A Retrospective Study to Determine the Frequency and Factors Associated with Social Phobia among Undergraduate Medical Students

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Abstract

Aim: To determine the frequency and factors associated with social phobia among undergraduate medical students.

Materials and Methods: A study was conducted in the department of psychiatry, PMCH, Patna, Bihar, India for one year. 600 undergraduate medical students were included in this study. The sample included students currently enrolled in theundergraduate medical course ranging from 1st year to 4th year and who are willing to participate in the study. All the students who had pre-existent psychiatric illness and those who were not willing to participate in the study were excluded from the sample. The scales used in this study are Social Phobia Inventory Scale and Oslo 3- Item Social Support Scale.

Results: The answers provided by the respondents were summed anda value was generated. This number was categorized between 5 sections - students in whom social phobia cannot be observed (score>30); students in whom mild social phobia was observed (31<score<36); students in whom moderate level of social phobia was observed (37<score<42); studentswho exhibited a severe level of social phobia (43<score<58); students who experienced very severe levels of social phobia(score>58). As can be observed, the distribution between thecategories is quiet even. It was observed that 22% of the students had no observation of social phobia. 18% and 17% of the students reported mild and moderate levels of social phobia respectively. A staggering 31% reported severe socialphobia while 10% of the respondents reported very severe social phobia. The shows the mean of the individual scores in SPI scale and it was observed that two factors in particular, I avoidtalking to people I do not know (mean = 3.02) and I avoid having to give speeches (mean = 3.02) had the highest scores.

Conclusion: In line with several studies in the past, this study too concludes that being a female student leads to higher prevalence of having social phobia. The overall proportion ofstudents who reported social phobia was much higher than averages from studies in other countries.

Keywords: Social phobia; Prevalence; Undergraduate

Introduction

Social phobia, also known as social anxiety disorder, is a common mental health condition characterized by an intense fear of social situations where one may be judged, embarrassed, or scrutinized by others. This condition can significantly impair daily functioning and quality of life, particularly in high-stress environments such as medical school. Undergraduate medical students are often under substantial pressure due to rigorous academic demands, frequent assessments, and the need for clinical competency, making them particularly vulnerable to developing social phobia. [1-3] The prevalence of social phobia among medical students is a growing concern, as it not only affects their academic performance but also their ability to interact with patients and peers effectively. Factors contributing to social phobia in this population include high expectations, fear of negative evaluation, and performance anxiety. Additionally, the competitive nature of medical education can exacerbate feelings of inadequacy and self-consciousness, leading to heightened anxiety in social and academic settings. [4-6] Understanding the prevalence and correlates of social phobia in medical students is crucial for developing targeted interventions to support their mental health. Identifying specific risk factors and correlates, such as personality traits, coping mechanisms, and academic pressures, can help in designing preventive measures and therapeutic strategies. By

addressing social phobia, medical schools can enhance the well-being and academic success of their students, ultimately leading to better healthcare professionals. [7-10] This study aims to investigate the prevalence and correlates of social phobia among undergraduate medical students. By examining the factors associated with social phobia, this research seeks to provide insights into the mental health challenges faced by medical students and suggest potential interventions to mitigate these issues. Understanding these aspects is essential for fostering a supportive educational environment that promotes both academic and personal growth.

Materials and Methods

A study was conducted in the department of psychiatry, PMCH, PATNA, Bihar, India for one year. 600 undergraduate medical students were included in this study. The sample included students currently enrolled in the undergraduate medical course ranging from 1st year to 4th year and who are willing to participate in the study. All the students who had pre-existent psychiatric illness and those who were not willing to participate in the study were excluded from the sample. The data was collected using a pre-tested self- administered questionnaire which included their social demographics such as gender, religion, marital status and residence. The scales used in this study are Social Phobia Inventory Scale and Oslo 3- Item Social Support Scale. The Social Phobia Inventory Scale uses 17 items to measure the social phobia with cut off points that are greater or equal to 21. 0-68 is the range of the total score and each question is rated between 0 (not at all) - 4 (extremely). [7] The Oslo 3 ItemSocial Support scale comes with a score ranging between three categories - "Poor support" 3–8, "moderate support" 9–11, and "strong support" 12–14 and the total score ranges between 3-14. [8]

The questionnaire was distributed using two separate mediums to ensure that that it covered a large number of responders. The first medium used was a traditional hardcopyof a questionnaire which was handed out to students during their classes and dropped off at a decided point to ensure anonymity. The second medium was a google form that was circulated amongst students of the sampled university. All ofthis data was then collated and analysed using excel data interpretation methods. To understand correlation and effectsof variables on the social phobia score - a multiple regressionwas run by taking social phobia as the dependent variables and other demographic factors as independent variables.

