

Perceived Causes, Prevention and Treatment of Injuries: The Case of Assela Town Male Football Club Players of Ethiopia

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Abstract: Injury is defined as an incident occurring during a training session or a match and causing a soccer player to miss the following sessions. One important element in determining the causes of injuries and prevention is having a proper understanding of the causes and ways of preventing as well as treatment techniques. The purpose of the research was to examine the perceived causes, prevention and treatment of male players injuries in Assela town football club. The participants of the research were 31; Out of this 25 football players, 2 coaches, 3 administrators of the clubs and 1 team physician were used as a sample using random sampling technique. The major instruments in this study were questionnaire, interview, observation and focus group discussion. Both a qualitative and quantitative methods were used to analyze the data. Scarcity of proper sportswear, lack of awareness on causes of injury, absence qualified team physician and coaches, lack of first aid materials, inappropriate training surfaces, overdose of training and absence/inappropriate warm-up ,cool down, stretching of the ligaments and joints were the major perceived cause of injuries stated by football players, coaches, administrators of the club and team physician. For this reason adequate sport wears, aware on cause of injuries, qualified team physician and coaches, adequate first aid materials, appropriate training surfaces, appropriate warm-up, cool down and stretching and using RICE treatment where the main preventive and treatment of players injuries. Therefore, depending on the result, it is recommended that concerned bodies such as football players, coaches, administrators of the clubs and team physician should strive to minimize players' injuries.

Keywords: - Injury, Prevention, performance.

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I. INTRODUCTION

Football is one of the most popular sports throughout the world. It has a high injury rate, and most injuries occur in the lower limb (Hagglund, Waldén & Bahr, 2005; Powell & Barber, 2000). The injury was defined as an incident occurring during a training session or a match and causing a soccer player to miss the following sessions (Hawkins & Fuller, 1999; Orchard, 2001).

Any physical complaint sustained by a player those results from a football match or football training, irrespective of the need for medical attention or time loss from football activities. An injury that results in a player receiving medical attention is referred to as a “medical attention” injury, and an injury that results in a player being unable to take a full part in future football training or match play as a “time loss” injury (Finch, 1997).

Football is fun, keeps you fit and prevents diseases. However, it can sometimes result in injury or in very rare cases, sudden cardiac arrest, if football health potential is to be fully exploited, possible risks must be kept to a minimum. To this end, FIFA Medical Assessment and Research Centre have developed a series of prevention measures (Michel, n. d). According to Hackney (1994), sports injuries are the result of both intrinsic and extrinsic factors and doctors should be able to recognize the types of injuries associated with various sports. Bahr & Holme (2003) considered intrinsic factors, also called internal athlete-related risk factors, as including the age, sex, weight, strength, and flexibility of the athlete and extrinsic risk factors can be divided into factors related to exposure, training, equipment and environment. Type of sports, exposure time, position in the team, and level of competition are exposure factors.

The common football injuries are hands and arms, head and face, groin pull, muscle cramp, hamstring pull, knee, ankle sprain/fracture, Achilles tendonitis, calf strain and shoulder dislocation. While overuse injuries can occur, traumatic injuries such as concussions are most common therefore, Soccer injuries can be prevented in different way such as, warm up, cool down and stretching have a pre-season physical examination, hydrate

adequately, appropriate footwear and protection, eat enough balanced diets, rest and recovery and avoid overuse injuries (Samuel, 2012).

According to Samuel (2012) the most football injury prevention methods are performing warming up, cool down, and stretching, appropriate sportswear and protection, hydration, rest and recovery. According to Van Mechelen, Hlobil & Kemper (1992) injury prevention research has been described as a model of four step sequence by reducing sports injuries such as, (1) establishing the extent of the problem: incident and severity (2) establishing the cause and mechanism of injuries, (3) introducing preventive measures (4) Assessing the effectiveness of prevention measures by repeating step one. Therefore, Injury risk can be reduced through implementing injury prevention measures such as those discussed above. Adopting most or all of these measures will help provide a safer sporting environment for players.

In order to effectively manage soft-tissue injuries the PRICER (Protection, Rest, Ice, Compression, Elevation and Refer) procedure needs to be followed. The immediate management of soft-tissue injuries during the acute inflammatory phase is very important for successful rehabilitation after the injury. The aims of immediate treatment are to: prevent further tissue damage, minimize swelling, ease pain, reduce the formation of scar tissue and reduce the time needed to rehabilitate (Chris, n. d).

