury resulting from playing football and leading to a player being unable to fully participate in future training or match play (i.e. time loss injury)
Slight injury	Injury causing absence from training and match play for <1 day
Minimal injury	Injury causing absence 1-3 days from training and match play
Mild injury	Injury causing absence 4-7 days from training and match play
Moderate injury	Injury causing absence 8-28 days from training and match play
Severe injury	Injury causing absence >28 days from training and match play
Foul play injury	Match injury resulting from foul play according to the decision of the referee

Injury incidence	Number of injuries per 1000 player hours [ $(\sum \text{injuries} / \sum \text{exposure hours}) \times 1000$ ].
Player	
Hours/match	X (Matches)*11 (players in a match)*1,5hrs ( Duration of a league match)

---

### **Ethical considerations:**

All the registered 2013 seasons' PSL Players were informed about the study and accepted participation in the study by signing the informed consent form (Annexure 1). The study protocol was accepted and approved by the University of Stellenbosch ethical committee number **S12/11/286**

### **RESULTS**

A total of 438 registered players from sixteen PSL teams for the year 2013 were issued with a questionnaire at the beginning of the season. Of these, 325(74.2%) responded to the questionnaire. A total of 78 (22.8%) of them were using AT as their home ground as compared to 247(77.2%) who were using NT as their home ground. The players' anthropometries are shown in Table1 below. Mean age for the players was  $25.6 \pm 4.5$  years while the players' mean BMI was  $24.9 \pm 3.0 \text{ kg/m}^2$ .

Only 30 (9.2%) of the players preferred to use the AT and 295 (90.8%) preferred to play on the NT. When asked which surface they thought was associated with more injuries, 250 (76.9%) indicated AT while only 29 (8.9%) indicated NT. The remaining 46 (14.2%) indicated that they were not sure. For injury reporting, only 9 (56.3%) teams gave complete returns at the end of the season. Two teams refused to participate because they did not have doctors contracted to them, three had incomplete returns and the remaining two did not use the standard PCMA and injury return forms to record the

injuries. The study therefore reports on the returns of the nine teams with a total of 364 injuries indicated.

**Table 1:** Anthropometric data registered 2013 PSL players (N=325)

<b>Variable</b>	<b>Mean (SD)</b>	<b>Range</b>
Age (years)	25.6±4.5	18 – 38
Height (Meters)	1.7±0.1	1.6 – 1.9
Body weight (Kgs)	71.6±9.4	47.9 – 93
BMI (Kgs/m <sup>2</sup> )	24.9±3.0	15.1 – 34.0

### **Exposure**

A total of 4445 phrs of exposure were recorded during the study period of which 1138.5phrs was exposure on AT and the remaining 3316.5phrs were exposure on NT.

### **Injuries**

A total of 364 time loss injuries were recorded from the nine participating teams. The combined incidence of the injuries on the AT and NT was 81.7/1000 phrs. Of these, 97(26.6%), of the injuries were experienced on the AT with an overall incidence of 85.2 injuries per 1000phrs while 267(73.4%) of the injuries were experienced on the NT platform, with an overall incidence of 80.5 injuries per 1000phrs. The injuries were analyzed according to body part (Table 2), and severity of injury (Table 3) as depicted below.

**Table 2: Incidence of football injuries on AT and NT in relation to by body part (N=364)**

	<b>Artificial Turf</b>		<b>Natural Turf</b>		<b>Rate Ratio</b>	<b>95% CI</b>
	<b>n</b>	<b>Incidence /1000phrs</b>	<b>n</b>	<b>Incidence /1000phrs</b>		
Abdomen	1	0.89	4	1.21	0.74	(0.08 – 6.65)
Achilles tendon	-	-	3	0.91	-	-

