

# RELATIONSHIP BETWEEN SELECTED PSYCHOLOGICAL FACTORS AND OCCURRENCES OF FOOTBALL INJURIES: AN EMPIRICAL STUDY

Kuljeet Singh<sup>1</sup>, Sinku Kumar Singh<sup>2</sup>

Research Scholar, Swami Ramanand Teerth Marathwada University, Nanded<sup>1</sup>

Swami Ramanand Teerth Marathwada University, Nanded (MS)<sup>2</sup>

**Abstract:** Psychological factors or psychological parameters can play a major role in determining injuries in sports and physical activities. Although physical factors are involved in the sports injuries, the accident-prone profile appears to be dominated by psychosocial factors. The primary objective of the study is to determine the psychological and Occurrences of football Injuries ,The sampling method of the present research was the purposive method of sample design for football players. Data was collected through questionnaire form respondents from 1000 football players. The investigator is contacting the footballers individually and in some cases also at the venue of inter-university, state tournaments. A total of 578 injuries were detected among 1000 football players in one year during this period. A correlation test was taken to find out the relationship between Psychological Factors and occurrences of injuries of football players were correlated negatively with sum of the Psychological factors. To test for the effect of Psychological Factors on occurrences of football injuries, multiple regression analyses was carried out. Psychological Factors and the interaction term were regressed on overall occurrences of football injuries

**Keywords:** Factors, Occurrences, Injury, Football, Game

## I. INTRODUCTION

Psychological factors such as, stress, depression, anxiety, fear, competitive temperament, etc may play a dominant role in determining of injuries in sports and physical activities (Andreas Ivarsson and Urban Johnson ,2010). Though physical factors such as previous injuries, level of play, flexibility, joint instability, joint laxity, muscle strength, aerobic fitness, functional performance, prolonged reaction time, players height, weight and BMI, and anatomical alignment are involved in the sport injuries, the accident-prone profile seems to be dominated by psychological factors (Ostenberg and Roos 2000). Injuries in football normally occur due to physical contacts. Even though injuries in football are driven by several factors, factors such as the physical and the lack and/or improper physical preparation, the violence and harsh playing style of the opponents, and other factors like psychological profiles also need to be considered ( Chomiak , Junge , Peterson , and Dvorak , 2000).

Football is one of the dangerous team sports in the india and world and injuries are a frequent occurrence in football (*Bahr and Holme , 2003*; *Drawer and Fuller , 2002b*). Football requires a variety of physical as well as specific performance related fitness along with technique playing tactics. It is an entertaining and social game that can be played at a recreational level or as a competitive game from childhood to old age (*Hawkins RD and Fuller CW , 1999 ; Inklaar , Bol , Schmikli , and Mosterd 1996; Nielsen AB and Yde J, 1989*)

There is much research that suggests that athletes with high levels of fear, depression, stress, anxiety, or low self-esteem may be at greater risk for injury ( Andreas Ivarsson and Urban Johnson ,2010). At the global level , there are several research available on football injuries (Dvorak J, Junge A, Chomiak J, Graf-Baumann T, Peterson L, Rosch D, and Hodgson R et.al.2000 ; Ekstrand J and Gillquist J , 1983a ; Fuller CW, Junge A, Dvorak J 2005, Hawkins, Colin & Fuller 1998; Singh S.K. et.al ,2008, Smith , Scott , Wiese ,1990;Singh, 2006, Ostenberg and Roos, 2000; Orchard , Seward , McGivern , and Hood,2001 ;) But there is little research information available on psychological factors and occurrences of football injuries. Therefore, the investigator is interested in researching psychological factors as predictors of injuries in football.

**II. METHODS****Pilot Study**

A pilot study was conducted immediately after the approval of this research, prior to the commencement of the main study. The purpose of the pilot study is to test the feasibility and logistical aspects of the proposed main study in particular the submission of detailed injury occurrence data and player activity data

**Ethical consideration:**

In collecting the data, the **researcher Follow to ethical** guidelines, principles, and standards for studies conducted with human beings

**Sampling frame :**

The sampling frame was included football players the aged 14 to 30 years. The investigator was made an attempt to classify the football players based on the aged group. The age also was categorized in four groups are as (14-17),(18-21),(22-25) and (26-30).

**Sampling method and Sample Size:**

The method of sample was purposive –A non-random method of sampling design for elite football players with a specific purpose. Total 1000 Indian elite football players from different states and national level affiliated unites of all India football federation was selected as sample size of the study.

