



INJURY SURVEILLANCE IN A SOCCER TOURNAMENT IN KENYA

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Abstract

The occurrence of injuries in sports and the negligence of the injured players are key factors in the early exit of talented players from competitive sport in developing countries. It is for this reason that this study prospectively observed and documented injuries to male soccer players who participated in the 2001 Moi Golden Cup Tournament. A total of 24 matches out of 30 were observed and injury statistics taken while watching the matches live in various stadia around the country. The injuries were recorded on a soccer match observation chart. The injuries recorded were those that either led to a temporary stoppage of the match or first aid attention to the affected player. The data was analysed and descriptively presented. Among other findings, it was established that most injuries, 44(43.14%) occurred in the preliminary phase of the tournament. Most injuries, 50(49%) were caused by an opponent as a result of tackling or fouling, 28(27.5%). The offensive zone recorded more injuries 37(36.3%) compared to the defensive and construction zones, which recorded 35 (34.3) and 30(29.4%), respectively. Soft tissue injuries accounted for the highest percentage (77.45%) of injuries during the tournament. Away teams registered more injuries 58(56.9%) than home teams 44 (43.1%), while winning teams incurred more injuries 54 (53%) than losing teams 48(47%). Anatomically, the lower body was most affected by injuries, 67(65.78%). Based on the findings of this study, it is recommended that coaches and officials should lay emphasis on adequate preparation of players, provision of protective gear, observation of fair play and the proper maintenance of soccer playing facilities to avoid occurrence of unnecessary injuries.

Key words: Moi Golden Cup, Aetiology, Mechanism, Offensive zone, Defensive zone.

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INTRODUCTION

The risk of injury is inevitable in any competitive sporting activity involving strength, speed and endurance (Bond, Miller & Cristied, 1980). The incidence of sports injuries is rising at an alarming rate thereby causing concern among organisations such as Sports Council of Europe, Federation of International Basketball Associations (FIBA), Federation of International Football Associations (FIFA), International Olympic Committee (IOC) and the World Health Organization among others (Ekstrand, 1994; Reinstroem, 1994).

One of the reasons for the increasing rate of injuries is the over emphasis on winning and the implication for uncompromising and tough training regimes (Williams & Reinstroem, 1994). Both training and competition are capable of impacting negatively on players unless well prescribed and monitored. The possible consequences of incurring an injury range from an inability to complete competition schedule successfully up to serious and permanent damage to an athlete.

Irrespective of the nature, cause and mechanism, injuries are a serious hazard in many sports (Fox, 1981; Hardiker, 1981; Huffman, 1981; Loft, 1981; O'Neill, 1981; Reilly, 1981; Wilkinson, 1981). Injuries hamper a player's performance both in training and competition, disrupt the conditioning process (Reilly, 1981) and prevent them from realizing their athletic potential (Reilly & Stirling, 1990). In soccer, for example, there is a lot of physical contact in the course of tackling or contesting possession of the ball with opponents and this inevitably leads to injury of varying severity (O'Neill, 1981; Reilly, 1981). Additionally, the basic elements of the sport include running, turning, jumping, tackling, kicking, landing, and heading the ball. All these elements therefore predispose a participant to injury as a result of direct blows and indirect mechanisms (O'Neill, 1981).

Despite the inevitability of injury, coaches and officials have a role to create a safe training and competition environment. It is on this basis that this study aimed at analysing injuries incurred by players during the Moi Golden Cup soccer tournament in Kenya in terms of their nature, ecology, contextual occurrence and

aetiology in relation to the playing field and winning as well as losing.

MATERIALS AND METHODS

The 2001 Moi Golden Cup tournament from where data were gathered was played on a knockout basis. Out of 30 matches, 24 were randomly selected on a stratified basis, for observation. A soccer match observation chart (Appendix A) was used as the instrument for collecting data. The chart was a modified instrument of those previously applied to hockey (Asembo, 1995; Wekesa, Asembo & Njororai, 1993; Wekesa, Asembo, Njororai & Madaga, 1996); rugby (Wekesa, Asembo & Njororai, 1996; Asembo, Njororai & Munayi, 1997); soccer (Wekesa, 1995); handball (Asembo & Wekesa, 1998) and Volleyball (Wekesa, 1993). The chart sought the following information: home and away team, tournament phase, the nature, site, aetiology, mechanism, time and context of the injuries, part of the field and match outcome. The researchers worked hand in hand with the various team doctors to certify the nature of the injuries.

The data were computed in terms of frequencies, percentages and descriptively presented.

RESULTS AND DISCUSSION

A total of 102 injuries were recorded in the 24 matches observed. On average, there were 4 injuries per match. This average is in agreement with the 3.6 established by Wekesa, Asembo, Njororai and Madaga (2003). However, the injury rate in soccer was higher than what has been found in other disciplines such as handball (1.3), volleyball (0.6) and hockey (2.1) (Wekesa, Asembo, Njororai & Madaga, 2003).

During the tournament, opponents caused 50(49%), the surface 27(26.5%), ball 15(14.7%), goal post 1 (0.98) and others 9(8.82%) injuries. From these analyses, it is evident that opponents caused the majority of injuries incurred in the matches. These findings are close to Albert's (1993) observation that in outdoor soccer, the percentage of injuries resulting from player to player contact accounted for 42%. Watson (1995) also reported that the opponents caused 48% of the injuries. The surface of the playing facility is another major cause of injuries. This would be attributed to some of the poorly maintained playing surfaces across the country. A number of pitches do not have sufficient grass cover and are not watered during dry weather. It is imperative that

coaches and officials strive to improve the players' physical condition as well as properly maintaining the soccer fields to avoid incurring unnecessary and costly injuries. It is apparent that the technical abilities of the players also require upgrading to avoid unnecessary contacts, which lead to injury.