Ankle	13	11.42	63	18.99	0.60	(0.33 – 1.09)
Elbow	1	0.89	6	1.81	0.49	(0.06 – 4.07)
Finger	-	-	4	1.21	-	-
Foot	9	7.91	6	1.81	4.37	(1.56 – 12.28)*
Forearm	1	0.89	1	0.30	2.97	(0.42 – 21.09)
Groin	4	3.51	16	4.82	0.73	(0.24 – 2.18)
Hand	-	-	3	0.90	-	-
Head/face	11	9.66	37	11.16	0.87	(0.44 – 1.71)
Hip	4	3.51	7	2.11	1.66	(0.17 – 16.41)
Knee	14	12.3	28	8.44	1.46	(0.77 – 2.77)
Lower leg	7	6.15	21	6.33	0.97	(0.41 – 2.28)
Lumbar spine	1	0.89	9	2.71	0.33	(0.04 – 2.60)
Neck	2	1.76	2	0.60	2.93	(0.41 – 20.81)
Pelvis/sacrum	-	-	1	0.30	-	-
Shoulder	4	3.51	11	3.32	1.06	(0.34 – 1.10)
Sternum/ribs	2	1.76	7	2.11	0.83	(0.17 – 3.99)
Thigh	15	13.18	26	7.84	1.68	(0.89 – 3.17)
Thoracic spine	1	0.89	1	0.30	2.97	(0.42 – 21.07)
Thump	-	-	2	0.60	-	-
Toe	2	1.76	2	0.60	2.93	(0.41 – 20.80)
Upper arm	2	1.76	1	0.30	5.87	(0.53 – 64.71)
Wrist	3	2.64	6	1.81	1.46	(0.37 – 5.84)

\* indicates significant differences among the injuries by nature of play platform

Only the rate of foot injury occurrence was more likely to occur among those who played in AT when compared to those who played in NT.

**Table 3: Incidence and severity of injuries by playing surface (N=364)**

Injury severity	Artificial Turf		Natural Turf		Rate Ratio	95%CI
	n	Incidence /1000phrs	n	Incidence /1000phrs		
Slight	19	16.69	85	25.63	0.65	(0.39–1.07)
Minimal	29	25.47	56	16.89	1.51	(0.95–2.41)
Mild	36	31.62	75	22.61	1.40	(0.94–2.08)
Moderate	10	8.78	45	13.57	0.65	(0.33-1.29)
Severe	3	2.63	6	1.81	1.45	(0.36–5.80)
<b>Total</b>	<b>97</b>	<b>85.20</b>	<b>267</b>	<b>80.51</b>	<b>1.06</b>	<b>(0.84–1.34)</b>

This analysis showed no significant differences in the overall incidence of injury between the surfaces during match plays during the season, [RR= 1.06; 95% CI: 0.84 – 1.34]

## DISCUSSION

With regards to the player preferences, the majority (90.8 %) preferred to play on the natural turf. This was in line with the thinking by 76.9% of the players who thought that the AT was associated with more injuries. The finding is in keeping with a recent study that had a similar finding where 94% of the players thought that the AT increased the risk of sustaining injuries.<sup>22</sup> This thinking can be attributed to the historical issue that the AT (1<sup>st</sup> and 2<sup>nd</sup> generation turfs) were associated with more injuries than the NTs.<sup>4</sup> A Zimbabwean weekly,<sup>10</sup> published articles condemning the use of the AT without any

reasonable scientific data , citing poor maintenance and neglect as the main reason for Rufaro stadium (AT) to be a dangerous match ground.

The overall incidence of injuries on the AT was 85.2 /1000 phrs as compared to 80.5 /1000 phrs on the NT with a risk ratio of 1.06 (95%CI 0.84-1.34). The conclusion is that there is no statistically significant difference between injury incidences on the AT as compared to the NT and supports the review(of 12 cohorts) concluding the same.<sup>23</sup>

The injury rates for European studies ranged from 3.6/1000 phrs , to 17/1000 phrs.<sup>5,24-,27</sup> Two similar African studies depicted injury incidences of 289/100phrs and 64.6/1000phrs respectively.<sup>27,28</sup> This study found an overall incidence of 81.7 /1000 phrs. There is therefore need for further studies to look into the various mechanisms of injuries in Africa.