**Source and tools of Data collection:**

The study depends mainly on primary source of data. The data was collected through respondents in the form of Questionnaires from 1000 football players of different Academies, Clubs, States and Universities affiliated to all India football federation separately, investigator contacting footballers personally and some cases at the venue of Inter-varsity, State tournaments.

**Demographic Information:**

The demographic information was collected through respondents in the form of different descriptive tests. The demographic information about, age, height, weight daily smoking, drug use, etc. was obtained before seeking responses.

**2. Football Injury questionnaire**

For the present study, modified questionnaires prepared by Singh (S.K 2012) for footballers was utilized after the modification of this questionnaires and the test -retest reliability was found out by the researcher. Percentage, co-relation and Regression analysis was used as a statistical technique.

**Limitation of The Study**

1. Results of this study are limited by a survey of self-reported injuries of football players rather than a study of actual behaviour, which would be very difficult to achieve. As such, participants may have answered questions in a socially desirable manner to avoid the stigma associated with admitting personal inadequacies.
2. A limitation of this study is inability to draw cause-effect associations between the studied variables. One more limitation with anonymous self-reported questionnaires is inaccurate reporting. Future studies should be proactive in maintaining a balance of participants on the basis of injuries

**III. RESULTS OF THE STUDY**

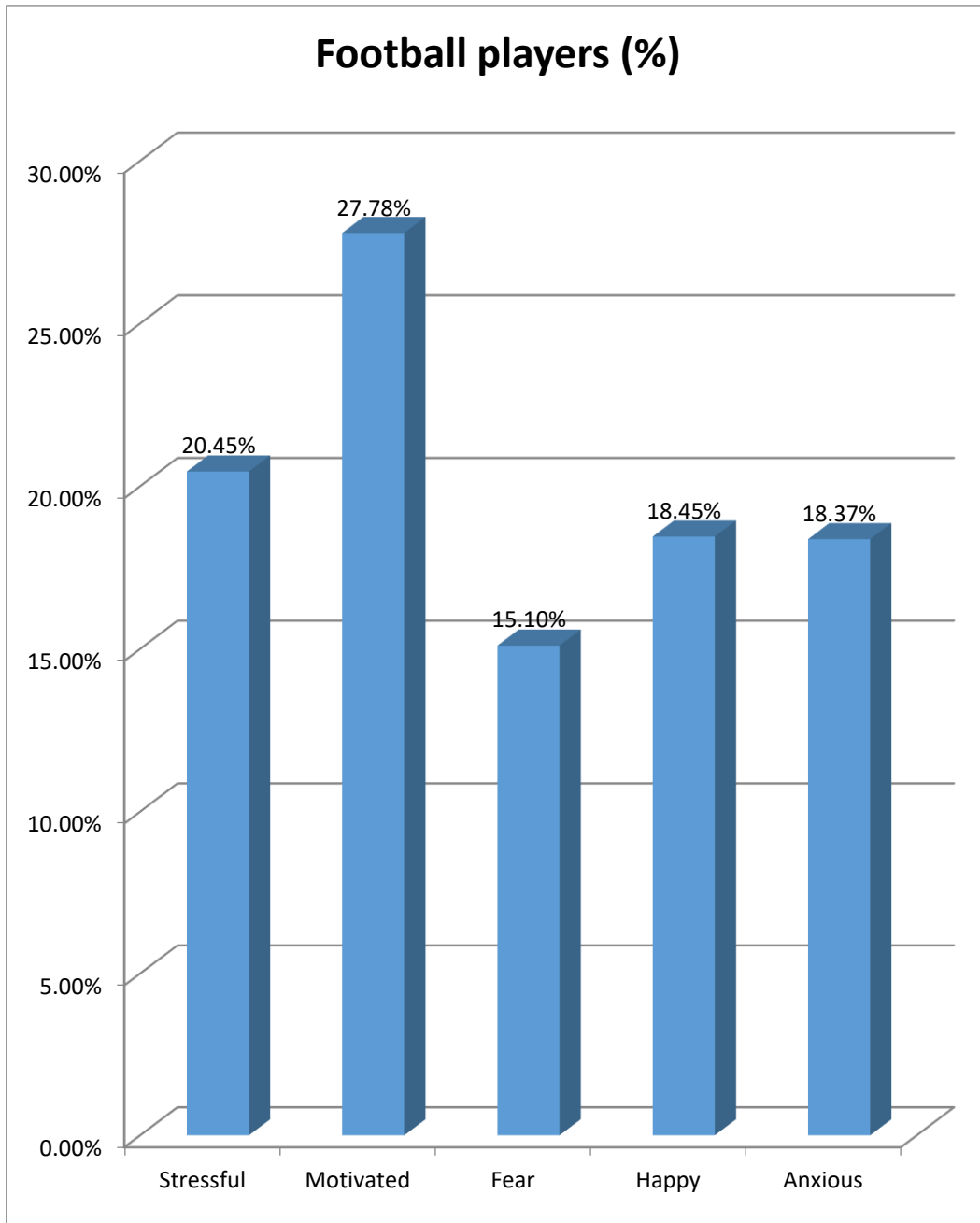
The results presented through appropriate table and figures

