



Frequency of Social Anxiety Disorder among Medical Students in A Tertiary Care Hospital in The Post Pandemic Era: A Cross-Sectional Study in India

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Abstract

Introduction: Social anxiety disorder is a common psychiatric illness characterized by fear of being observed and scrutinized by others. The COVID-19 pandemic has led to acute changes in daily routines and lifestyles. Hence, leading to an increase in the frequency of anxiety disorders worldwide.

Aim: To explore the frequency of social anxiety disorder among medical students and its socio-demographic correlates in the post-pandemic era.

Methods: This hospital-based, cross-sectional study was conducted among 140 medical students of a Tertiary care medical college and hospital in Mangalore, Karnataka from August to October 2023. The Social Phobia Inventory (SPIN) questionnaire was used to

diagnose SAD among students and correlated with their socio demographic data.

Statistical Analysis: Data entry and analysis were done using SPSS version 20.

Results: Social anxiety disorder (SAD) was present among 48.6 (n=68) of the medical students. The female students (55.1%, n=49) documented a higher proportion of SAD compared to male students (37.3 %, n=19). There was a higher incidence among students from authoritarian family environments.

Conclusions: A higher proportion of medical students had social anxiety disorder which was influenced by gender and family environment. These results constitute a need for awareness amongst the medical fraternity as a whole regarding early detection and management of these cases.

Keywords: Social anxiety disorder, Social Phobia, Medical students, Social phobia inventory, Covid-19

Introduction

Social Anxiety Disorder (SAD) aka social phobia is defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as an intense fear or anxiety about social situations where the individual is scrutinized by others. These situations can include social interactions, being observed and performing in front of others and avoidance of the same. Various studies have reported the lifetime prevalence of SAD to be between 3% and 13% ^[1]. A meta-analysis of epidemiological studies done across various parts of India found that the prevalence of social phobia in the community was 5.8% ^[2]. It is the third most prevalent mental disorder psychiatric illness; the first being depression and the second being substance abuse ^[3] and is also a significant risk factor for the same ^[4].

SAD is a common anxiety disorder among adolescents and young adults. Symptoms include slurred speech, tremors, tachycardia, hyperhidrosis, and nausea. If left untreated or dismissed can lead to decreased scholastic performance, alcohol and nicotine abuse, poor performance in assessments and presentations ^[5, 6] and taking over-the-counter prescriptions to manage the same.

The pathophysiology of SAD is not fully understood, it involves the interplay between genetics, temperamental factors, family modelling, neurobiology and cognitive behavioural factors.

Symptoms of SAD usually begin to emerge in late childhood and are often influenced by the social environment in which the child is raised ^[7]. The lack of social interactions and extracurricular activities during

the study period can contribute to the development of social phobia ^[8].

Authoritative parents provide not only support and warmth but also clearly defined rules and consistent discipline. Authoritarian parents on the other hand tend to use hostile control or harsh punishment as a way of making the child follow what's been asked but never provide any explanation for their action or take the child's perspective or opinion into consideration. ^[9]

Families with socially anxious parents socialise less thereby restricting the child's exposure to social situations. They hence have fewer opportunities to develop social skills and get over the fear of being in social situations. Similarly, controlling and overprotecting parenting may be associated with the child being fearful and socially withdrawn. Increased rates of social anxiety have been reported in firstborn children, maybe because of increased pressure on them to succeed and the absence of benefits of having older siblings as role models. ^[10,11,12]

The COVID-19 pandemic has led to changes in the modes of communication and in itself contributed to a further decrease in social interaction. A systematic review done on the global date of anxiety during Covid 19 pandemic estimated an additional 76.2 million cases of anxiety disorders globally with an increased prevalence of 25.6 per cent. ^[13]

Medical education includes learning methods requiring active participation and interaction in clinical case presentations, oral exams etc which can precipitate the symptoms of SAD. Due to the COVID pandemic, the students have not been exposed to the above for over 2 years which may add to the worsening of SAD. Social phobia has a high prevalence and marked impact on life, early identification and adequate treatment by college

counselling centres will successfully help in reducing the burden of this common condition. Therefore, this study aims to explore the frequency of social anxiety disorder among medical students and its socio-demographic correlates in the post-pandemic era.

Materials and Methods

This hospital-based, cross-sectional study was conducted among the 140 medical students of a tertiary care medical college and hospital in Mangalore, Karnataka from August to October 2023. All the medical students from first year to final year (aged 19-26) who were present and willing to participate were included in the study following informed consent. Students with any comorbid psychiatric illness and medical illness (seizure disorder, history of head injury, endocrine disorders, respiratory disorders like bronchial asthma, cardiovascular disorder, use of bronchodilators) and students who refused to give consent were excluded from the study.

The Social Phobia Inventory (SPIN) questionnaire was used to diagnose SAD among students. It is an easily administered self-rating scale that captures the spectrum of fear, avoidance and physiological symptoms in a Likert scale for each item. It has a sensitivity of 73-85% and a specificity of 69-84% regarding the diagnosis of SAD.