Results

Socio-demographic Characteristics

A total of 600 students were included in the study from which36% of the respondents are male and the remaining 64% of the respondents are female. The average age of a respondentis 19.4 years. Students in their first year of education are 21.5%, second year are 38.6%, third year are 14.5% and finalyear are 25.1%. A majority of the students (90.3%) recognized as Hindus and the remaining 10% ranged betweenChristians, Muslims, Others and Atheists. Amongst the students, 14.5% of the students scored between 50-60%, 49%of students scored between 61-70%, 25% of the students ranged between 71-80% and 10.3% of the students scored above 80% in the last medical exam they had written (Table 1).

Substance Characteristics

It can be seen that there is a higher tendency for substance usage amongst students in this age. 12% of the students consumed alcohol, 1% consumed cannabis and 2% smoked cigarettes. 83% of the students reported no usage of any of these items (Table 1).

Table 1: Demographic variables of the study sample

		Frequency	Percentage
Sex	Female	382	63.66
	Male	218	36.33
Age	17-21 years	431	71.83
	22-24 years	160	26.67
	25 years and above	9	1.50
Religion	Hindu	542	90.33
	Christian	27	4.50
	Muslim	25	4.17
	Atheist	3	0.5
	Other	3	0.5
Marital status	Single	595	99.17
	Married	5	0.84
Residence	Urban	517	86.00
	Rural	83	14.00
Year of study	1st Year	130	21.67
	2nd Year	232	38.67

	3rd Year	87	14.67
	4th Year	151	25.17
% scored in the most recent examination	50-60%	88	14.67
	61-70%	299	49.83
	71-80%	150	25.00
	Above 80%	63	10.50
Substance use	Alcohol	76	12.67
	Cigarette	15	2.50
	Cannabis	10	1.67
	None	499	83.17

Prevalence of Social Phobia

The answers provided by the respondents were summed anda value was generated. This number was categorized between 5 sections - students in whom social phobia cannot be observed (score>30); students in whom mild social phobia was observed (31<score<36); students in whom moderate level of social phobia was observed (37<score<42); students who exhibited a severe level of social phobia (43<score<58); students who experienced very severe levels of social phobia(score>58). As can be observed, the distribution between thecategories is quiet even. It was observed that 22% of the students had no observation of social phobia. 18% and 17% of the students reported mild and moderate levels of social phobia respectively. A staggering 31% reported severe social phobia while 10% of the respondents reported very severe social phobia. The (Table 2) shows the mean of the individual scores in SPI scale and it was observed that two factors in particular, I avoidtalking to people I do not know (mean = 3.02) and I avoid having to give speeches (mean = 3.02) had the highest scores.

Table 2: SPI scale questionnaire values

	Mean	SD	P-Value
I am afraid of people in authority	2.53	1.018	0.001
I am bothered by blushing in front of people	2.20	1.125	0.001
Parties and social events scare me	2.22	1.710	0.001
I avoid talking to people I don't know	3.02	1.285	0.001
Being criticized scares me a lot	2.96	1.361	0.001
I avoid doing things or speaking to people for fear of embarrassment	2.96	1.609	0.001
Sweating in front of people causes me distress	1.96	1.180	0.001
I avoid going to parties	2.12	1.468	0.001
I avoid activities in which I am the centre of attention	2.34	1.563	0.001
Talking to strangers scares me	2.12	1.659	0.001
I avoid having to give speeches	3.02	1.626	0.001
I would do anything to avoid being criticized	2.74	1.346	0.001
Heart palpitations bother me when I am around people	1.98	1.151	0.001
I am afraid of doing things when people might be watching	2.55	1.469	0.001
Being embarrassed or looking stupid are among my worst fears	2.72	1.372	0.001
I avoid speaking to anyone in authority	2.24	1.195	0.001
Trembling or shaking in front of others is distressing to me	2.12	1.164	0.001