Table – 1  
Percentage (%) of Psychological feeling ( Psychological Factors ) before tournament / competition among football players.

<i>Sr.No.</i>	<i>Psychological factors</i>	<i>Football players (%)</i>
1)	Stressful	20.45%
2)	Motivated	27.78%
3)	Fear	15.10%
4)	Happy	18.45%
5)	Anxious	18.37%

Table-01 shows that the Percentage (%) of Psychological feeling (Psychological Factors) before tournament / competition among football players.

Figure-1,  
Shows that the Percentage (%) of Psychological feeling (Psychological Factors) before tournament / competition among football players.



**TABLE -02**  
**CORRELATION OF PSYCHOLOGICAL FACTORS AND OCCURRENCES OF INJURIES AMONG FOOTBALL PLAYERS**

<b>Pearson correlation test injuries with psychological factors</b>						
	Sum of Psychological Factors	Stressful	Motivated	Fear	Happy	Anxious
Knee Injuries	-.56*	-.26*	-.06	-.33*	-.11	.51*
Ankle Injuries	-.44*	-.30*	-.12	-.11	-.01	.26*
Shoulder/Upper Arm Injuries	-.29*	.40*	.08	.10	-.00	.33*
Hamstring/Groin Injuries	-.28*	.38*	.13	.14	.10	.31*
Lower Leg/Foot Injuries	-.49*	-.40*	-.05	-.04	-.08	.35*
Hand/Elbow Injuries	-.41*	-.40*	-.12	-.09	-.13	-.45*
Back Injuries	-.08	-.01	.03	-.006	.04	-.22*
Other Anatomical location of the body Injuries	-.40*	.43*	.07	.14	.09	.44
Overall Injuries	-.56*	-.47*	-.04	-.38*	-.01	-.48*

Tabl-02 shows the correlation of Psychological Factors and occurrences of Injuries .

**Table -3**  
**Regression analysis for the Psychological Factors and Occurrences of Injuries**

Testing Steps	Unstandardized coefficients		Standardize coefficients
T	B	Std.Error	Beta (β)
<b>Step 1</b>			
Football Injuries			
<b>Predictor: Psychological Factors</b>	1.501	0.162	-.14
<b>Step 2</b>			
Football Injuries			
1. <b>Knee Injuries</b>	0.01	0.008	-.004
2. Ankle Injuries	0.009	0.011	.031
3. <b>Shoulder/upper arm</b>	0.021	0.011	.078
4. <b>Hamstring /Groin</b>	0.006	0.010	.023
5. Foot/Lower leg	-0.027	0.015	-.081
6. <b>Hand/Elbow</b>	0.013	0.020	.026
7. <b>Back Injuries</b>	0.55	0.018	.121
8. Other location	0.004	0.010	-.14
<b>Predictor: Psychological Factors</b>			

**Step 3**

Psychological Factors

1.	Stressful	.001	0.008	0.004
2.	Motivated	.010	0.011	0.37
3.	Fear	.020	.011	0.71
4.	Happy	0.008	0.010	0.32
5.	Anxious	.0.26	0.15	-.79
<b>Predictor: Psychological Factors</b>		1.63	0.004	-0.12

Table- 3 shows the Regression analysis for Psychological Factors and occurrences of Injuries of Football Players. The result shows the Injuries was regressed on the predictor Psychological Factors .

TABLE-4  
 REGRESSION ANALYSIS FOR THE PREDICATION OF PSYCHOLOGICAL FACTORS ON FOOTBALL INJURIES

Steps and Predictor variable	BSE B		B
Psychological Factors	1.78	1.66	.88
Overall Football Injuries	-4.20	1.50	-.67
Psychological Factors x Overall Football Injuries	0.82	0.51	.54

Table-4 shows the Regression analysis for the Effects of Psychological Factors on occurrences of Football Injuries .