The severity of SAD is graded based on the total score obtained viz: Less than 20–None; 21–30-Mild; 31–40-Moderate; 41 – 50-Severe; 51 or more- very Severe. [14]

Statistical analysis

Data entry and analysis were done using SPSS version 20. The association between age, gender and SAD severity scores was established using a chi-square test. Mean scores were compared using a student t-test. A p-

value of <0.05 was considered to be statistically significant.

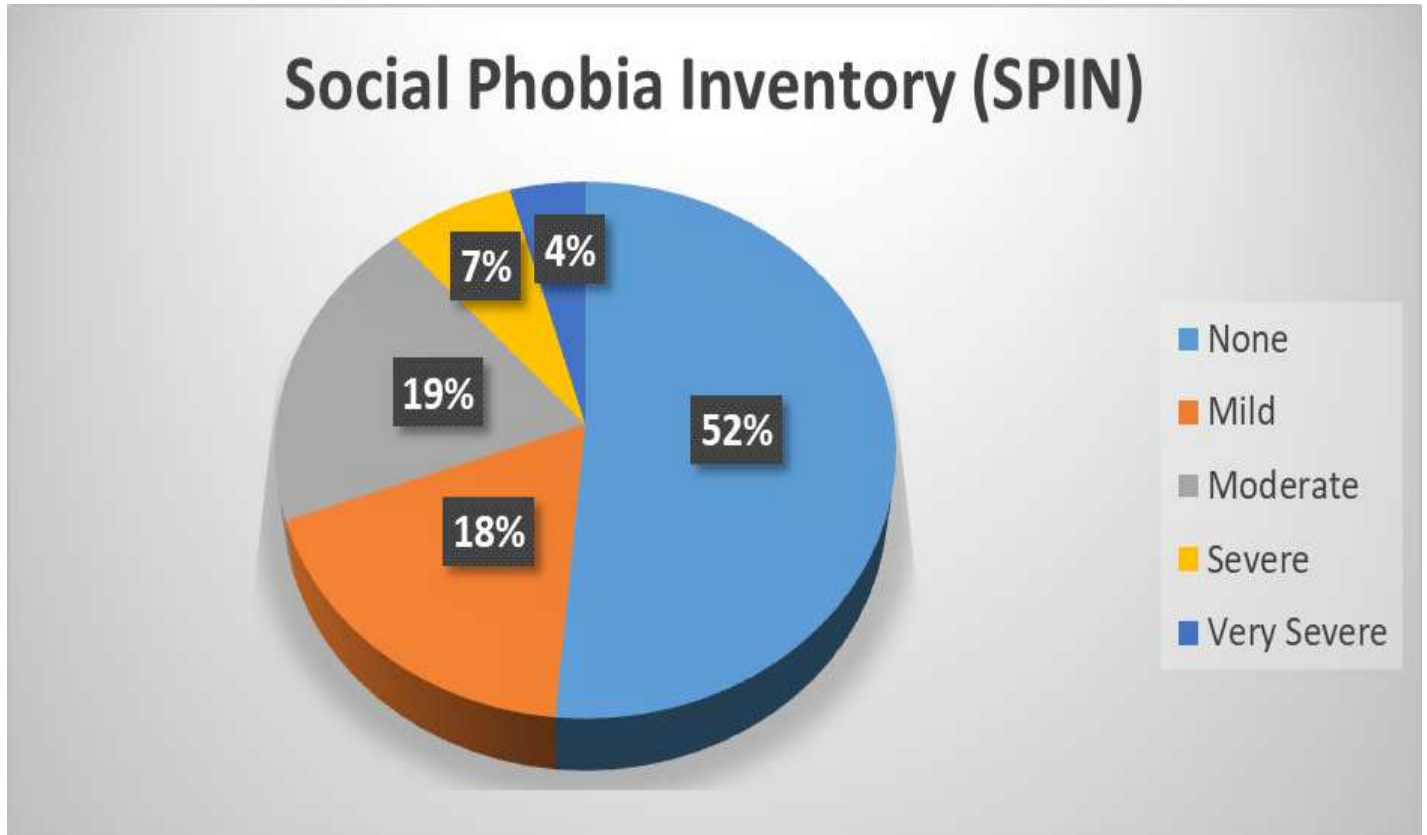
Results:

Table 1: Sociodemographic details of the study participants

Study variables	Frequency	Percentage	
Age	18	6	4.3
	19	10	7.1
	20	34	24.3
	21	30	21.4
	22	23	16.4
	23	18	12.9
	24	5	3.6
	25	14	10.0
Sex	Female	89	63.6
	Male	51	36.4
Residence	Rural	12	8.6
	Urban	128	91.4
Birth order	1	83	59.3
	2	50	35.7
	3 and more	7	5.0
Number of siblings	0	25	17.9
	1	76	54.3
	2	29	20.7
	3 and more	10	7.1
Family Environment	Authoritative	111	79.3
	Authoritarian	29	20.7

