



## The prevalence and correlates of social phobia among undergraduate medical student

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### Abstract

**Introduction:** Social phobia is the fear of social situations that involve interaction with others. It is highly prevalent among high school, College and university students. The impact of social phobia among students leads to decreased educational performance, dependence to take alcohol, avoidance of oral presentations, weak performance at clinical examinations, and development of depressive symptoms.

**Aims and Objectives:** The aim of this study is to assess social phobia and associated factors among undergraduate medical students to contribute towards their optimal care.

**Materials and Methods:** This cross-sectional study consisted a total of 600 medical undergraduate students. Data was collected using the Oslo 3-item social support scale and Social phobia inventory (SPI) scale.

**Results:** A total of 600 participants were interviewed with a response rate of 100%. The results revealed that as high as 78% of the students reported some form of social phobia and about 31% of these students reported severe social phobia. Regression study show that female students have a higher chance of social phobia.

**Conclusions:** Study concludes that being a female student leads to higher social phobia. The overall proportion of students who reported social phobia was much higher than averages from studies in other countries.

**Keywords:** social phobia; prevalence; undergraduate

### Introduction

Social phobia is the fear of social situations that involve interaction with others. It is an excessive and irrational fear that being a part of a performance or social interactions with people would lead to humiliation or embarrassment. There has been a recent increase in interest regarding this due to higher cases and the severe effects that it has on the people who suffer from it. It is now the third most diagnosed illness after depressive disorder and alcohol addiction <sup>[1]</sup> It's prevalence in adolescents is 1-3%, while about 27-47% of them have reported at least one symptom of the disorder <sup>[2]</sup> It is highly prevalent among high school, college and university students <sup>[3]</sup> The symptoms typically include slurred speech, tremor, palpitations, excessive sweating and nausea.

The impact of social phobia among students leads to decreased educational performance, dependence to take alcohol, avoidance of oral presentations, weak performance in viva and development of depressive symptoms <sup>[4]</sup> Anxiety and panic attacks may also occur in severe cases. The major source of social phobia amongst students was exam, presentation, language, parental anger, criticism in front of others, exaggerated protection, maltreatment, and family provocation <sup>[1]</sup> The context in which educational institutions are situated also often played a large role in social phobia. A less diverse, uncomfortable campus environment led to higher cases of social phobia.

The symptoms however start showing up in late childhood and often are related to the social demographics in which the child is being raised <sup>[5]</sup> Whether it be gender, economic status, educational status, surroundings etc. all of the factors play an important role in a child's diagnosis with social phobia.

While it is highly prevalent amongst students across the world, very little attention is given to its diagnosis and treatment. This study hence will aim to understand the effects of social phobia of undergraduate medical students and understand how demographic factors affect the student's propensity to have social phobia.

### Methods

A study was conducted among 600 undergraduate medical students between October 2019 - December 2019 in Telangana, India. The sample included students currently enrolled in the undergraduate medical course ranging from 1st year to 4th year. The data was collected using a pre-tested self-administered questionnaire which included their social demographics such as gender, religion, caste, 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).<sup>6</sup> The Oslo 3 Item Social 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<sup>17</sup>.

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 hardcopy of 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 on the sampled university. All of this data was then collated and analyzed using excel data interpretation methods. To understand correlation and effects of variables on the social phobia score - a multiple regression was 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 which 36% of the respondents are male and the remaining 64% of the respondents are female. The average age of a respondent is 19.4 years. Students in their first year of education are 21.5%, second year are 38.6, third year are 14.5% and final year are 25.1%. A majority of the students (90.3%) recognized as Hindus and the remaining 10% ranged between Christians, Muslims, Others and Atheist.

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

			Frequency	Percentage
1	Sex	Female	382	63.66
		Male	218	36.33
2	Age	17-21 years	431	71.83
		22-24 years	160	26.67
		25 years an above	9	1.50
3	Religion	Hindu	542	90.33
		Christian	27	4.50
		Muslim	25	4.17
		Atheist	3	0.5
		Other	3	0.5
4	Caste	OC	288	48.00
		BC	229	38.17
		SC/ST	52	8.67
		Do not want to disclose	31	5.17
5	Marital status	Single	595	99.17
		Married	5	0.84
6	Residence	Urban	517	86.00
		Rural	83	14.00
7	Year of study	1 <sup>st</sup> year	130	21.67
		2 <sup>nd</sup> year	232	38.67
		3 <sup>rd</sup> year	87	14.67
		4 <sup>th</sup> year	151	25.17
8	% 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
9	Substance use	Alcohol	76	12.67
		Cigarette	15	2.50
		Cannabis	10	1.67
		None	499	83.17