**IV. DISCUSSION**

Football is a sport that is played and loved by millions of people around the world. It can be called a universal game because every small and big country plays it. The psychological reaction to a sports-related injury can trigger or highlight serious mental health issues such as depression, anxiety, Stress, Competitive temperament, Psychoticism and Neuroticism. Recently, injuries have been cited as the biggest source of stress and other psychological factors. Injuries can cause emotional problems such as anxiety and depression and increase unhealthy behaviors such as drug and alcohol abuse. These negative moods and behaviors place the athlete at risk for longer rehabilitation periods and further behavioral problems. Sports injuries are not simply the result of lack of physical fitness, Training and Tactics; There is also a psychological component to them. Negative thoughts, emotions and mental state can affect the way we perform, recover and even prevent injuries. The results of the study revealed that 20.45% football players were feeling Stressful before tournament / competition, whereas 27.78% football players were feeling Motivated, Furth more, 15.10% football players were feeling Fear, Moreover, 18.45 % football players were feeling happy and 18.37% football players were feeling Anxious before tournament / competition. A correlation test was taken to find out the relationship between Psychological Factors and occurrences of injuries (Overall injuries ) of football players were correlated negatively with sum of the Psychological factors . Psychological factors was correlated negatively with Knee Injuries (r = -.33, p<.05), Ankle Injuries ( r = -.29, p<.05), Shoulder/Upper Arm Injuries(r= -.25,p<.05), Hamstring/Groin Injuries( r=-.19,p<.05),Lower Leg/Foot Injuries(r = -.27,p<.05),Hand/Elbow Injuries,Back Injuries and Other Anatomical location of the body Injuries ( r = -.13,p<.05) of football Players. To test for the effect of Psychological Factors on occurrences of football injuries , multiple regression analyses was carried out in which the cross product of Psychological factors and occurrences of Overall football injuries (Psychological Factors x Overall Football Injuries) was added to the relevant main effects, with Psychological factors score as the dependent variable. Psychological Factors and the interaction term were regressed on overall occurrences of football injuries.

In this analysis, significant effect was found for the injuries main effect. The effect of effects of Psychological Factors was supported. The findings of the study concluded that, most of the football players were feeling motivated, stressful and happy before tournament / competition. In sport, high levels of psychological factors such as fear, aggression, stress response, anxiety, depression and low motivation, lack of self-esteem, poor emotional intelligence can have significant adverse effects on an athlete's performance and injury susceptibility ( Smith , Scott , Wiese ,1990). When football players are scared, stressed or anxious about opponents, they can become distracted, leading to reduced awareness of their surroundings and an increased likelihood of colliding with opponents, falling to the ground and losing focus, Which may increase the possibility of injury (Andreas Ivarsson and Urban Johnson , 2010; Petrie, 1992). The findings of the research will lead to a reduction in football injuries in particular and sports injuries in general and increase the quality of play in players.