The study included 140 medical students with a mean age of 20.4 years, with a standard deviation of 1.8 years. The minimum and maximum ages are 18 and 25 years respectively. (Table 1)

Graph 1: Prevalence of Social Phobia



The Prevalence of social Phobia was found to be 48.6%. It is observed that 17.9% had mild, 19.3% had moderate, 7.1% had severe and 4.3% had very severe social

Phobia. The mean score was 22.4 ± 14.3 with a minimum score of 0 and a maximum score of 59. (Figure 1)

Table 2: Association of Social Phobia with study variables

Study variables		Social Phobia		Test statistics	P value
		Present (n=68)	Absent (n=72)		
Gender	Female	49(55.1)	40(44.9)	4.11	0.043*
	Male	19(37.3)	32(62.7)		
Residence	Rural	8(66.7)	4(33.3)	1.72	0.190
	Urban	60(46.9)	68(53.1)		
Religion	Hindu	18(26.5)	16(22.2)	1.567	0.456
	Muslim	8(11.8)	5(6.9)		
	Christian	42(61.8)	51(70.8)		
Income class	Middle	22(32.4)	19(26.4)	0.607	0.438
	Upper	46(67.6)	53(73.6)		
Family	Authoritative	49(44.1)	62(55.9)	4.20	0.040*

Environment	Authoritarian	19(65.5)	10(34.5)		
Mothers' profession	Working mothers	38(49.4)	39(50.6)	0.0416	0.838
	Homemaker	30(47.6)	33(52.4)		
Fathers' profession	Professional	63(48.5)	67(51.5)	0.008	0.925
	skilled	5(50.0)	5(50.0)		

*p value <0.05 is considered statistically significant

Statistical test used: Chi Square test

The female students (55.1%, n=49) documented a higher proportion of SAD compared to male students (37.3 %, n=19). There was a higher incidence among students from authoritarian family environments. (Table 2)

Discussion

Among the 140 participants in this study, 48.6 per cent had social anxiety disorder which was similar to the study findings a study done in Sudan (61.3 %), Ethiopia (37.12 ± 12.61), Nigeria (62.5 %), 56% in Malaysia, 80% in Iraq, and 60% in Saudi Arabia, Iran (58.9%) and Tamil Nadu (India) 41%.^[15,16,17,18,19,20,21,22] On the contrary, the following studies had a lower frequency of social phobia in Davangere Karnataka (30%); East Delhi (12.3%) and Kerala (14.3%) among medical students had lower prevalence. 34.6% in Brazil; and 8 per cent in the UK ^[23, 24, 25, 26, 27].

Various studies conducted in different student populations have found a prevalence rate of 15.3% ^[28] in India, which is comparatively lower than that among medical students. This highlights the stressful and demanding nature of medical education.

This could be due to variations in the scales used being different in various studies as well as the sociocultural factors. The increase in social phobia compared to previous studies in India can also be attributed to the effect of COVID-19 19 as our study took place post Covid following social isolation for a period of 2 years.

Our study showed that social phobia was more common in female students than male students. With 55.1 % of females having social phobia compared to 37.3 % of males. Similar to studies done in Saudi Arabia where 61.7% of females and 38.3% of males had social phobia ^[29], in Tamil Nadu regression analysis showed higher social phobia among females than men. ^[30] Unlike the results of our study, few studies found higher social phobia among males than females or no gender predominance. In a study done in Saudi 65.2 % of males and 51. 9 % of females had social phobia ^[31] , In Sudan 62.3% of females and 59.3 % of males had social phobia ^[15] , In Davangere Karnataka social phobia was 31.1% female students and in 29.9% male students ^[23] .

Social phobia is more common among females and can be attributed to sociocultural factors. Where in developing countries women are not allowed to socialise like men.

Social phobia was also higher in students who were brought up in an authoritarian family as compared to an authoritative family. A Study done in Lahore revealed a positive correlation between a supportive family environment and adolescent well-being, evidenced by high mean scores in communication, emotional support, and family cohesion. ^[32] Similarly in Iran a study among 250 students where found a positive correlation between social anxiety parental conflicts and authoritative parenting style. ^[33] In Tehran study among 306

participants showed a significant positive relationship between social anxiety with permissive parenting and authoritarian parenting^[34].

Conclusion

Overall this study found that a large population of medical students struggle with social anxiety disorder. The medical curriculum should address social anxiety disorder among medical students and encourage the social interaction of students in the community, conduct personality development training and provide repeated clinical exposure in the earlier part of the course.

Our study had certain limitations such as a small sample size in a medical population from a single tertiary centre. Hence the findings could not be generalised to the population. It was also a cross sectional study which does not establish causality or temporal association between variables. Factors such as substance use, burden on scholastic performance and personality disorders were not looked into. Nonetheless our study was the only study that assessed social phobia among medical students post the pandemic. It was also one of the few studies that took into consideration the parenting style.

Future implications being that it can be conducted in a larger sample size and with various medical colleges. It can be further extended to the general population. Turning this study into an interventional study can determine which measures that were taken were found to be effective.

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