

ANATOMICAL LOCATION OF INJURIES PREVALENCE IN AGED GROUP (14-17) FOOTBALL PLAYERS

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Abstract: The primary objective of the study is to determine the Anatomical Location of Injuries Prevalence in Aged group (14-17) Football Players. The sampling method was purposive – a non-random method of sampling design for football players with a specific purpose. A total of 254 Indian elite football players from various states and national level units affiliated to the All India Football Federation were selected as the sample size of the study. The findings of the study revealed that 7.87% of football players in the age group (14-17 years) reported knee injuries, 24.80% reported ankle injuries, 23.30% football players reported shoulder/upper arm injuries. Injuries were reported by 19.33%. In hamstring/groin, 09.15% reported lower leg/foot injuries/injuries, 08.20% of football players reported arm/elbow injuries, 07.05% of football players in the age group reported back injuries, and 07.65% of football players in the age group reported an injury. This study found that knee and ankle are the common anatomical location of injuries.

Keywords: Prevalence, Football, Aged group, Football, Injuries

I. INTRODUCTION

Football is a game played outdoors by two teams. Each football team has eleven players. The aim of this game is to score maximum goals by each team (Singh, 2008). The team scoring the most goals is called the winning team. It is a game which is played by hitting the ball with the feet (Singh 2006). This game is also called soccer in some countries. Football is a collision sport that is played and loved by millions of people around the world (Chomiak, Junge, Peterson, and Dvorak, 2000, .) It can be called a universal game because every small and big country plays it. Moreover, it is a great relaxant, stress reliever, teacher of discipline and teamwork. There are various forms of football such as association football (in the UK), gridiron football, American football or Canadian football (in the US and Canada), Australian rules football or rugby league (in Australia), Gaelic football (in Ireland), rugby football (in New Zealand in), etc.

Different forms of football are known as football codes (Junge, 2004; Junge A, Chomiak, and Dvorak, 2000a; Cromwell, & Walsh Gromely, 2000). Football is one of the most dangerous team sports and injuries are a common 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). Playing football mainly involves, tackling, kicking, running, bending, twisting, jumping, heading and turning activities which put players at a higher risk of injury in football (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).

Football injury means an injury sustained while playing during training/practice or a tournament. However, injuries can occur in any part of the body while exercising or playing a match (Hawkins, Colin & Fuller 1998; Singh S.K. et.al, 2008, Smith, Scott, Wiese, 1990; Singh, 2006). But the term sports or football-related injury is used specifically to refer to injuries to the musculoskeletal system of players (Ostenberg and Roos, 2000; Orchard, Seward, McGivern, and Hood, 2001; Petrie, 1992; Peterson, Junge, Chomiak, Graf-Baumann, and Dvorak, 2000).

In football only a few studies have been made in the literature regarding in anatomical location of Football Players. In the light of the above, the investigators become interested in determining the occurrence of injuries with respect to anatomical location among football Players.

II. METHODS**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 254 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 254 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. There was following questionnaires, including are as follows.

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.

Techniques for Collection of data:

The letter to be sent to the affiliated authorities of all India football federation seeking their permission and cooperation in the completion of the study along with all document including, full proposal, information sheet for participant, consent form, and the letter from office.

III. RESULTS OF THE STUDY

The results presented through appropriate table and figures

Table – 1.

Mean Scores (MS) and Standard Deviations (S.Ds) of Practice /Training and Playing Components of Aged group (14-17) Footballers.

Sr. No.	Components	Means Scores	Standard Deviations
1.	Practice /Training in week	03.45	01.43
2.	Practice /Training duration in a hours	01.25	0.50
3.	Conditioning / Warm up in a Minutes	12.30	02.45
4.	Warm down / limbering Dawn in a minutes	10.33	02.10
5.	Participation in Tournament in a year	08.12	02.02

Table-1, illustrates that the Mean Scores (MS) and Standard Deviations (SDs) of Practice /Training and Playing Components of the Aged group (14-17) Footballers.