## REFERENCES

- [1]. **Andreas Ivarsson and Urban Johnson (2010)** Psychological factors as predictors of injuries among senior soccer players *Journal of Sports Science and Medicine* **9**, 347-352
- [2]. **Bahr R and Holme (2003)** Risk factors for sports injuries--a methodological approach. *Br J Sports Med* **37**: 384-392
- [3]. **Boden BP, Kirkendall DT, and Garrett WE, Jr. (1998)** Concussion incidence in elite college soccer players. *Am J Sports Med* **26**: 238-241
- [4]. **Chomiak J, Junge A, Peterson L, and Dvorak J (2000)** Severe injuries in football players. Influencing factors. *Am J Sports Med* **28**: S58-S68
- [5]. **Cromwell, F.J. Walsh Gromely(2000)** " A Pilot Study examining injuries in elite gaelic football players" *British journals of sports medicine* , **34**: 104-108.
- [6]. **Drawer S and Fuller CW (2002b)** Perceptions of retired professional soccer players about the provision of support services before and after retirement. *Br J Sports Med* **36**: 33-38.
- [7]. **Dvorak J, Junge A, Chomiak J, Graf-Baumann T, Peterson L, Rosch D, and Hodgson R et.al.(2000)** Risk factor analysis for injuries in football players. Possibilities for a prevention program. *Am J Sports Med* **28**: S69-S74.
- [8]. **Ekstrand J and Gillquist J (1983a)** Soccer injuries and their mechanisms: a prospective study. *Med Sci Sports Exerc* **15**: 267-270
- [9]. **Fuller CW, Junge A, Dvorak J(2005)**. A six year prospective study of the incidence and causes of head and neck injuries in International football. *Br J Sports Med* ; **39** (Suppl 1) : i 3-9 .
- [10]. **Hawkins RD and Fuller CW (1999)**A prospective epidemiological study of injuries in four English professional football clubs. *Br JSports Med* **33**: 196-203
- [11]. **Hawkins RD and Fuller CW (1998b)** An examination of the frequency and severity of injuries and incidents at three levels of professional football. *Br J Sports Med* **32**: 326-332
- [12]. **Heidt RS, Jr., Sweeterman LM, Carlonas RL, Traub JA, and Tekulve FX (2000)** Avoidance of soccer injuries with preseason conditioning. *Am J Sports Med* **28**: 659-662
- [13]. **Inklaar H, Bol E, Schmikli SL, and Mosterd WL (1996)** Injuries in male soccer players: team risk analysis. *Int J Sports Med* **17**: 229-234
- [14]. **Junge A (2004)**. Football injury during world cup 2002. *American journal of sports medicine* Vol. **32**: 523-527.
- [15]. **Junge A, Chomiak J, and Dvorak J (2000a)** Incidence of football injuries in youth players. Comparison of players from two European regions. *Am J Sports Med* **28**: S47-S50
- [16]. **Junge A (2000)** The influence of psychological factors on sports injuries. Review of the literature. *Am J Sports Med* **28**: S10-S15.
- [17]. **F. Le Gall1, C. Carling2, T. Reilly (2006)** Biological maturity and injury in elite youth football. *Scand J Med Sci Sports* **136**-144.
- [18]. **Lysholm T, Wiklander J(1987)**. Injuries in runners. *Am J Sports Med* **15**(2): 168-171,.
- [19]. **Meeuwisse WH (1994)** *Assessing* causation in sport injury: a multifactorial model. *Clin J Sport Med* **4**: 166-170
- [20]. **Nielsen AB and Yde J (1989)** Epidemiology and traumatology of injuries in soccer. *Am J Sports Med* **17**: 803-807
- [21]. **Ostenberg A and Roos H (2000)** Injury risk factors in female European football. A prospective study of 123 players during one season. *Scand J Med Sci Sports* **10**: 279-285
- [22]. **Orchard J, Seward H, McGivern J, and Hood S (2001)** Intrinsic and extrinsic risk factors for anterior cruciate ligament injury in Australian football players. *Am J Sports Med* **29**: 196-200



- [23]. **Petrie, T.A. (1992)** Psychosocial antecedents of athletic injury: The effects of life stress and social support on female collegiate gymnasts. *Behavioral Medicine* **18**, 127-138.
- [24]. **Peterson L, Junge A, Chomiak J, Graf-Baumann T, and Dvorak J (2000)** Incidence of football injuries and complaints in different age groups and skill-level groups. *Am J Sports Med* 28: S51-S57
- [25]. **Richard D Hawkins, Colin W Fuller (1998)** An examination of the frequency and severity of injuries and incidents at three levels of professional football. *Br J Sports Med* 1998;**32**:326–332
- [26]. **Sean D. Turbeville Linda D. Cowan, Willis L. Owen, Nabih R. Asal, and Mark A. Anderson( 2003)** Risk Factors for Injury in High School Football Players. *The American journal of sports medicine*, Vol. 31, No. 6 1-7
- [27]. **Sinku S.K. et.al (2008)**. “ A Pilot Study Examining injuries in relation to field position of competitive football players” *journal of exercise science and physiotherapy* . (1) 50-54
- [28]. **Smith AM, Scott SG, Wiese DM(1990)**. The psychological effects of sports injuries : *Sports Med* .9(6): 352-369.
- [29]. **Singh, S. K(2006)** “ Comparison of occurrence of injuries to football players at low and high level of achievement.” An unpublished M.Phil thesis, Kurukshetra University, Kurukshetra 2006.
- [30]. **Rahnama N, Reilly T, and Lees A (2002)** Injury risk associated with playing actions during competitive soccer. *Br J Sports Med* 36: 354-359
- [31]. **Soderman K, Pietila T, Alfredson H, and Werner S (2002)** Anterior cruciate ligament injuries in young females playing soccer at senior levels. *Scand J Med Sci Sports* 12: 65-68
- [32]. **Waston A(1993)**. Incidence and nature of sports injuries in Ireland *American journal of sports Medicine* 1993; 21: 137-143.
- [33]. <https://universidadeuropea.com/en/blog/psychology-sports-injuries>.