**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.

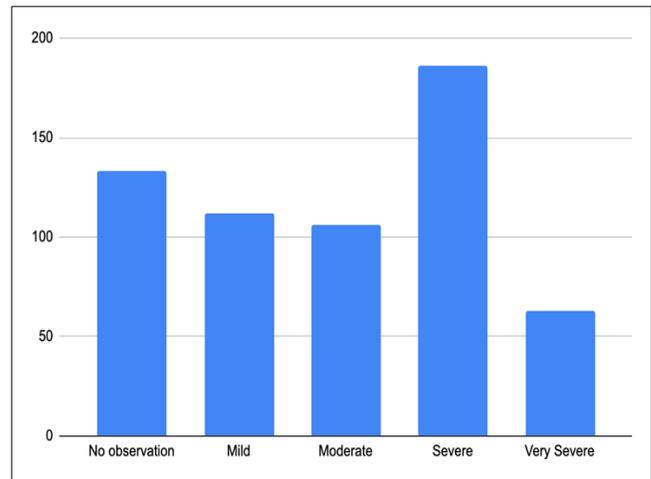
**Prevalence of Social Phobia**

The answers provided by the respondents were summed and a 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 the categories 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.



**Fig 1**

**Table 2**

S.NO		MEAN	SD	P-value
1	I am afraid of people in authority	2.53	1.018	0.001
2	I am bothered by blushing in front of people	2.20	1.125	0.001
3	Parties and social events scare me	2.00	1.710	0.001
4	I avoid talking to people I don't know	3.02	1.285	0.001
5	Being criticized scares me a lot	2.96	1.361	0.001
6	I avoid doing things or speaking to people for fear of embarrassment	2.69	1.609	0.001
7	Sweating in front of people causes me distress	1.96	1.180	0.001
8	I avoid going to parties	2.12	1.468	0.001
9	I avoid activities in which I am the center of attention	2.34	1.563	0.001
10	Talking to strangers scares me	2.12	1.659	0.001
11	I avoid having to give speeches	3.02	1.626	0.001
12	I would do anything to avoid being criticized	2.74	1.346	0.001
13	Heart palpitations bother me when I am around people	1.98	1.151	0.001
14	I am afraid of doing things when people might be watching	2.55	1.469	0.001
15	Being embarrassed or looking stupid are among my worse fears	2.72	1.372	0.001
16	I avoid speaking to anyone in authority	2.24	1.195	0.001
17	Trembling or shaking in front of others is distressing to me	2.12	1.164	0.001

The above table shows the mean of the individual scores in SPI scale and it was observed that two factors in particular, I avoid talking to people I do not know (mean = 3.02) and I avoid having to give speeches (mean = 3.02) had the highest scores.

**Regression Analysis**

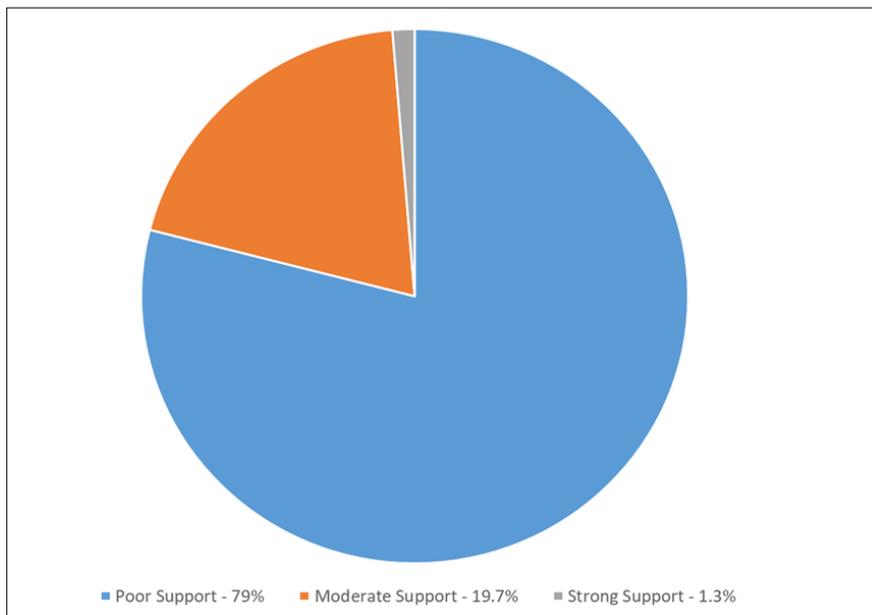
To understand the affect that socio demographic factors have on the social phobia, a multiple regression was run using the dependent variable as the total social phobia score and independent variables as the year of study, gender, residence, percentage in most recent examination and substance usage. Gender, residence and substance usage were converted into dummy variables for ease of analysis where 0-male, 1-female; 0-rura l, 1-urban;0-no substance usage,1-substance usage. The analysis shows that being a woman, belonging to a 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 year of study, there 0.76 points drop in the social phobia score. For substance 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 a negative correlation with the social phobia score. For every increase in percentile, the student experienced lower social phobia.