Regression Analysis

To understand the effect that socio demographic factors have on the social phobia, a multiple regression was run using thedependent variable as the total social phobia score and independent variables as the year of study, gender, residence, percentage in most recent examination and substance usage. Gender, residence and substance usage were converted into dummy variables for ease of analysis where 0-male, 1- female; 0-rural, 1-urban; 0-no substance usage, 1-substance usage. The analysis shows that being a woman, belonging toan urban residence and using alcoholic substances was positively correlated with a higher social phobia score. The percentile in which students typically fell into is negatively correlated with social phobia For every one unit increase in their total exam score, there was a 0.133 reduction in the social phobia score. Females scored 3.46 points higher in their social phobia score as opposed to their male counterparts. Students from urban residences scored 0.55 points higher as opposed to their rural counterparts. It needs to be taken into account that the total number of rural students in the sample were low. The regression also showed that for every 1 year

increased in yearof study, there 0.76 points drop in the social phobia score. Forsubstance use, it was observed that for people who engaged in any form of substance use had a 0.02 chance higher of having social phobia. The mean score, as expected also had anegative correlation with the social phobia score. For every increase in percentile, the student experienced lower social phobia (Table 3).

Table 3: Regression analysis of the factors for social phobia

Total	Coef.
Gender	3.465012
Residence	0.5532478
Year of study	-.7647629
Substance Use	.0249963
Mean	-.1337736
_cons	49.57762

The social support in the undergraduate medical students. In the sampled students, 474 (79%) of them feel that they have poor social support and 118(19.7%) of them feel that they have moderate social support. Only 8(1.3%) of them feel that they have strong social support.

Discussion

The study aimed to understand the prevalence of social phobias amongst undergraduate medical students in the sampled university. The results revealed that as high as 78%of the students reported some form of social media and about31% of these students reported severe social phobia.

Similar tests conducted in other countries have on average shown a much lower level of social phobia amongst students. A study conducted in Ethiopia showed that about 31.7% of the students had some form of social phobia. Similar studies conducted previously in India also had an estimation of about 28.6%.[9] The higher rate of social phobiaof students in this study could be attributed to differentfactors. The first being that they are students attending MBBS while students in these other studies came from a variety of backgrounds. It has been time and again been stated that medical education in education with its large competition pool, tedious exams is much more stressful on students than other average degrees.[10] The lack of social interactions, co-curricular activities etc. during the time of study furtherpushed students pursuing medical education towards developing social phobia. [11]

The results of the regression study as predicted show thatfemale students have a higher chance of social phobia. Typically belonging to conservative families in a country like India, often leads to women being less confident in public situations and having social phobias. This result very much aligns with the general trend that is noticed in our society.

Students with social anxiety disorder are more likely to experience depression and poor quality of life and vice versa. [12] Our study shows who engage in alcohol use have been known to have a higher tendency towards social phobia and depression.

Several studies have correlated the use of substances with social phobia, anxiety and depression. [13] Students who have difficulty coping with their studies typically turn to alcohol, cigarettes as a method of coping to help relieve stress. This in several cases leads to further moresocial phobia.

Students who score higher percentiles in examinations and are in a higher year of study both exhibited a negative correlation with the total social phobia scores. As the year progresses, students tend to have higher confidence while facing exams, interacting with seniors out of habit which leads to lower levels of social phobia Students who score higher also similarly face lower social phobia as a result of their confidence. The correlation between social phobia and social support is almost 0 and insignificant which could lead us to believe that despite having the option of getting support, several students continue to talk less to their peers and the social phobia score continues to increase.

Conclusion

In line with several studies in the past, this study too concludes that being a female student leads to higher prevalence of having social phobia. The overall proportion ofstudents who reported social phobia was much higher than averages from studies in other countries. This comes to show that the current competition and pressure that medical students face in India is much higher than an average studentfrom another country.

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