

Original Research Article

A cross-sectional study on social anxiety disorder and self-esteem among undergraduate medical students of a tertiary health care centre in central India

Anju George^{1*}, Ashok R. Jadhao¹, Sanjay Agrawal¹, Ebin Mathew², Kalaivani M.¹

¹Department of Community Medicine, Indira Gandhi Government Medical College, Nagpur, Maharashtra, India

²Medical Officer, Ministry of Defence, India

Received: 18 September 2024

Accepted: 15 November 2024

*Correspondence:

Dr. Anju George,

E-mail: georgeanju94@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Social anxiety disorder (SAD) aka social phobia is a persistent fear of one or more social situations where embarrassment may occur and the fear or anxiety is out of proportion to the actual threat posed by the social situation as determined by the cultural norms. Self-esteem is an attitude or a sense of worth as a person. People low in self-esteem are generally more dependent on others and more susceptible to external cues that carry self-relevant implication. This study aims to estimate the prevalence of Social anxiety disorder and to assess the status of self-esteem and to determine the association of SAD with self-esteem among undergraduate medical students.

Methods: A cross-sectional study was conducted among 382 undergraduate medical students and interns of a tertiary health care institute. Social phobia was assessed using Social-phobia-Inventory (SPIN) questionnaire and self-esteem using Rosenberg self-esteem scale.

Results: Among 382 study participants, 180 (47.1%) were females and 202 (52.9%) were males. 203 (53.1%) had social anxiety disorder. 135 (35.3%) students had low self-esteem. There was a statistically significant association between social phobia and status of self-esteem.

Conclusions: This study showed that a higher proportion of medical students had social anxiety disorder and 35.3% had low self-esteem. So, early detection and appropriate intervention need to be done among the students to improve self-esteem and to enhance social interaction by their institutes.

Keywords: Self-esteem, Social anxiety disorder

INTRODUCTION

Social anxiety disorder (also referred to as social phobia) involves the fear of social situations, including situations that involve scrutiny or contact with strangers. Persons with social anxiety disorder are fearful of embarrassing themselves in social situations (i.e., social gatherings, oral presentations, meeting new people).¹ The fear that people with social anxiety disorder have in social situations is so intense that they feel it is beyond their control. For some people, this fear may get in the way of going to work,

attending school, or with routine things. Others may be able to accomplish these activities but with great deal of fear or anxiety. People with social anxiety disorder may worry about engaging in social situations for weeks before they happen. Sometimes, they end up avoiding places or events that cause distress or generate feelings of embarrassment.²

In worldwide studies, the prevalence of SAD is as high as 13% in the general population, having an adolescent onset, mostly of chronic course, and is almost invariably

associated with higher comorbid rates of other anxiety, depression, or substance use disorders.³ The current prevalence of SAD in India stands at 0.47%.³ The nature of medical education and the medical profession itself may contribute to the development of social anxiety disorder in several ways: high academic demands, performance expectations, isolation, burnout etc.

Self-esteem is an attitude or a sense of worth as a person. People low in self-esteem are generally more dependent on others and more susceptible to external cues that carry self-relevant implication.⁴ Studies have shown that social phobia in young adults has an inverse relation to self-esteem.⁵ Individuals with low self-esteem may be more prone to developing social phobia. A negative self-image and a lack of confidence can contribute to heightened social anxiety, as individuals may fear negative evaluations and judgment from others.

So, this study was done to estimate the prevalence of social anxiety disorder among undergraduate medical students and to study the status of self-esteem and determine its association with social anxiety disorder if present and to study the socio-demographic characteristics of study participants.

METHODS

A cross-sectional study was carried among undergraduate medical students and interns of Indira Gandhi government medical college, Nagpur between September 2023 to November 2023. Students who were willing to participate in the study were included in the study.

Sample size

Considering a study conducted by Sundaram et al, taking the prevalence of social anxiety disorder among medical undergraduate students as 41.1% with a 5% absolute error and 95% confidence interval, the estimated sample size was 372 for this study.⁶

Data was collected using a questionnaire which was made up via Google Forms and disseminated to the study participants after explaining the purpose of the study. The questionnaire was divided into three sections: Socio-demographic characteristics, social-phobia-inventory

(SPIN) questionnaire to assess social phobia, and Rosenberg self-esteem scale to assess the status of self-esteem. A total of 382 responses were obtained for this study.