Figure -1
Illustrates that the Mean Scores (MS) and Standard Deviations (SDs) of Practice /Training and Playing Components of the Aged group (14-17) Footballers.

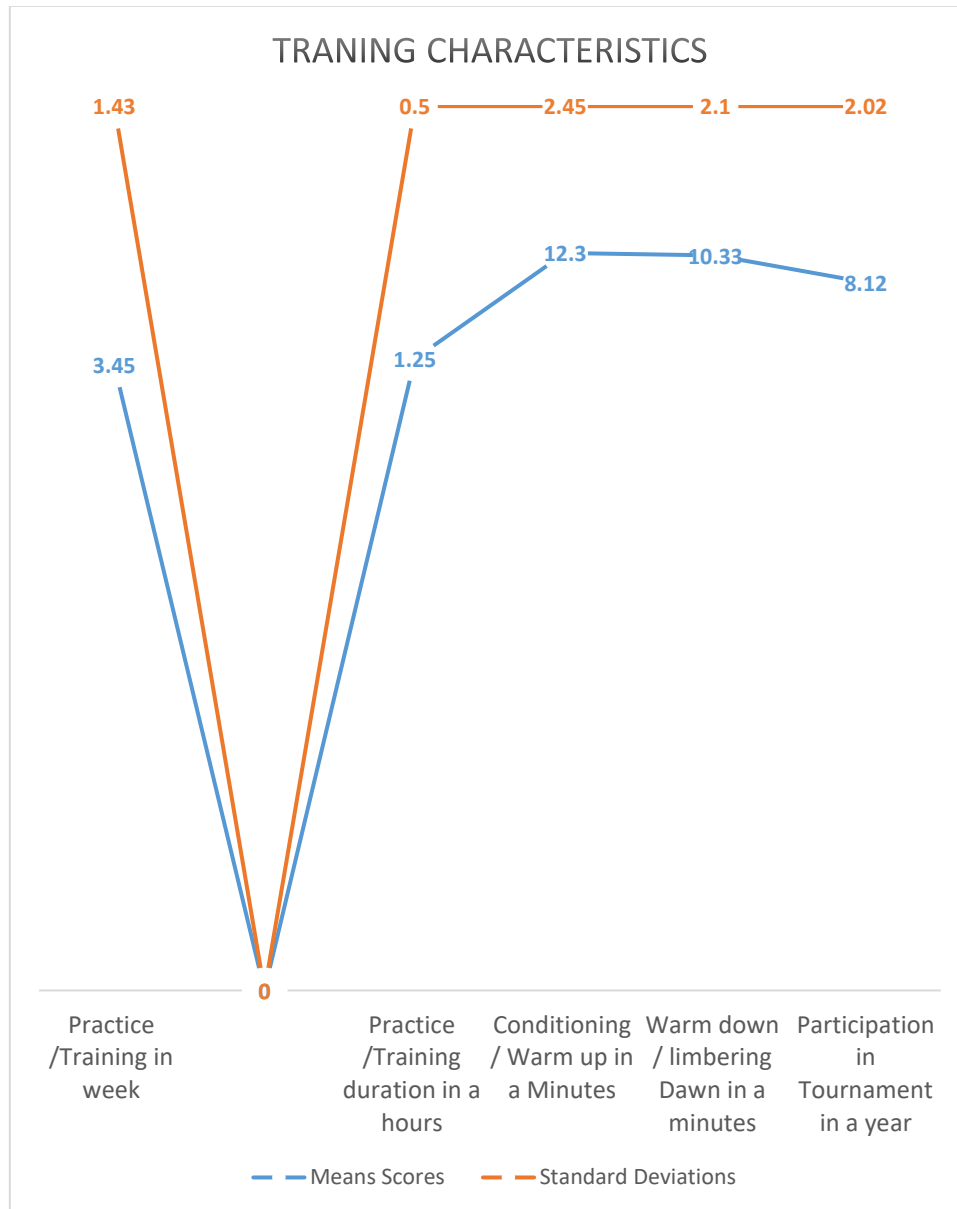


Table – 2

Mean Scores (M.S) and Standard Deviations (S.Ds) of Morphological Profile of Aged group (14-17) Footballers.