## **LIMITATIONS**

The main weakness of this study is that it did not distinguish between recurrent injury or new injury. This has been also a weakness in several earlier papers but Finch CF and Cook J have come up with a Subsequent Injury Categorisation<sup>20</sup> (SIC) model that will address this in future .Another weakness maybe observer bias,<sup>21</sup> with regards to team doctors / physiotherapists overly recording even minor injuries. This may account for high injury rates, but even if we remove the slight injuries, the injury rates still remain very high for this Zimbabwean study.

## **CONCLUSION**

Football players believe that the AT is associated with increased risk of injury. There was no significant difference in injury incidence rates between the AT and NT during the 2013 PSL season in Zimbabwe. When comparing the severity of the injuries, there was also no significant difference in severity of the injuries sustained between the AT and the NT. The injury incidences were much higher than comparable European studies and there is need for further studies to explore the reasons.

## **ACKNOWLEDGEMENTS**

First and foremost would like to acknowledge my supervisor Dr Michael Pather for making me believe that this was a worthwhile study. Let me also acknowledge the work of all the team medics, owners and administrators who supported the study throughout the 2013 PSL season with the meagre resources that were at our disposal. I have to mention the input from Mr. Mandozana Gibson the statistician and Dr Mario Bizzini with clarity on the definitions of the injury rates. Finally I have to acknowledge the support that I got from my family and my Friend Billy Rigava for enabling me to soldier on even when the chips were down.

## **REFERENCES**

1. Topends Sport. The sport and Science Resource.  
<http://www.topendsports.com/world/lists/popular-sport/> visited June 2014
2. ZIFA Players Register as at June 2014.
3. FIFA. Football Development  
Goal.<http://www.fifa.com/aboutfifa/footballdevelopment/projects/goalprogramme/status.html> -visited June 19 2014.
4. DragooJL, Braun HJ. The Effect of playing Surface on Injury rate: A review of current literature. *Sports Med.* 2010; 40 (11): 980-990.
5. Ekstrand J, Hägglund, M Fuller CW. Comparison of injuries sustained on artificial turf and grass by male and female elite football players *Scandinavian Journal of Medicine & Science in Sports* . 2011; 824–832.
6. Constantinou D. *Football Medicine: CME* 2010; 28 (5) : 197.
7. Constantinou D. *Football injuries – surveillance, incidence and prevention: CME* 2010; 28 (5): 220-225.
8. Shwellnus M P. *Muscle Injuries in Football: CME* 2010; 28 (5): 234.
9. Voice Of America/Zimbabwe. Zimbabwe health sector severely understaffed, official tells Parliament . <http://www.voazimbabwe.com/content/zimbabwes-health-sector-severely-understaffed-says--140934493/1456992.html>. Visited June 2014.



10. Mashaya B, Weekend  
Post.<http://www.weekendpost.co.zw/articles/2013/11/08/sporting-facilities-in-bad-shape>. Visited June 2014.
11. Stiles VH, James IT, Dixon SJ, Guisasola IN. Natural Turf Surfaces: The Case for Continued research. *Sports Med* 2009; 39 (1):66-84.
12. Meyers MC. Incidence, Mechanisms, and Severity of Game-Related College Football Injuries on Field Turf Versus Natural Grass: A 3 –year Prospective study. *Am J Sports Med* 2010; 38: 687-697.
13. Steffen K, Andersen TE, Bahr R. Risk of injury on artificial turf and natural grass in young female football players: *Br J Sports Med* 2007; 41(Suppl 1): 33 -37.
14. Kordi R, Hemmati F, Heidarian H, Ziaee V. Comparison of the incidence , nature and cause of injuries sustained on dirt field and artificial turf field by amateur football players: *Sports Medicine , Arthroscopy , Rehabilitation, Therapy and Technology* 2011; 3: 3.
15. Javier M, Pablo G, Santiago V and Enrique Injury incidence in a Spanish sub-elite professional football team: A prospective study during four consecutive seasons. *Journal of Sports Science and Medicine* 2011; 10: 731-736.
16. Junge A, Lamprecht M, Stamm H, Hasler H, Bizzini M, Tschopp, Met al.  
Countrywide campaign to prevent soccer injuries in Swiss amateur players. *The American Journal of Sports Medicine* 2011; 39: 57.
17. Ekstrand J, Timpka T, Hägglund M. Risk of injury in elite football played on artificial turf versus natural grass: a prospective two-cohort study *British Journal of Sports Medicine*, 2006; 40: 975-80.
18. Kaila, R .Influence of modern studded and bladed soccer boots and sidestep cutting on knee loading during match play conditions. *The American Journal of Sports Medicine* 2007; 35:1528.
19. Fuller CW, Ekstrand J, Junge A, Andersen TE, Bahr R, Dvorak J, et al. Consensus statement on injury definitions and data collection procedures in studies of football (soccer) injuries. *British Journal of Sports Medicine* 2006: 40: 193–201.

