Original Research Paper

Psychiatry

PREVALENCE AND SOCIODEMOGRAPHIC CORRELATES OF SOCIAL ANXIETY DISORDER AMONG MEDICAL UNDERGRADUATES

I. Guganeshwari*	3rd year MBBS student, Saveetha Medical College and Hospital, kuthambakam, Chennai– 600124, Tamilnadu. *Corresponding Author
Maathanghi Ravishankar	2nd year MD, Department of Psychiatry, Saveetha Medical College and Hospital, kuthambakam, Chennai – 600124, Tamilnadu.
Dr. Vijay Anand	Senior Resident, Department Of Psychiatry, Saveetha Medical College And Hospital, Kuthambakam, Chennai – 600124, Tamilnadu.

ABSTRACT
Background: Social anxiety disorder is a common mental health disorder characterized by persistent fear of being embarrassed, humiliated, rejected and looked down by others. It can cause impairment in education and in professional achievement, quality of life and social relationships. The objective of this study was to measure the prevalence and study associated factors of social anxiety disorder among students of a tertiary medical college and hospital.
Methods: This cross-sectional study was conducted among 403 medical students of a medical college and Hospital. The questionnaire used in the study had questions related to socio-demographic details and had the social phobia inventory (SPIN) questionnaire which was used to assess social anxiety disorder.
Results: Out of 403 medical students, 61.53% (n=248) students were not having any type of social anxiety disorder. Among 38.46% (n=155) of students who were having SAD, 21.33%(n=86) were having mild SAD and 17.11% (n=69) were having significant SAD. Mild social anxiety is considered as normal. Factors such as age, year of study, self- perception of facial appearance, history of chronic illness, academic performance satisfaction and language barrier were found to be statistically associated with SAD.
Conclusion: Social anxiety disorder was significantly associated with age, year of study, self perception of facial appearance, history of chronic illness, academic performance satisfaction and language barrier.

KEYWORDS : social anxiety disorder, prevalence, medical students, social phobia inventory

INTRODUCTION:

Social anxiety disorder is also known as social phobia. It is a common mental health disorder. Diagnostic and statistical manual for mental disorders (DSM) V has classified social anxiety disorder (social phobia) under anxiety disorders and is defined as "a persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be embarrassing and humiliating" [1]. As per NMH survey 2015-2016 report among all age group the prevalence of phobic anxiety disorder was found to be 1.9% [2]. Social anxiety disorder affects 4% of the population in their lifetime and the current prevalence of social anxiety disorder was estimated to be 1.3% [3]. Although social anxiety disorder is common among adults, it is often under diagnosed and undertreated [4],[5].

Social anxiety disorder is characterized by the fear of being embarrassed, humiliated, rejected and looked down by others. SAD created a negative impact on the ability to learn, quality of life, social relationships, educational achievement and professional achievement [6],[7]. This in turn can lead to substance abuse and depressive disorders [6-8]. Due to high competition and the pressure to perform well especially among students, SAD is becoming highly relevant. Social anxiety disorder among students was found to be as a result of various factors such as male or female gender, academic performance, presence of language barrier, social media usage, perceived overweight and staying away from family.

As medical education can impose considerable degree of psychological stress among medical students, this study was conducted to assess the socio demographic factors associated with SAD in medical students.

METHODOLOGY:

This cross-sectional study was done on 403 medical students of a tertiary medical college and hospital medical college after obtaining approval from the Institutional ethics committee.

All MBBS students of 1st, 2nd, 3rd, 4th years and interns who were willing to participate, both males and females were included in the study following informed consent.

First year students who were less than 18 years, students who were already diagnosed with mental illness or on treatment were excluded from study.

The questionnaire used in the study had two parts. First part had questions related to socio-demographic details, self-perception, language barriers, academic performance and medical history. The second part was the social phobia inventory (SPIN) questionnaire which was used to assess social anxiety disorder. It consisted of 17 items.

The items were headed by the following question: 'please indicate how much the problem have bothered you for the past week'. The answers of each item ranged from 0 (not at all) to 4 (extremely). The total score determines the severity of the disease as the following: less than or equal to 20 indicates no disease, 21-30 indicates mild, 31-40 indicates moderate, 41-50 indicates severe and 51 or more indicates very severe. Test-retest reliability (r=0.81) and internal consistency (alpha=0.89) of the SPIN questionnaire is good [10-14].