Hence, one important element in determining the causes of injuries and prevention is, having a proper understanding of the causes and ways of preventing as well as rehabilitation techniques. Therefore, the causes of football sport injuries are the one among the factors that affect the performance of athletes. To maintain pick performance of the players, it requires understanding causes, prevention and treatments of football player injuries. The purpose of this study, therefore, was to examine the perceived causes, prevention and treatment of soccer players' injuries in Assela town football clubs..

II. METHODS

2.1. Study design

In order to investigate the perceived causes, prevention and treatment of male football player's injuries in Assela town football clubs a cross sectional design was used

2.2. Subject of the study

The participants of the research were 31; Out of this 25 football players, 2 coaches, 3 administrators of the clubs and 1 team physician were used as a sample using random sampling technique.

2.3. Data collection Instrument and procedure

The researcher used questionnaires, observation, interview, and focus group discussion as an instrument for data collection. Observations were carried out during the club training session for about five days. For observation check lists was prepared containing items that check different activities of the coaches, players and team physician. The face-to-face structured interview was conducted with the team physician of the football club. The questionnaire was developed for the players; the coaching staff, club administrators. As indicated on the above, the questionnaire was developed as per the objectives of the study and then the questionnaire was approved by the advisors. It was translated in to Amharic with the help of language teacher and was distributed for the players, the coaching staff. Data collection instruments constitute both closed and an open ended questions items.

2.4. Data analysis

The study was approached both quantitative and qualitative data analysis techniques were employed. The data gathered through the questionnaires, focus group discussion, observation and interview were used to summarize, editing, coding and analyzing the appropriate data to transform to reliable and useful information. Hence, interpreted using descriptive statistics describe the data using tables, chart and graphs. The statistical software that has used to facilitate the analysis work was Statistical Package for the Social Sciences (SPSS).

III. RESULTS

3.1. Pattern of injuries

Table 1 data revealed that 18 (72%) of the players responded that most injuries happened during competition period. The remaining 7 (28%) of the respondents revealed that the injuries happened during per competition period as well as non- injuries happened during the transition period as players claimed.

Table 1: Frequency of injuries in various training periods

Variables	Frequency	Percent
Pre competition period	7	28
Competition period	18	72
Transition period	0	0
Total	25	100

Injuries and body parts

As it can be observed from table 2, 20 (80%) of the players responses revealed that lower body part such as ankle, knee, hamstring Pull and heel, 5 (20%) of the respondents revealed that upper body parts were also affected such as upper limbs, trunk and head and neck. (The upper limb injuries comprised upper arm, elbow, forearm, wrist, hand and finger injuries, the trunk injuries included both chests, and abdomen, back and shoulder injuries and the face injuries included head and neck injuries). The injuries reported in this study revealed that the lower extremities were more commonly affected than the upper extremities. Similarly the data obtained from the coaches indicated that the most repetitive types of players' injuries were ankle, knee, thigh, head and hand and arms. As well as team physician responded that both upper and lower body parts of players injured, but the most affected body parts of players were in the lower extremities parts (knee, ankle, thigh, hamstring Pull and heel)

Table 2: Frequency of injuries in body part

Variables	Frequency	Percent
Upper body part	5	20
Lower body part	20	80
Total	25	100

Injuries and playing position

Figure 1 illustrates that, 12 (48%) of the players were midfielder that mostly exposed to injuries, 8 (32%) of the players were defenders that mostly exposed to injuries, 3 (12%) of the respondents were striker that mostly exposed to injuries and lastly, 2 (8%) of the respondents were goalkeeper that mostly exposed to injuries. According to players responses obtained from open-ended questions, have pointed out that the midfielder and defenders were the players commonly injured in this study. This can be understood because soccer is more forceful in the midfield and the strength of the lower limbs is required to win the ball. The defenders put their lower extremities 'on the line' when defending a ball, hence they are more likely to be injured.

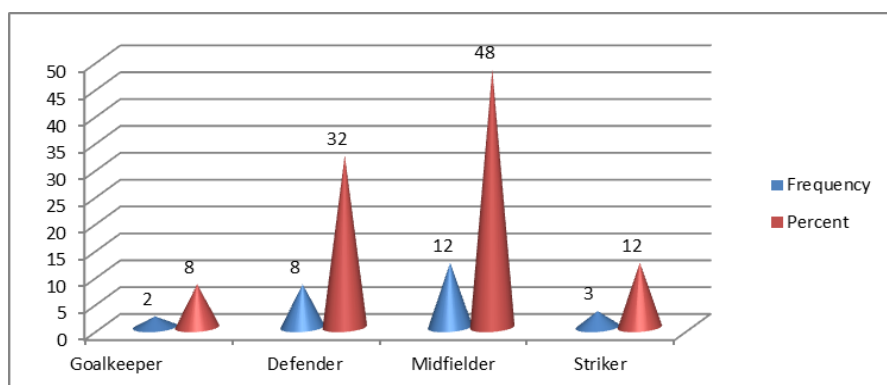


Figure 1: Frequency of injuries in players' positions

3.2. Causes of Injuries

Regarding to the major causes of injuries in football, the responses of players, coaches and team physician revealed that lack of awareness about the causes of injuries were the dominant one. In addition, they further stated as the major causes of injuries as follows,