Among the other factors, the issue of self inflicted injuries featured. This has to do with poor technique, rough play, inadequate warm-up and poor fitness levels (Ekstrand, 1994; Reilly & Stirling, 1990; Reinstroem, 1994). There is need for players to be educated about the importance of warming up before competition as well as the proper execution of soccer techniques to avoid potentially injurious contacts via tackles and collisions. According to O'Neill (1981), soccer players who are not fit are more vulnerable to injury than the well-conditioned ones. One key aspect of training is the flexibility routine to stretch and strengthen muscles. Tactical awareness should also be instilled in the players. For example, a player who passes a ball to another who at that point has no chance of avoiding an opponent's tackle, may predispose his team mate to injury. Communication among players is also useful in avoiding unnecessary collisions during a match.

Table 2 shows the anatomical distribution of the injuries incurred during the 2001 Moi Golden Cup Soccer Tournament in Kenya.

Table 2: Anatomical distribution of the injuries during the tournament

Site of body	Frequency (number)	Percentage (%)
<u>Lower limb</u>		
Hip	05	4.90
Thigh	25	24.59
Knees	08	7.84
Lower leg	19	18.63
Ankle	10	9.80
Sub Total	67	65.69
<u>Trunk</u>		
Back	02	1.96
Chest/rib area	01	0.98
Abdomen	01	0.98
Sub Total	04	3.92
<u>Upper Limb</u>		
Shoulder	03	2.94
Elbow	04	3.92
Wrist	03	2.94
Palm	04	3.92
Sub Total	14	13.73
<u>Head</u>		
Forehead	06	5.88
Cheek	01	0.98
Back head	02	1.96
Parietal	09	8.82
Sub Total	17	16.67
TOTAL	102	100

Anatomically, 65.7% of the injuries affected the lower body (below the hip) while 34.3% affected the upper body. The head suffered confusions while the lower limbs suffered mainly soft tissue injuries that included bruises, abrasions and sprains. These injuries negatively affect the overall performance of a team since

players who are injured will lose concentration and the ability to execute their game plans. The game of soccer involves use of the lower limbs more than the upper hence the finding is typical of the game. It was noticeable during matches that some players did not wear shin guards. It is important that players strictly adhere to the FIFA provisions of wearing stockings as well as shin guards for protective purposes. Match and team officials should collectively endeavour to educate the players on the need to protect oneself given that soccer is a contact sport. According to Watson (1995) and O'Neill (1981), the lower limbs are the commonest site of injury in soccer. The rules of soccer do not allow players to touch or control the ball with their arms or hands. Therefore, so much of the trauma occurs to the lower limbs (O'Neill, 1981).

Most injuries 69(67.6%) occurred in the first half compared to 33 (32.4%) in the second half of the matches. These higher injury rate in the first half could be due to the aggressive and combative approach by players, hence predisposing themselves to injury. The initial period of a match is a time for each team to assert authority and dominance. Hence the over enthusiasm could easily translate to reckless tackles, fouling as well as tightening of muscles.

However, more players on the winning teams incurred more injuries 54(53%) than those on the losing side 48(47%). This could be attributed to the fact that winning teams tend to possess the ball more, hence attract tackles from the opponents in an attempt to win back possession (Njororai, 2000).

CONCLUSION AND RECOMMENDATIONS

It is evident from the findings of this study that occurrence of injuries was a common phenomenon during the 2001 Moi Golden Cup tournament in Kenya. An average of 4 injuries were observed per match. Most of the injuries affected the soft tissue and were caused mainly by tackles and through contact with playing surfaces. The largest proportion of the injuries affected the lower limbs. Most of the injuries occurred during first half of the matches, and the winning teams incurred most of them. These results show that soccer players are susceptible to injury during play. Such injuries adversely affect players, leading to their inability to continue playing, complete competition schedules or even permanent impairment. It is, therefore, necessary to provide playing environments that are safe for players to effectively express themselves. Soccer coaches, officials, administrators and players themselves have a responsibility to put in place safety measures that can assist minimize

occurrence of injuries during soccer matches. Emphasis should be laid on adequate preparation of players (technique, tactics, mental and physical conditioning), provision of proper protective gear, observation of fair play and proper maintenance of soccer playing facilities to avoid occurrence of injuries. It is also important that qualified medical personnel, are engaged to manage complications and possible permanent damage, arising from injuries incurred during play. A data bank of injury occurrences should also be put in place so as to help monitor the long-term trends in soccer injuries nationally.

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APPENDIX A: SOCCER MATCH INJURY NOTATION CHART

TOURNAMENT-----

DATE-----TIME-----VENUE-----

TEAMS: HOME-----VISITING/AWAY-----

TOURNAMENT STAGE-----

Serial no.	Nature	Site	Time	Aetiology	Team	Mechanism	Position
1.							
2.							
3.							
4.							
5.							
6.							

SUMMARY: 1ST HALF-----
2ND HALF-----
TOTAL-----

OBSERVED BY-----DATE-----SIGN-----

CHECHED BY-----DATE-----SIGN-----