20. Finch CF, Cook J. Categorising sports injuries in epidemiological studies: the subsequent injury categorisation (SIC) model to address multiple, recurrent and exacerbation of injuries. *British Journal of Sports Medicine* 2014 Sep;48(17):1276-80.
21. Almutawa M, Scott M, George KP, Drust B. The incidence and nature of injuries sustained on grass and 3rd generation artificial turf: A pilot study in elite Saudi National Team footballers. *Physical Therapy*. 2014;15(1):47-52.
22. Poulos CC, Gallucci J, Gage WH, Baker J, Buitrago S, Macpherson AK. The perceptions of professional soccer players on the risk of injury from competition and training on natural grass and 3rd generation artificial turf. *BMC Sports Sci Med Rehabil*. 2014;6(1):11.
23. Williams S, Hume PA, Kara S. A review of football injuries on third and fourth generation artificial turfs compared with natural turf. *Sports Med*. 2011;41(11):903-23.
24. Fuller CW, Dick RW, Corlette J, Schmalz R. 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* 2007;41(Suppl 1):i20-2.
25. Fuller CW, Randall RW, Corlette J, et al. Comparison of the incidence, nature and cause of injuries sustained on grass and new generation artificial turf by male and female football players, Part 2: training injuries. *British Journal of Sports Medicine* 2007; 41: i27-i32.
26. Ekstrand J, Hägglund M, Fuller CW. Comparison of injuries sustained on artificial turf and grass by male and female elite football players. *Scand J Med Sci Sports*. 2011;21(6):824-32.
27. Bjørneboe J, Bahr R, Andersen TE. Risk of injury on third-generation artificial turf in Norwegian professional football. *British Journal of Sports Medicine*. 2010;44(11):794-8.
28. Akodu AK, Owoeye OB, Ajenifuja M, Akinbo SR, Olatona F, Ogunkunle O. Incidence and characteristics of injuries during the 2011 West Africa Football Union (WAFU) Nations' Cup. *Afr J Med Sci*. 2012;41(4):423-8.

29. Theron N, Schwellnus M, Derman W, Dvorak J. Illness and injuries in elite football players-a prospective cohort study during the FIFA Confederations Cup 2009;Clin J Sport Med. 2013;23(5):379-83.
30. Dvorak J, Junge A, Grimm K, et al: Medical report from the 2006 FIFA World Cup Germany. British Journal of Sports Medicine 2007; 41: 578-581
31. Junge A, Dvorak J: Soccer injuries: a review on incidence and prevention. Sports Med 2004, 34:929-938.

**ANNEXURE 1:**

**Premier Soccer League Injuries Research Questionnaire**

**Section 1**

1. What is your AGE GROUP (tick appropriate one)

Under 19	19 to 24	25 to 29	Above 30
----------	----------	----------	----------

2. How many years have you played Premier league football? (*tick appropriate one*)

<5years	5 to 9 years	10 to 14 years	Above 15 years
---------	--------------	----------------	----------------

3. What turf is your teams' training ground?(*tick appropriate one*)

Natural	yes	No	Artificial	yes	No
---------	-----	----	------------	-----	----

4. What turf is your team's home match ground?(*tick appropriate one*)

Natural	yes	No	Artificial	yes	no
---------	-----	----	------------	-----	----

5. Which turf do you prefer to play on? (*tick appropriate one*)

Natural	yes	No	Artificial	yes	no
---------	-----	----	------------	-----	----

6. Playing football on the artificial turf is associated with more injuries? (*tick appropriate one*)

True	False	Not sure
------	-------	----------

## **ANNEXURE 2:**

### **PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM**

#### **TITLE OF THE RESEARCH PROJECT:**

A comparison of injuries sustained on artificial and natural soccer turfs among premier soccer league football players in Zimbabwe.