Data entry and analysis was done using SPSS version 21 The association between the socio-demographic correlates and SAD severity scores was established using chi-square test. A p value of < 0.05 was considered as statistically significant.

RESULTS:

The study included 403 medical students. Out of 403 medical students, 61.53% (n=248) students were not having any type of social anxiety disorder. Among 38.46% (n=155) of students

who were having SAD, 21.33%(n=86) were having mild SAD and 17.11% (n=69) were having significant SAD. Mild social anxiety is considered as normal.

Among students who were having significant SAD, most common was moderate SAD which was seen in 11.41% (n=46) of students, followed by severe SAD seen in 4.71% (n=19) students and the least common was very severe SAD which was seen in 0.99% (n=4) of students (Graph 1).

The Socio-demographic profile of study participants are given in Table 1. The socio-demographic variables associated with SAD are given in Table 2.

Incidence of SAD was higher in female students (11.4%, n=46) than male students (5.7%, n=23). This difference was not statistically significant.

Out of 214 students belonging to age group < 21 years, 44 (10.9%) were having SAD and out of 189 students belonging to age group >21 years, 25 (6.2%) were having SAD and this difference was statistically significant (p value= 0.051).

6 (1.5%) out of 55 first year students had SAD. 34 (8.4%) out of 135 second year students had SAD. 22 (5.5%) out of 88 third year students had SAD. 3 (0.7%) out of 59 fourth year students had SAD. 4 (1%) out of 66 interns had SAD. This difference was statistically significant.

Out of 267 hostelite students, 47 (11.7%) were having SAD and out of 136 dayscholar students 22(5.5%) were having SAD.

Out of 107 students residing in rural area, 13(3.2%) were having SAD and out of 296 students residing in urban area, 56 (13.9%) were having SAD and this difference was not statistically significant.

Proportion of SAD was higher among students who were a part of nuclear family (13.2%, n=53) than students who were a part of joint family (2.2%, n=9) and single parent family (1.7%, n=7).

Out of 63 students whose father's education was 12th Std or less, 6 (1.5%) were having SAD and out of 340 students whose father's education was 12th std or more, 63 (15.6%) were having SAD and this difference was not statistically significant.Out of 96 students whose mother's education was 12th Std or less, 14 (3.5%) were having SAD and out of 307 students whose mother's education was 12th std or more, 55 (13.6%) were having SAD and this difference was not found to be statistically significant.

Incidence of SAD was higher among those students who were satisfied with their body weight (10.2%, n=41) than those who were not satisfied with their body weight (6.9%, n=28).

Incidence of SAD was higher among those students who were satisfied with their facial appearance (9.9%, n=40) than those who were not satisfied with their body weight (7.2%, n=29) and this difference was found to be statistically significant (P value= 0.017).

Out of 23 students who gave history of any chronic illness, 8(2%) were having SAD and out of 380 students who do not have any history of chronic illness, 61(15.1%) were having SAD. This difference finding was found to be statistically significant. (P value=0.021).

Out of 259 students who were satisfied with their academic performance, 28 (6.9%) were having SAD and out of 144 students who were not satisfied with their academic performance,41(10.2%) was having SAD. This difference was found to be statistically significant (0.001).

Language barrier was perceived during communication by 54 students and students out of it 17 (4.2%) had SAD. Out of 349 students who did not have any language barrier during communication 52(12.9%) had SAD. It was found to be statistically significant (p value= 0.003).

DISCUSSION:

Significant SAD was seen only among 17.11% students. Moderate SAD was seen most commonly among students with a frequency of 11.41%, followed by severe SAD seen in 4.71% and the least common was very severe SAD seen in 0.99% of students.

These findings were similar to that of the study conducted by Jogdande AJ et al [14] on socio demographic correlates of social anxiety disorder in medical students showing that 27% students were having mild SAD, 12.67% students were having moderate anxiety, 5.33% students were having severe anxiety and 0.67% students were having very severe anxiety.