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age in a Year	15.40	02.20
2.	Weight in a K.G	61.20	07.70
3.	Height in a cm.	162.80	14.04
4.	BMI	16.58	03.56

Table-2, shows that the mean scores and standard deviations of the selected components of the Aged group (14-17) Footballers.

Figure -2

Shows that the mean scores and standard deviations of the selected components of the Aged group (14-17) Footballers.

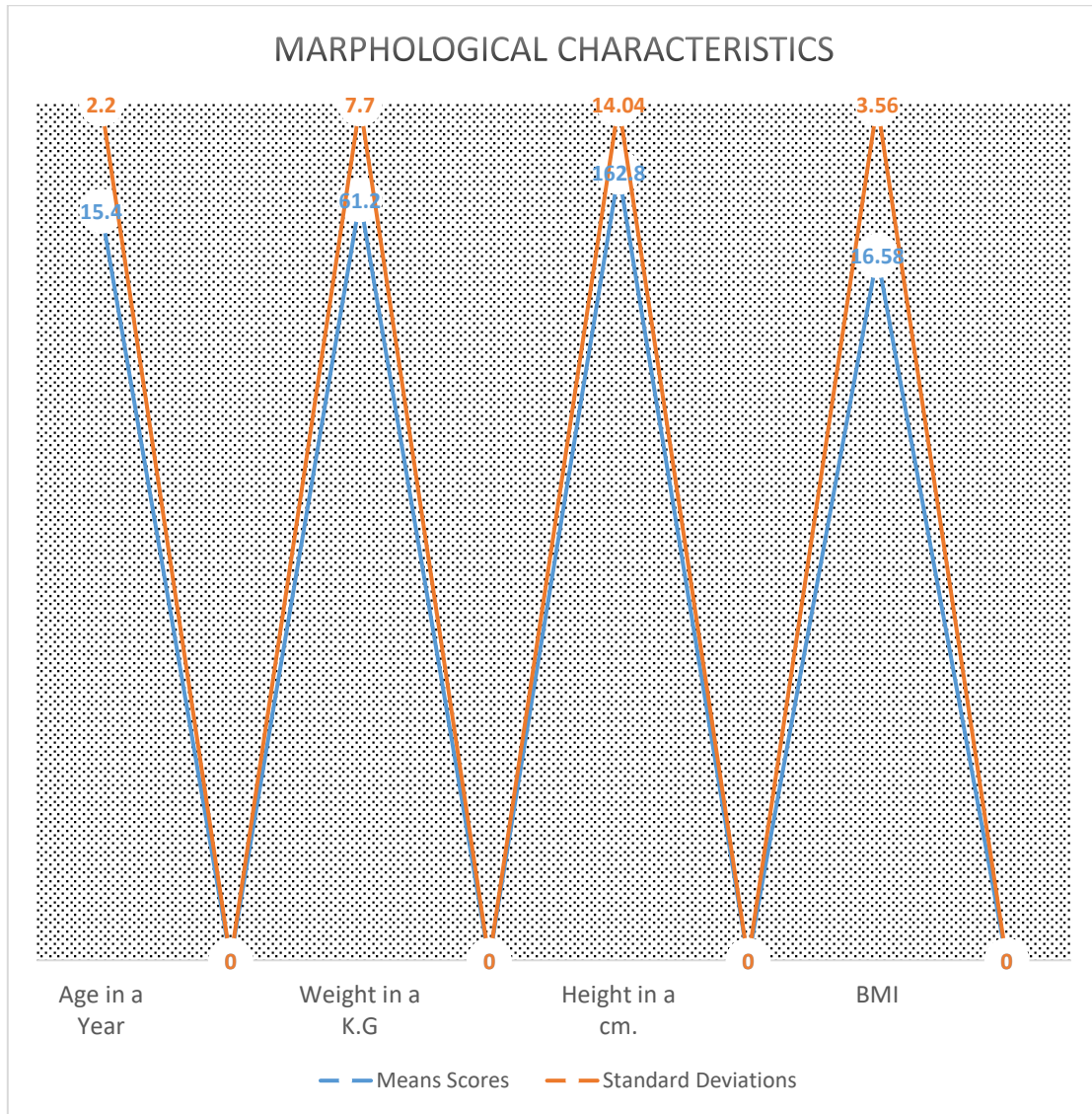


Table – 3

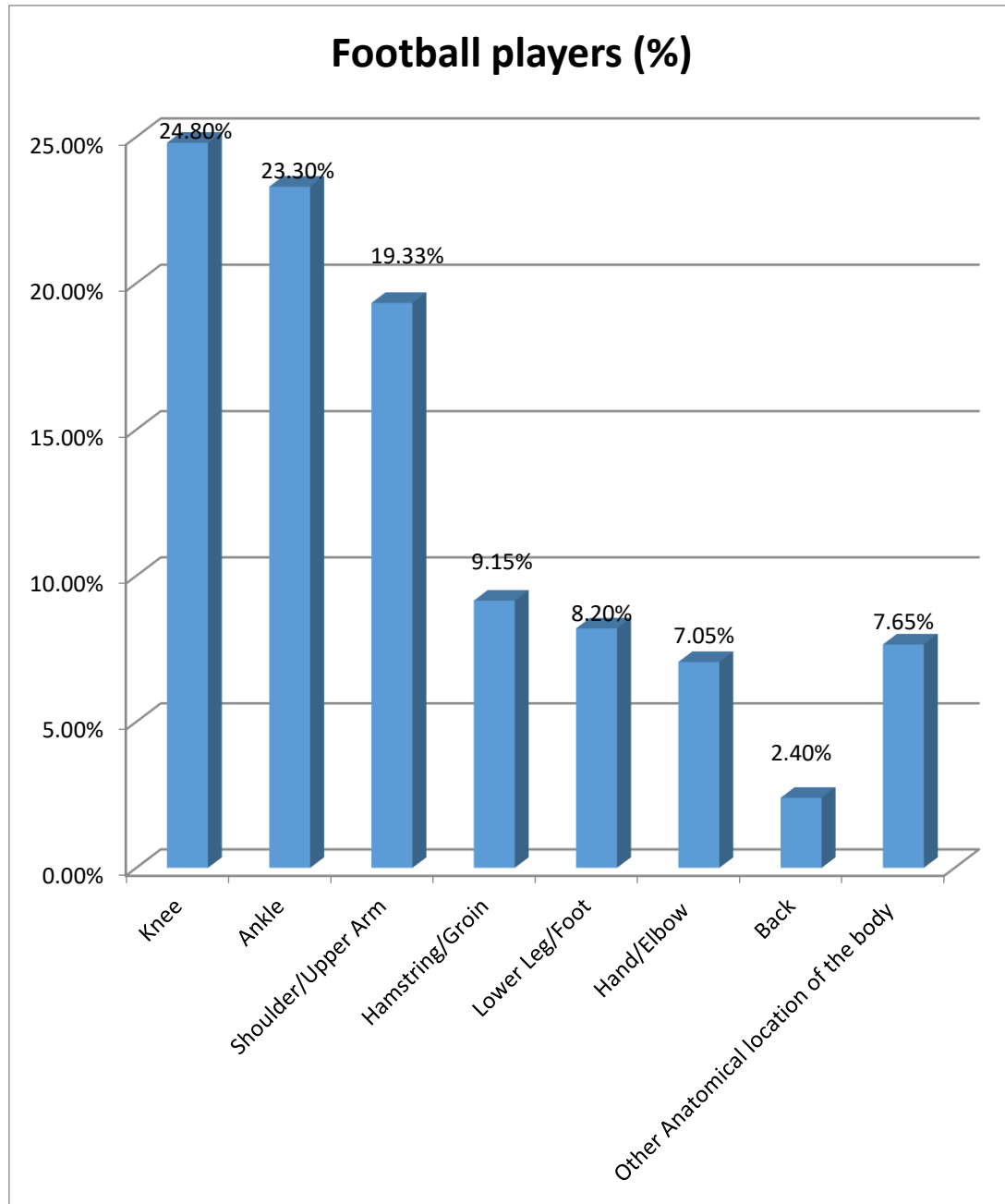
Percentage of occurrences of injuries of aged group (14-17 years) football players with respect to Anatomical site