**REFERENCE NUMBER: SN 11/286**

**PRINCIPAL INVESTIGATOR: Dr E Chagonda**

**ADDRESS: 22 Doon Road, Vainona, Harare, Zimbabwe**

**CONTACT NUMBER: 00263912292034**

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff or doctor any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee at Stellenbosch University** and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

#### **What is this research study all about?**

- You are being asked to participate in a research study to determine the injuries that you get from playing football on both the artificial and natural turfs during PSL matches. The purpose of the study is to compare the nature of the injuries and assess their severity. You were selected as a possible participant in this

study because you are a registered PSL player (all registered players are eligible).

### **What will your responsibilities be?**

- *We expect you to cooperate with your medical team and report any injuries that you get.*

### **Will you benefit from taking part in this research?**

- We cannot and do not guarantee or promise that you will receive any financial benefits from this study.
- *The research will benefit the country and the football playing world with the data so that we will plan on who, how and what to expect when people are playing football .*

### **Are there in risks involved in your taking part in this research?**

- *Apart from the inherent risk if injury associated with playing football, there is no additional risk to you.*

### **If you do not agree to take part, what alternatives do you have?**

Participation in this study is voluntary. If you decide not to participate in this study, your decision will not affect your future relations with the ZIFA its personnel, and associated leagues **and Stellenbosch University**. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty.

### **Who will have access to your medical records?**

If you indicate your willingness to participate in this study by signing this document, we plan to disclose to the **Department of Family Medicine , University of Stellenbosch , ZIFA, CAF and FIFA so that we have our own information about the injuries in Zimbabwe and make better planning and ultimately improve our football**. Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission.

### **What will happen in the unlikely event of some form injury occurring as a direct result of your taking part in this research study?**

.. The study does not lead to any injuries. In the event of injury during your participation in this study, treatment can be obtained at your usual Hospital/Clinic. You should

understand that the costs of such treatment will be your responsibility. Financial compensation is not available.

### **Will you be paid to take part in this study and are there any costs involved?**

No you will not be paid to take part in the study . There will be no costs involved for you, if you do take part.

### **Is there anything else that you should know or do?**

- You should inform your family practitioner or usual doctor that you are taking part in a research study.
- You can contact Dr EDWARD CHAGONDA. at CELL 0772292034 if you have any further queries or encounter any problems.
- You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.
- You will receive a copy of this information and consent form for your own records.

### **Declaration by participant**

By signing below, I ..... agree to take part in a research study entitled (*insert title of study*).

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) ..... on (*date*) ..... 2012.

.....  
**Signature of participant**

.....  
**Signature of witness**

**Declaration by investigator**

*I Dr EDWARD CHAGONDA*..... declare that:

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use a interpreter. (*If a interpreter is used then the interpreter must sign the declaration below.*)

Signed at (*place*) ..... on (*date*) ..... 2012.

.....  
**Signature of investigator**

.....  
**Signature of witness**

**Declaration by interpreter**

I (*name*) ..... declare that:



- I assisted the investigator (*name*) ..... to explain the information in this document to (*name of participant*) ..... using the language medium of Shona/Ndebele.
- We encouraged him/her to ask questions and took adequate time to answer them.
- I conveyed a factually correct version of what was related to me.
- I am satisfied that the participant fully understands the content of this informed consent document and has had all his/her question satisfactorily answered.

Signed at (*place*) ..... on (*date*) .....

.....  
**Signature of interpreter**

.....  
**Signature of witness**