Social phobia was assessed using a 17-item Social Phobia Inventory (SPIN) scale with cut-off points ≥ 21 . A 5-point Likert scale was used for scoring (Not at all=0, A little bit=1, Somewhat=2, Very much=3, Extremely=4). The SPIN score was used to categorize the Social phobia as: none (0-20), mild (21-30), moderate (31-40), severe (41-50), very severe (51-68). The minimum and maximum scores were 0 and 68, respectively.⁶

Rosenberg self-esteem scale is a widely used self-report instrument for evaluating individual self-esteem. It is a ten-item Likert scale with items answered on a four-point scale - from strongly agree to strongly disagree. Points were given to each degree and scoring was done for items 1,2,4,6,7: Strongly Agree=3, Agree=2, Disagree=1, and Strongly Disagree=0. For items 3,5,8,9,10: Strongly Agree=0, Agree=1, Disagree=2, and Strongly Disagree=3. A score less than 16 indicates low self-esteem, more than 25 indicates high self-esteem, and scores from 16 to 25 show normal self-esteem.⁷

Statistical analysis

Data entry was made in Microsoft Excel and analysis was done with the SPSS statistics 20.0 version. Qualitative data was expressed by number and percentage. Bar chart and pie diagram were also used to interpret the data. The chi-square test was used to observe differences between proportions and p value < 0.05 was taken as statistically significant.

RESULTS

Table 1 shows socio demographic characteristics of the study participants. Out of the 382 participants, 276 (72.3%) participants were of above 20 years of age. Majority of the participants 202 (52.9%) were males. As per religion, majority were Hindus 318 (83.2%). 315 (82.5%) belonged to class I socio-economic class (as per modified BG Prasad scale). Almost equal number of students responded from each year in this study (Table 1).

Table 1: Socio demographic characteristics of the study participants.

Socio demographic characteristics	Number	Percentage (%)
Age (in years)		
≤ 20	106	27.7
> 20	276	72.3
Gender		
Male	202	52.9
Female	180	47.1
Type of family		
Nuclear	305	79.8
Three generation	40	10.5

Continued.

Socio demographic characteristics	Number	Percentage (%)
Joint	37	9.7
Locality		
Rural	114	29.8
Urban	268	70.2
Religion		
Hindu	318	83.2
Muslim	30	7.9
Buddha	29	7.6
Christian	05	1.3
Socio economic status (As per modified BG Prasad scale)		
Class I	315	82.5
Class II	43	11.3
Class III	15	3.8
Class IV	09	2.4
Year of MBBS		
1 st year	75	19.6
2 nd year	77	20.2
3 rd year	75	19.6
4 th year	78	20.4
Interns	77	20.2

Among the 382 students, 107 (28%) had mild, 59 (15.4%) had moderate, 28 (7.3%) had severe and 9 (2.4%) had very severe SAD as scored by SPIN (Figure 1).

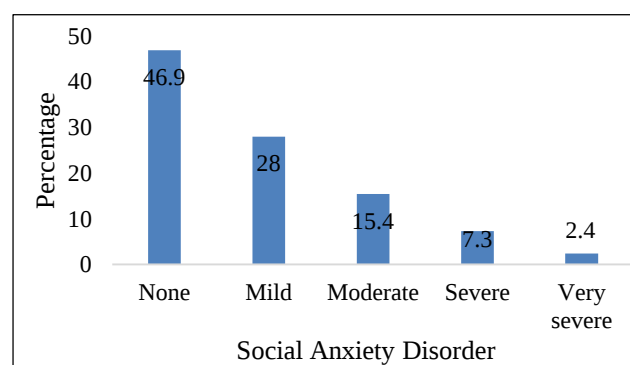


Figure 1: Distribution of study participants as per social anxiety disorder.