<i>Sr. No.</i>	<i>Anatomical Site</i>	<i>Football players (%)</i>
1)	<i>Knee</i>	<i>24.80%</i>
2)	<i>Ankle</i>	<i>23.30%</i>
3)	<i>Shoulder/Upper Arm</i>	<i>19.33%</i>
4)	<i>Hamstring/Groin</i>	<i>09.15%</i>
5)	<i>Lower Leg/Foot</i>	<i>08.20%</i>
6)	<i>Hand/Elbow</i>	<i>07.05%</i>
7)	<i>Back</i>	<i>02.40%</i>
9)	<i>Other Anatomical location of the body</i>	<i>07.65%</i>

Table-3. Shows that the percentage of injuries occurrences it respect to site among aged group (14-17 years) football players.

Figure – 3

Show the Percentage of occurrences of injuries of aged group (14-17 years) football players with respect to Anatomical site



IV. DISCUSSION

Injuries are a risk associated with sports participation, which adversely impacts players' health and performance. The Mean Score (M.S) of practice /training in a week of Aged group (14-17) Footballers was obtained 03.45 and Standard Deviation of (S.Ds) practice /training in a week of Aged group (14-17) Footballers was obtained 01.43; the mean Scores of Practice / training duration in a hours was obtained 01.25 and Standard Deviation (S.Ds.) of Aged group (14-17) Footballers was obtained 0.50 hours; Mean score (MS) of Conditioning / Warm up in a Minutes of Aged group (14-

17) Footballers was obtained 12.30 and the Standards Deviation of (S.Ds) of Conditioning / Warm up in a Minutes of Aged group (14-17) Footballers was obtained 02.45; Mean score (MS) of Warm down / limbering Dawn in a minutes of Aged group (14-17) Footballers was obtained 10.33 and the Standards Deviation of (S.Ds) Warm down / limbering Dawn in a minutes of Aged group (14-17) Footballers was obtained 02.10 and Mean score (MS) of Participation in Tournament in a year of Aged group (14-17) Footballers was 08.12 and Standards Deviation of (S.Ds) Participation in Tournament in a year of Aged group (14-17) Footballers was 02.02.

Whereas, Mean Score age in a year of Aged group (14-17) Footballers was obtained 15.40 while, Standard Deviation (S.Ds) of age in a year of Aged group (14-17) Footballers was obtained 2.20. The mean score of weight in a K.G was obtained 61.20 while the Standard Deviation (S.Ds) of weight of Aged group (14-17) Footballers was obtained 07.70 Kg. The mean scores of Height of Aged group (14-17) Footballers was obtained 162.80 in centimeters, while the standard Deviation (S.Ds) height of Aged group (14-17) Footballers was obtained 14.04 centimeters ; and the mean scores of Body Mass index of football players was obtained 16.58 and the standard deviation of body Mass index (S.Ds) was obtained 03.56 kg .

