Research Article

Prevalence of Social Anxiety Disorder and its Socio-Demographic Correlates in Undergraduate Medical Students

Aleena Khalid1, Ali Hamza1, Usman Sheikh2, Muhammad Junaid Tariq2, Muhammad Asad Faraz2, Malik Qistas Ahmad2*, Abdullah Javed Sheikh1, Arsalan Mustafa1, Awais Ijaz1, Chaudhry Saad Sohail2, Muhammad Jahanzeb Khalil2, Anum Jamal3, Arshia Akbar4, Muhammad Waqas2, Muhammad Sheharyar Warraich2, and Muhammad Yazar2

¹Department of Community Medicine, Allama Iqbal Medical College, Pakistan
²Department of Internal Medicine, King Edward Medical University, Pakistan
³Department of Internal Medicine, Fatima Jinnah Medical University, Pakistan
⁴Department of Internal Medicine, Rawalpindi Medical University, Pakistan

Abstract

Background: Social Anxiety Disorder (SAD) is characterized as an extreme anxiety, emotional discomfort or fear about social or performance situations. These people have an intense fear of being judged or negatively evaluated by others. People with social anxiety disorder may avoid important activities such as attending classes and meetings or may attend but avoid active participation. They achieve less in school and work, and are less likely to have a relationship than people who do not have the disorder.

Objective: The objective of this study was to evaluate Social Anxiety Disorder among undergraduate medical students.

Study Design: Cross sectional study

Study Setting and duration: March – May 2018

Inclusion criteria: All medical students of either gender from first to final year MBBS (Bachelor of Medicine and Bachelor of Surgery) attending Allama Iqbal Medical College, Pakistan.

Data Collection and analysis: 150 medical students, fulfilling the inclusion criteria were included in our study. Every student was given a structured questionnaire consisting of Liebowitz Social Anxiety Scale (LSAS) and last academic performance. Data was entered and analyzed in SPSS version: 21.0. Mean and standard deviation were calculated for numerical variables like age, Liebowitz Social Anxiety Scale (LSAS) scoring. Variables used for SAD were fear and avoidance. Frequency and percentages were calculated for nominal variables like age, gender, residential status, medical school year and SAD. Cross tabulation was done for SAD with gender and residential status.

Results: A total of 150 students were included, 67 (44.67%) were male and 83 (55.33%) were females. The age of the respondents ranged from 18 years to 26 years with the mean age of 21.2y. The percentage of females with mild, moderate and severe social phobia is 61.6%, 50.7% and 60% respectively as compared to males with 38.4%, 49.3% and 40%, respectively. The percentage of female's respondents with mild, moderate and severe degree of avoidance is 65.1%, 49% and 80% respectively as compared to males with 34.9%, 51% and 20 %, respectively.

Conclusion: The conclusion of our study was that females have greater tendency for fear and avoidance as compared to males, and students from urban background have greater tendency for fear and avoidance resulting in social anxiety disorder.

⊘SciMedCentral

ABBREVIATIONS

MBBS: Bachelor of Medicine and Bachelor of Surgery; SAD: Social Anxiety Disorder; LSAS: Liebowitz Social Anxiety Scale

INTRODUCTION

Social Anxiety Disorder (SAD) is characterized as an extreme anxiety, emotional discomfort or worry about social or performance situations. These people have a strong and persistent fear of being judged or scrutinized by others. Social anxiety disorder is the second most common anxiety disorder after specific phobia; it has an early age of onset—by age 11 years in about 50% and by age 20 years in about 80% of individuals—and it is a risk factor for subsequent depressive illness and substance abuse [1]. People with social anxiety disorder may avoid important activities such as attending classes and meetings or may attend but avoid active participation. They may achieve less in school and work and are less likely to be in a relationship than people who do not have the disorder [2]. Overprotective and hypercritical parenting has been associated with social anxiety disorder, although the extent to which such parenting is a contributing cause is unclear [3].