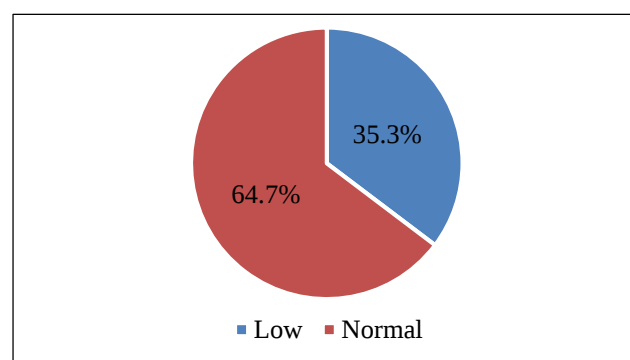


Figure 2: Distribution of study participants as per status of self-esteem.

135 (35.3%) of the participants had low self-esteem and 247 (64.7%) had normal self-esteem (Figure 2).

Table 2: Association of SAD with socio demographic characteristics of the study participants.

Socio demographic characteristics	Social anxiety disorder		Chi square, df, p value
	Present N (%)	Absent N (%)	
Age (years)			
≤20	57 (53.8)	49 (46.2)	0.024 1 0.878
>20	146 (52.9)	130 (47.1)	
Gender			
Male	107 (53.0)	95 (47.0)	0.005 1 0.943
Female	96 (53.3)	84 (46.7)	
Locality			
Rural	72 (63.2)	42 (36.8)	6.547 1 0.011
Urban	131 (48.9)	137 (51.1)	
Type of family			
Nuclear	166 (54.4)	139 (45.6)	1.665 2 0.435
Three generation	21 (52.5)	19 (47.5)	
Joint	16 (43.2)	21 (56.8)	
Year of MBBS			
1 st year	45 (60.0)	30 (40.0)	7.17 4 0.127
2 nd year	46 (59.7)	31 (40.3)	
3 rd year	31 (41.3)	44 (58.7)	
4 th year	42 (53.8)	36 (46.2)	
Interns	39 (50.6)	38 (49.4)	

Table 2 shows the association of social anxiety disorder with some socio-demographic characteristics of the study participants. Chi-square test was applied to test the significance of the association. There was a significant association between social anxiety disorder with locality of the study participants ($p=0.011$). No significant association was observed between age, gender, type of family, and year of MBBS with social anxiety disorder (Table 2).

Table 3: Association of SAD with the status of self-esteem of the study participants.

Self-esteem	Social anxiety disorder		Chi-square df P value
	Present (%)	Absent (%)	
Low self-esteem	100 (74.1)	35 (25.9)	36.739 1
Normal self-esteem	103 (41.7)	144 (58.7)	0.000

Table 3 shows the association of social anxiety disorder with the status of self-esteem of the study participants. Chi-square test was applied. A significant association was found between self-esteem and social anxiety disorder ($p=0.000$) (Table 3).

DISCUSSION

In the present study, the prevalence of social anxiety disorder among medical students was found to be 53.1% in which mild, moderate, severe, and very severe social phobias were 28%, 15.4%, 7.3%, and 2.4% respectively.

It was found that 53.1% of the medical students suffered from social phobia which is higher compared to the studies done by Dsouza et al (30.5%), Jogdande et al (46%), Ratnani et al (11.3%), Desalegn et al (31.2%) and Sundaram et al (41.1%) and lower compared to the study done by Charishma et al (78%)^{12, 8-12, 6}

In this study, students belonging to rural areas have a higher prevalence of Social phobia compared to urban students and these findings were similar to the study done by Mascarenhas et al and Sundaram et al.^{6, 13}

There was no statistically significant difference between male and female students for the presence of SAD in the present study which is similar to the study done by Dsouza et al⁸ whereas the study conducted by Jogdande et al, Afshari et al showed that the presence of SAD was higher among the female students.^{9, 14} Also no statistically significant difference was observed between the year of MBBS, age of the students for the presence of SAD in this study and these findings were consistent with findings by Sundaram et al⁶.