**Table 3**

	Total	Coef .
1	Gender	3.465012
2	Residence	0.5532478
3	Year of study	-.7647629
4	Substance Use	.0249963
5	mean	-.1337736
6	_cons	49.57762



**Fig 2**

The above Pie chart shows the social support in the undergraduate medical students. In the sampled students 474 (79%) of them feel that they have a 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 about 31% 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% [8] The higher rate of social phobia of students in this study could be attributed to a variety of different factors. The first being that they are students attending MBBS while students in these other studies came from a variety of background. It has been time and again been instated that medical education in education with its large

competition pool, tedious exams is much more stressful on students than other average degrees <sup>[9]</sup> The lack of social interactions, co-curricular activities etc. during the time of study further pushed students pursuing medical education towards developing social phobia <sup>[10]</sup>

The results of the regression study as predicted show that female 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.

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 <sup>[11]</sup> 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 more social 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 social phobia. The overall proportion of students 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 student from another country.

### Limitations

The samples were a small number of students. The diversity in the sample was also limited in some other areas such as residence etc. Broader and a more diverse sample would give us regression results with much higher significance. Further research must be considered on risk factors for social phobia to strengthen the results.

### References

1. Agha Mohammad Hasani P, Mokhtaree MR, Asadollahi Z, Fereidoni MJ. The prevalence of social phobia among students of Rafsanjan University of Medical Sciences, Iran, and its relation with personality traits in 2013. *Journal of Occupational Health and Epidemiology*. 2016; 5(2):72-82.
2. American Psychiatric Association. Diagnostic criteria from dsM-iV-tr. American Psychiatric Pub, 2000.
3. Honnekeri BS, Goel A, Umate M, Shah N, De Sousa A. Social anxiety and Internet socialization in Indian undergraduate students: An exploratory study. *Asian journal*

of psychiatry. 2017; 27:115-20.

4. Ahmad RJ, Bayan H, Faque T, Seidi PA. Prevalence of Social Anxiety in Students of college of Education–University of Garmian. InIn4 th Global Conference on Psychology, Educational Science, Law and Social Science. Shiraz, Iran, 2017.
5. Sadock BJ, Sadock VA. Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry. Lippincott Williams & Wilkins, 2011.
6. Connor KM, Davidson JR, Churchill LE, Sherwood A, Weisler RH, Foa E, *et al*. Psychometric properties of the Social Phobia Inventory (SPIN): New self-rating scale. *The British Journal of Psychiatry*. 2000; 176(4):379-86.
7. Bøen H. Characteristics of senior centre users–and the impact of a group programme on social support and late-life depression. *Norsk epidemiologi*, 2012, 22(2).
8. Desalegn GT, Getinet W, Tadie G. The prevalence and correlates of social phobia among undergraduate health science students in Gondar, Gondar Ethiopia. *BMC research notes*. 2019; 12(1):438.
9. Hill MR, Goicochea S, Merlo LJ. In their own words: stressors facing medical students in the millennial generation. *Medical education online*. 2018; 23(1):1530558.
10. Kumar SG, Kattimani S, Sarkar S, Kar SS. Prevalence of depression and its relation to stress level among medical students in Puducherry, India. *Industrial psychiatry journal*. 2017; 26(1):86.
11. Pedrelli P, Shapero B, Archibald A, Dale C. Alcohol use and depression during adolescence and young adulthood: a summary and interpretation of mixed findings. *Current addiction reports*. 2016; 3(1):91-7.