The findings of the study, 7.87% aged group (14-17 years) football players reported their occurrences of injures in Knee and **24.80%** aged group (14-17 years) football players reported their occurrences of injuries in Ankle, whereas, **23.30%** football players reported their occurrences of injuries in Shoulder/Upper Arm, **19.33%** aged group (14-17 years) football players reported their occurrences of injuries in Hamstring/Groin, **09.15%** aged group (14-17 years) football players reported their occurrences of injuries in Lower Leg/Foot, **08.20%** aged group (14-17 years) football players reported their occurrences of injuries in Hand/Elbow, **07.05%** aged group (14-17 years) football players reported their occurrences of injuries in Back, **02.40%** and **07.65%** aged group (14-17 years) football players reported their occurrences of injuries in Other Anatomical location of the body,. *This study found that knee, ankle and shoulder are the common anatomical location of injuries and Injuries in lower limb is predominated .*

The several studies illustrated that injuries are common in football (**Ostenberg and Roos, 2000; Orchard , Seward , McGivern , and Hood,2001 ; Petrie, 1992; Peterson, Junge , Chomiak , Graf-Baumann , and Dvorak , 2000, Chomiak , Junge , Peterson , and Dvorak , 2000 ; Cromwell , & Walsh Gromely, 2000, ; Drawer and Fuller , 2002b, Ostenberg and Roos, 2000; Orchard , Seward , McGivern , and Hood,2001 ; Petrie, 1992; Peterson, Junge , Chomiak , Graf-Baumann and Dvorak , 2000**) and studies have shown that 11%-35% of injures are severe, and recurrent injuries are also common (Hawkins et al. 2001). Studies have shown that knee injuries usually cause the longest absence from match and training (Chomiak et al. 2000, **Drawer and Fuller , 2002b, Ostenberg and Roos, 2000; Orchard , Seward , McGivern , and Hood,2001**).

This study supported to **Peterson et.al.(2000)** who investigated the incidence of football injuries and complaints as related to different age groups and skill levels. Total 558 injuries were documented from 264 players of different age groups in football. this study found that 216 football players reported that they had one or more injuries. Whereas 18% football players reported that they have no injury. In this study Injuries were classified as 52.00% was mild , 33.00% was moderate and 15.00 % was severe (15%). foul play is a common causes of injuries and 50.00% injuries were occurred due to contact mechanism. The majority of injuries involving the ankle, knee, and lumbar spine. 91.00% players suffered from complaints related to football. **Peterson et.al.(2000) suggested that**, Prevention programs, fair play, and techniques and skills may reduce the injuries over time.

This study also supported to Cromwell and Gromely (2000) who examined in a six month period of elite gaelic footballers, investigated that 95 injuries were recorded and the incidence rate of injuries 1.78 per subject per year, of which 35.00% of football injuries were occurred during training session. Lower extremities injuries as ankle and knee being the most commonly anatomic location of injuries . Most injuries in muscle, 33% Ligament 32%, tendon, 16%. The most common situations giving rise to injuries were collisions (22%) and twist turn (19%) foul play only accounted for about 6% of injuries.

Chomiak et.al.(2000) analysed factors related to the occurrence of severe football injuries in players of different ages (14 to 42 years) and different skill levels (local teams to first league teams). In this study, Injuries to the knee were more common (29%) and followed by injuries to the ankle (19%) and spine (9%). More injuries occurred during the match playing periods (59%) as compared than Training or Practice . whereas, 24% of the football players had reoccurrence of injuries . In addition, 46% of football injuries due to cause by contact mechanism and 54% non- contact. 31% of severe injuries recorded due to by the foul play. This study will provide guide line to players, Coaches, physicians physical educationist and sports trainers that how to improve the awareness regarding prevention of injuries.

V. LIMITATIONS OF THE STUDY

Results of this study are limited by a survey of self-reported statement 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. 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 year wise.

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