The prevalence of low self-esteem in this study was 35.3% which was higher compared to the study done by Roshan et al (17.9%) and Virk et al (21.6%).^{4, 15}

Among the participants having low self-esteem, 100 (74.1%) participants had social anxiety disorder and there was a statistically significant association between social anxiety disorder and self-esteem which is similar to the study done by Roshan et al where 57.1% of participants with low self-esteem had SAD ($p<0.0001$).⁴

CONCLUSION

The study revealed a higher prevalence of social anxiety disorder among medical students, particularly those with low self-esteem. Many studies suggest that the disorder can profoundly disrupt the life of an individual over many years. This can include disruption in academic achievement and interference with job performance and social development. So, early detection and appropriate intervention need to be done among the students to improve self-esteem and enhance social interaction by their institutes. This may include counselling services, mental health awareness programs, and creating a culture that promotes well-being. Seeking help from mental health professionals is crucial for individuals experiencing social anxiety or other mental health issues, as early intervention can lead to better outcomes. Additionally, fostering a supportive learning environment can contribute to the overall mental health and well-being of individuals pursuing a career in medicine.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Sadock BJ, Sadock VA, Ruiz P. Anxiety disorders. In: Kaplan & Sadock's synopsis of psychiatry behavioural sciences/clinical psychiatry. 11th ed. Wolters Kluwer; 2014:405-7.
2. National Institute of Mental Health. Social Anxiety Disorder: More Than Just Shyness. Available at: <https://infocenter.nimh.nih.gov/sites/default/files/2022-02/social-anxiety-disorder-more-than-just-shyness.pdf>. Accessed 01 May 2024.
3. Suhas S, Jayasankar P, Patley R, Manjunatha N, Rao GN, Gururaj G, et al. Nationally representative epidemiological study of social anxiety disorder from India. Ind J Psych. 2023;65(12):1261.
4. Roshan S, Varkey RG, Philip GA, Babu AS. Association of social anxiety disorder and self-esteem among young adults-a single centre study. Inter J Curr Res Rev. 2022;5(3):737-41.
5. Acarturc C, Smit F, de Graaf R, van Straten A, ten Have M, Cuijpers P. Incidence of social phobia and identification of its risk indicators: a model for

- prevention. *Acta Psychiatr Scand*. 2009;119(1):62-70.
6. Sundaram R, Srinivasan V, Malik SR, Mahalingam G, Saradham HR, Kalidossani HR, et al. Prevalence of social phobia and its determinants among undergraduate medical students of Tamil Nadu, India: a cross-sectional study. *J Clin Diagnost Res*. 2023;17(2):LC24-8.
 7. Shrestha B, Yadav S, Dhakal S, Ghimire P, Shrestha Y, Rathaur ES. Status of self-esteem in medical students at a college in Kathmandu: A descriptive cross-sectional study. *F1000Research*. 2022;(10):1031.
 8. D'souza MJ, J. AD, G. MM. Social anxiety disorder among medical students in a tertiary care hospital in Davangere, Karnataka. *Int J Commu Med Publ Health*. 2019;6(4):1434.
 9. Jogdande AJ, Gupta A. Social anxiety disorder in medical students: socio-demographic correlates. *Int J Community Med Public Health*. 2017;4(9):3293.
 10. Ratnani IJ, Vala AU, Panchal BN, Tiwari DS, Karambelkar SS, Sojitra MG, et al. Association of social anxiety disorder with depression and quality of life among medical undergraduate students. *J Family Med Prim Care*. 2017;6(2):243-8.
 11. Desalegn GT, Getinet W, Tadie G. The prevalence and correlates of social phobia among undergraduate health science students in Gondar, Gondar Ethiopia. *BMC Res Notes*. 2019;12(1):438.
 12. Charishma KS, Challuri P, Babu RS, Narukurthi P, Sakamudi M. The prevalence and correlates of social phobia among undergraduate medical student. *Int J Psych Res*. 2020;2(2):26-30.
 13. Jovita Mascarenhas J, Krishna A, Pinto D, Professor A. Social phobia (social anxiety disorder) in medical and paramedical first year undergraduates. *Galore Int J Heal Sci Res*. 2019;4(2):120.
 14. Afshari N, Farokhzadian J, Abdi K, Sheikhbardsiri H. Gender Matter, Social Phobia and High-Risk Behaviors in Young Medical Students. *Ethio J Heal Sci*. 2021;31(2).
 15. Virk A, Singh P. A study on relationship between body-image and self-esteem among medical undergraduate students. *Int J Commu Med Publ Heal*. 2020;7(2):636-41.

Cite this article as: George A, Jadhao AR, Agrawal S, Mathew E, Kalaivani M. A cross-sectional study on social anxiety disorder and self- esteem among undergraduate medical students of a tertiary health care centre in central India. *Int J Community Med Public Health* 2024;11:4844-8.