The results of our study are in contrast to the study conducted by Hazeem Abdeljaleel Suleiman et al on Prevalence of Social Anxiety Disorder among Medical Students The overall prevalence of social anxiety disorder among his participants was 61.3%, of which 19.2% had mild, 21.6% moderate, 10.9% severe, and 9.6% had very severe SAD [15].

In our study female had both significant Sad (11.4%) and no disease (51.40%) more than the males, where 5.7% male expressed the disease and 31.5% did not have thedisease. In contrast, a study done by Alkhathami et al [16], showed that males had higher social anxiety scores than female.

Sad was found more in students belonging to age group <21 years (10.9%) but it was not statistically significant. Our results were in contrast with a study conducted by Dsouza MJ et al, where SAD was found more in students belonging to age group > 21 years (36.6%) [17].

SAD was found higher in 2nd year students (8.4%) followed by 3rd year students (5.5%), 1st year students (1.5%), interns (1%) and 4th year students (0.7%). Our findings were similar to a study conducted by Dsouza MJ et al, where SAD was found more in in 2nd year students (35%) followed by 3rd year students (23.3%) and 4th year students (32.5%) but they did not include 1st year students and interns in their study [17].

SAD was found more in hostelites (11.7%) than dayscholars (5.5%). This finding is same as found in a study conducted by Jogdande AJ et al where SAD among hostelites was 22.05% and none of the dayscholars had SAD [14].

Prevalence of SAD was more among students residing in urban area (13.9%) than students residing in rural areas (3.2%). Our results were similar to that of a study conducted by Joylin Jovita Mascarenhas et al where SAD among medical students residing in urban area and rural area was 35.71% and 10.71% respectively [18].

SAD was higher among students who were a part of nuclear family (13.2%) followed by joint family (2.2%) and single parent family (1.7%). This was similar to a study conducted by Preeti et al where prevalence of SAD was higher among Students who were a part of nuclear family (74.5%) followed by joint family (25.5%). But this study did not include single parent family [19].

SAD was more in students whose father's education was 12th std or more (15.6%) and in students whose mother's education was 12th std or more (13.6%) but it was not statistically significant. This finding was contrasted to a study done by Jogdande AJ et al which stated that SAD was more in students

whose father's and mother's education was 12th std or less (23.53% and 25.81% respectively) [14].

In our study Social anxiety was higher among students who were satisfied with their body weight (10.2%) than students but was not statistically significant. This finding was in contrast to the study done by Preeti et al where SAD was more among students who were not satisfied with their body weight (14.1%) than those students who were satisfied with their body weight (4.8%) [19].

SAD was significantly associated with students who were satisfied with their facial appearance but in contrast to our findings, in the study conducted by Preeti et al SAD was significantly associated with dissatisfaction of facial appearance [19].SAD was significantly associated with students who had history of chronic illness (2%). In contrast, history of chronic illness did not have a significant association with SAD in the study conducted by Preeti et al [19].

SAD was higher among students who were not satisfied with their academic performance (10.2%) than students who were satisfied with their academic performance (6.9%). Mazhari et al in their study stated that there was no correlation between academic performance and SAD [20].

SAD was significantly associated with students who did not perceive language barrier during communication (12.9%). In contrast SAD was significantly associated with students who perceived language barrier during communication (24.2%) in a study conducted by Preeti et al [19].

CONCLUSION:
Out of 403 medical students, 61.53% (n=248) students were not having any type of social anxiety disorder. Among 38.46% (n=155) of students who were having SAD, 21.33%(n=86) were having mild SAD and 17.11% (n=69) were having significant SAD. Factors such as age, self-perception of facial appearance, history of chronic illness, academic performance satisfaction and language barrier were found to be statistically associated with SAD. Medical colleges have to address social anxiety disorder among students. Adequate awareness about SAD and provision for counselling and appropriate supportive therapy has to be made.