- Inappropriate footwear (shoes, ankle protection, and shin guard),
- Lack of physical fitness
- Inadequate warm-up, cooling down and stretching
- Nutritional deficiency,
- Lack of adequate rehabilitation,
- An age, which is not adapted to high competition,
- Inadequate first aid materials and the lack of qualified team physician practitioners.
- Clubs lack awareness in possessing team physician and poor understanding of the injury's occurrence would play a role in its aggravation of injuries.

3.3. Prevention of Injuries

As it is illustrated in Figure 2, players response on the prevention method of injury, majority (96) per cent of respondent replied that proper dressing like shoes, ankle protection, and shin guard will prevent injuries. On the other hand, 20(80) per cent of respondents replied that using proper warming up as preventive measure of

injuries, whereas 18(72) per cent of respondents were replied that proper training uses as a preventive measure of injuries.

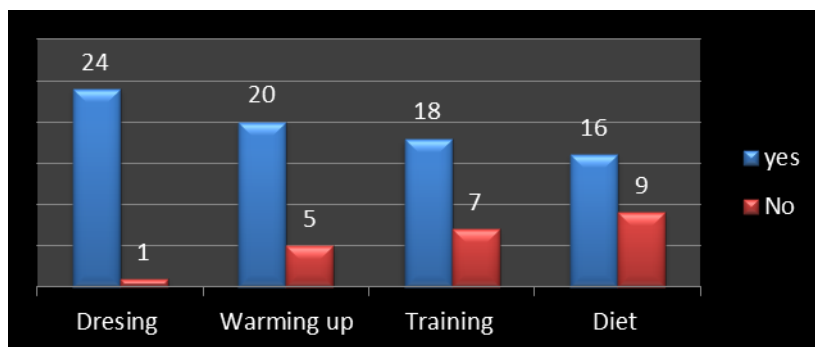


Figure2: prevention of injury

3.4. Treatment of injuries

Players requested the type of treatment they have got when they were injured during training and competition, players replied in Fig 3, illustrates that 15 (60%) of the players had got traditional treatment, 4 (16%) of the players have got medical treatment, 3 (12%) of the players have got self-treatment, 2 (8%) of the players did not benefit at all from any treatment and lastly 1 (4%) of the players have got Physiotherapy.

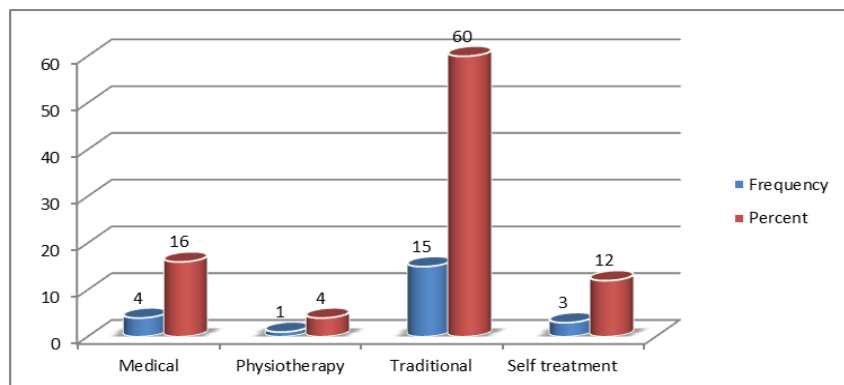


Figure 3: Mechanism of injury treatment

IV. DISCUSSION

PATERN OF INMJURIES

In this study players revealed that more than 72% of the players responded that most injuries happened during competition than training period. Similarly, according to Janvier (2004) 5 out of 7 Rwandan team medical practitioners reported that soccer injuries were more prevalent during competition than training sessions. Regarding to body part, the results of this study revealed that more than 80% of the respondents responded that the lower body part injuries such as ankle, knee and heel observed in any training or competition season. The body sites prone to soccer injuries did not differ from those found in various literatures. By summing up injury frequencies reported to ankle, knee and other remaining lower extremity parts, the findings of this study agreed with similar studies that have found lower extremity injuries as representing 60%-87% of the total injuries incurred by soccer players (Hawkins et al., 2001; Lyon, 2001; Morgan and Oberlander, 2001; Rahnama et al., 2002). Considering to playing position, the defenders and midfielders were the players commonly injured in this study. Although other studies was reported that defenders and midfielders are injured more in relation to other positions of play, the location of injuries was not related to player position (Dvorak, Junge 2000). Other studies have shown contradictory results, with some studies reporting that strikers and forward players were more susceptible to injury than other players (Andersen et al., 2004 and Árnason et al., 1996).