Acknowledgement:
I sincerely thank the department of psychiatry and the participant medical students for their contribution in research.
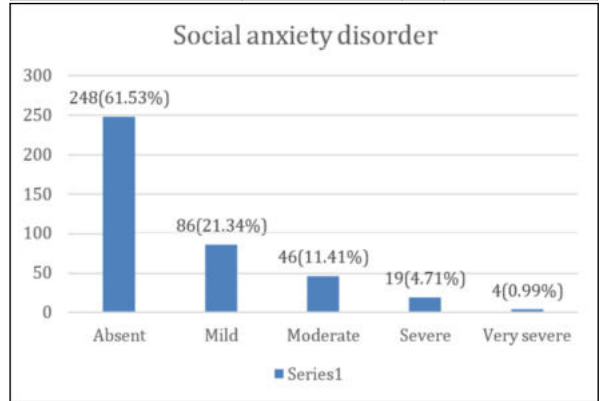
Conflict Of Interest: None declared.

Ethical Approval: The study was approved by the Institutional Ethics Committee.

Table 1: Socio-demographic Profile Of Study Participants

SOCIO-DEMOGRAPHIC VARIABLE		N	PERCENTAGE
Gender	Female	253	62.80%
	Male	150	37.20%
Year of study	1st year	55	13.60%
	2nd year	135	33.50%
	3rd year	88	21.80%
	4th year	59	14.60%
	CRRI	66	16.40%
Father's education	12th std or less	63	15.60%
	More than 12th std	340	84.40%
Mother's education	12th std or less	96	23.80%
	More than 12th std	307	76.20%
Self-perception of body weight	Not satisfied	163	40.40%
	Satisfied	240	59.60%
Self-perception of facial appearance	Not satisfied	121	30.00%
	Satisfied	282	70.00%
History of chronic illness	Absent	380	94.30%
	Present	23	5.70%
Academic performance satisfaction	Absent	144	35.70%
	Present	259	64.30%
Language barrier	Absent	349	86.60%
	Present	54	13.40%

Graph1: Prevalence Of Social Anxiety Disorder Among Medical Students

Table 2: Association Of Socio-demographic Factors And Social Anxiety Disorder

Socio demographic variable	Categories	Social anxiety disorder				Chi Square Value	P Value
		Present		Absent			
		Numbers	Percentage	Numbers	Percentage		
Gender	Male	23	5.70%	127	31.50%	0.538	0.463
	Female	46	11.40%	207	51.40%		
Age	< 21 years	44	10.90%	170	42.20%	3.803	0.051
	> 21 years	25	6.20%	164	40.70%		
Year of Study	1st year	6	1.50%	49	12.20%	23.246	0.001
	2nd year	34	8.40%	101	25.1		
	3rd year	22	5.50%	66	16.40%		
	4th year	3	0.70%	56	13.90%		
	CRRI	4	1%	62	15.40%		
Mode of accommodation	Hostelite	47	11.70%	220	54.60%	0.129	0.719
	Dayscholar	22	5.50%	114	28.30%		
Place of Living	Urban	56	13.90%	240	59.60%	2.538	0.111
	Rural	13	3.20%	94	23.30%		
Family structure	Nuclear family	53	13.20%	263	65.30%	5.175	0.75
	Joint family	9	2.20%	58	14.40%		
	Single parent family	7	1.70%	13	3.20%		
Father Education	12th std or less	6	1.50%	57	14.10%	3.038	0.081
	More than12th std	63	15.60%	277	68.70%		
Mother Education	12th std or less	14	3.50%	82	20.30%	0.572	0.449
	More than 12th std	55	13.60%	252	62.50%		
Self-perception of body weight	Not satisfied	28	6.90%	135	33.50%	0.001	0.98
	Satisfied	41	10.20%	199	49.40%		

Self-perception of facial appearance	Not satisfied	29	7.20%	92	22.80%	5.71	0.017
	Satisfied	40	9.90%	242	60%		
History of any chronic illness	Absent	61	15.10%	319	79.20%	5.362	0.021
	Present	8	2%	15	3.70%		
Academic perfor mance satisfaction	Absent	41	10.20%	103	25.60%	20.343	0.001
	Present	28	6.90%	231	57.30%		
Language barrier	Absent	52	12.90%	297	73.70%	9.061	0.003
	Present	17	4.20%	37	9.20%		