CAUSES OF SOCCER INJURIES

The results of this study further revealed that the causes of injuries observed were inappropriate footwear (shoes, ankle protection, and shin guard), lack of physical fitness, inappropriate playground, inadequate warm-up, cool down, stretching lack of adequate rehabilitation, lack of adequate nutrition (inappropriate diet) and inadequate first aid materials and the lack of qualified team physician practitioners. In

another study, it was reported that Extrinsic factor, also called external environmental risk factors, (Bahr and Holme, 2003) include training methods, the surface upon which the sport is played, equipment such as footwear and padding, and environmental factors such as the weather. In addition to these, McGrath and Ozanne (1997) added pre-season conditioning whereas Rahnama et al.(2002), in their study, found that playing action, zone of pitch, periods of the game were also among extrinsic factors influencing injuries.

PREVENTION OF INJURIES

The results of this study further revealed that the major prevention method of the player's injuries was using appropriate shin guards, ankle protections and shoes, Performing sufficient warm-up, cool down and stretching, adequate endurance, nutrition, rehabilitation, using adequate first aid materials and good qualified team physician practitioners and train on good playground. In another study, it was reported that a set of sporting program such as warm-up, stretching, protection and suitable equipment, appropriate surface as well as appropriate training, adequate recovery, psychology and nutrition have been designed as main components of injury prevention and rehabilitation (Brukner and Khan, 2003). However, John, Michael and Helen (2000) suggest that warm-up should start with jogging to gently raise the pulse rate. And this is followed by stretching by giving particular attention to joints and muscles that will be most active. In Assela therefore, if medical practitioners are absent during training sessions, it is due to lack of finances in the team and consequently the inability to employ team medical practitioners

TREATMENT OF INJURIES

The results of this study revealed that traditional treatment presented a higher during training and competition session than the other three (self-treatment, medical treatment and Physiotherapy) treatments. Each of the above treatments could not be used in conjunction with other treatments that revealed in this study. Contradict with another study, it was reported that when one treatment was used, there was a possibility of also using other treatments. The study revealed that, physiotherapy was classified third as a method of management after medication and self-treatment. The third ranking of physiotherapy was similar to the findings observed in a previous report after self and traditional treatments (Hakizimana, 2002). As well as, traditional massage, Ice / cold, compression, Joint mobilization, elevation, stretching and rest treatment approaches which were mainly used in both training and competitive sessions in this study were similar to the Secondary injury countermeasures consisting of PRICER, matched with the use of joint mobilization, rest, ice, compression, soft massage, compression and elevation treatment approaches which were mainly used in both training and competitive sessions in this study (Janvier, 2004).

V. CONCLUSION

The main objective of this study was to examine the perceived cause, prevention and treatment of football players' injuries in Assela town football club. Besides this, the target populations of the study were a football players, coaches, club administrators and team physician. Most players injured during the competition season; players injured lower body part such as ankle, knee and heel by means of tackling, collusion, running, jumping and charging this reasons exposed players during competition rather than a training session. Defense players were frequently injured comparing with other position players. Training, inappropriate sportswear's, inadequate warming up, cool down, lack of adequate physical fitness and rehabilitation, lack of adequate nutrition, inappropriate playground, hard surfaces, misunderstanding of training principles and lack of qualified team physician practitioners were identified as the causes of injuries. Regarding to treatment, Assela town soccer players still had got traditional treatment services sufficiently to help. This means that the players treated by a non-professional team physician, this implies that the players exposed more to injuries. Although a pronounced difference was detected in terms of Illinois test among the players in relation to age, we did not detect prominent difference in the other physical fitness tests among the players in relation to age and position. The physical fitness status of Ethiopian females' premier league players was considerably better than the world's standards in terms of body mass index, sit up and push up tests whereas; it was poor in terms of agility and sit and reach tests. A considerable attention should be given by the Ethiopian football federation to bring players to the world's standards in terms of agility and sit and reach fitness. The national football federation should replicate the study involving the entire females' football premier league in the country in order to document a reliable working material for further use by other upcoming researchers in the area. Therefore, the team owners should fulfill all the necessary sport wears, follow proper training schedule, and also fulfill team physician to minimize and treat sport injuries.

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