REFERENCES:
1) American Psychiatric Association. Diagnostic and statistical manual of mental disorders, Fifth Edition, Arlington, VA: American Psychiatric Publishing; 2013.
2) National Mental Health Survey of India, 2015–2016 Prevalence, Patterns and Outcomes, Supported by Ministry of Health and Family Welfare, Government of India, and Implemented by National institute of Mental Health and Neurosciences (NIMHANS) Bengaluru: In Collaboration with Partner Institutions; 2015–2016. Available at: http://indianmhs.nimhans.ac.in/Docs/Summary.pdf
3) Stein DJ, Lim CCW, Roest AM, Jonge PD, Aguilar-Gaxiola S, Al-Hamzawi A, et al. The cross-national epidemiology of social anxiety disorder: data from the World Mental Health Survey Initiative. BMC Med. 2017;15:143
4) Veale D. Treatment of social phobia. Advances Psychiatric Treatment. 2003;9(4):258-64.
5) Priyamvada R, Kumari S, Prakash J, Chaudhury S. Cognitive behavioral therapy in the treatment of social phobia. Industrial Psychiatry J.2009;18(1):60.
6) Fathi S, Ahmadi M, Birashk B, Dehnad A. Development and use of a clinical decision support system for the diagnosis of social anxiety disorder. Comput Methods Programs Biomed 2020;190:105354.
7) Koyuncu A, İnce E, Ertekin E, Tükel R. Comorbidity in social anxiety disorder: Diagnostic and therapeutic challenges. Drugs Context 2019;8:212573.
8) Hakami RM, Mahfouz MS, Adawi AM, Mahha AJ, Athathi AJ, Daghreeri HH, et al. Social anxiety disorder and its impact in undergraduate students at Jazan University, Saudi Arabia. Ment Illn 2017;9:7274.
9) Chukwujekwu DC, Olose EO. Validation of the Social Phobia Inventory (Spin) in Nigeria. J Psychiatry Psychiatr Disord 2018;2:49–54.
10) Harikrishnan U, Arif A, Sobhana H. Prevalence of social phobia among school going adolescents. Int J Indian Psychol 2016;4:74.
11) Bravo MA, González Betanzos F, Castillo Navarro A, Padrós Blázquez F. Evidence of validity of the Spanish version of the Social Phobia Inventory (SPIN). Universitas Psychologica 2017;16:152–63.
12) Mahdi HA. Validity and reliability of social phobia inventory in students with social anxiety. J Mazandaran Univ Med Sci 2016;26:166–77.
13) Fogliati VJ, Terides MD, Gandy M, Staples LG, Johnston L, Karin E, et al. Psychometric properties of the mini-social phobia inventory (Mini-SPIN) in a large online treatment- seeking sample. Cogn Behav Ther 2016;45:236–57.
14) Jogdande AJ, Gupta A. Social anxiety disorder in medical students: socio-demographic correlates. Int J Community Med Public Health 2017;4:3293-6.
15) Hazeem Abdeljaleel Suleiman, Sara Ahmed Elamin, Abdalaziz Awad Alobeid, and Wegdan Elshame Altaib (2021) "Prevalence of Social Anxiety Disorder among Medical Students from Six Medical Schools in Khartoum State," Sudan Journal of Medical Sciences, vol. 16, Issue no. 2, pages 223–232. DOI 10.18502/sjms.v16i2.9290
16) ALKHATHAMI S, KAVIANIA H and SHORTA E(2014): Social anxiety among adolescents and its relation to quality of life. European Proceedings of Social & Behav-ioural Sci. 2014;1:1-4
17) Dsouza MJ, Daniel AJ, Muntazeem MG. Social anxiety disorder among medical students in a tertiary care hospital in Davangere, Karnataka. Int J Community Med Public Health 2019;6:1434-6.
18) Mascarenhas JJ, Krishna A, Denzil Pinto D. Social phobia (social anxiety disorder) in medical and paramedical first year undergraduates. Galore International Journal of Health Sciences & Research. 2019; 4(2): 120-126.
19) Preeti, Das P. Prevalence of social anxiety disorder and its determinants among undergraduate medical students of East Delhi. Int J Community Med Public Health 2019;6:1335-9.
20) Mazhari, S. H., Ekhlaspour, M., and Banazadeh, N. (2014). Social phobia and its association with academic performance among student of Kerman University of Medical Sciences, Iran. *Journal of Strides in Development of Medical Education*, vol. 11, no. 2, pp. 227–235.