Although social anxiety disorder (SAD) is a common mental disorder, it is often under diagnosed and under treated [4]. Kesseler and colleagues interviewed 9282 English-speaking participants, aged 18 years and older, and found that SAD was the most common anxiety disorder after specific phobia, with a lifetime prevalence of up to 12-15% and a 12-month prevalence of 6.8% [5]. Students with elevated social anxiety are one such vulnerable subgroup. Socially anxious college students experience more alcohol-related problems and exhibit poorer outcomes [6].
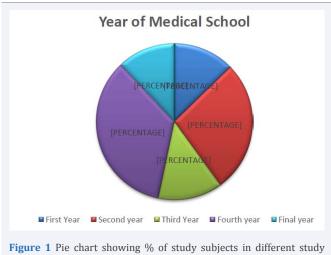
Social Anxiety Disorder (SAD) is characterized by intense fear of social or performance situations coupled with distress or avoidance that often leads to significant impairment [7,8] (e.g., few friends, loneliness, depressed mood, disturbances in school performance, and difficulty with interpersonal relationships). SAD may be particularly disabling during adolescence because peers play a critical role in social and identity development during this period [8] and often it is considered a risk factors for physical diseases like asthma in adolescent [9]. One of the main causes of psychological stress among medical students is the medical education itself, posing significant psychological morbidity. The rationale of our study is that because SAD is often overlooked in our set up and the medical students being mostly under stress due to pressure of studies; we intend to find out frequency of SAD among medical students which will shed some light on prevalence of this disorder and delineate guidelines for its diagnosis and treatment. Our study also attempts to assess the socio-demographic variables associated with SAD in medical undergraduate students.

MATERIALS AND METHODS

A cross sectional study was taken place at Allama Iqbal Medical College Lahore, Pakistan, from March 2018 – May 2018. 150 undergraduate medical students, both male and female, who were willing to participate from 1st to final year MBBS, were included in the study. Non-probability / purposive sampling techniques were used. We excluded the students from Allied Health Sciences, Allama Iqbal Medical College, Pakistan, along with students with diagnosed psychiatric disorders or those getting treatment. After informed consent and approval from Ethics Committee of Allama Iqbal Medical College, detailed demographic information was collected. Every student was given a structured questionnaire consisting of Liebowitz Social Anxiety Scale (LSAS), an easily administered self-rating scale that captures the spectrum of fear, avoidance and physiological symptoms. LSAS is a reliable, valid and treatment sensitive measure of social phobia. Data was entered and analyzed in SPSS version: 21.0. Mean and standard deviation were calculated for numerical variables like age, Liebowitz Social Anxiety Scale (LSAS) scoring. Variables used for SAD were fear and avoidance. Frequency and percentages were calculated for nominal variables like age, gender, residential status, medical school year, and SAD. Cross tabulation was done for SAD with gender and residential status (urban vs. rural).

RESULTS

Of 150 students, 12.6% were from 1st year, 27.3% from 2nd year, 13.3% from 3rd year, 34.6% from 4th year and 12.0% were from Final year MBBS (Figure 1). Moreover, out of 150 students, 67 (44.6%) were male and 83 (55.3%) were females. The age of the respondents ranged from 18 years to 26 years. The mean age was found to be 21 (Tables 1,2). We used the Liebowitz Social Anxiety Scale for finding the severity of social anxiety among the students. The scale consists of 24 items divided into 2 subscales; 13 concerning performance anxiety, and 11 pertaining to social situations.

Figure 1 Pie chart showing % of study subjects in different study years.

Table 1: Baseline demographics of study subjects.	
No of students	150
Mean Age	21.2 y
Range	18-26 y
Male	67 (44.6%)
Female	83 (55.3%)
Urban	129 (86%)
Rural	21 (14%)

Table 2: Mean statistics for Fear and Avoidance, gender and residential status distribution.

Classification	Population (n)	Fear Scale Score Mean±SD	Avoidance Scale Score Mean±SD
Overall	Total students (150)	24.5±12.4	30.8±11.6
Gender	Male (67)	24.7±13.1	31.2±10.8
	Female (83)	24.3±11.9	30.5±12.2
Residential Status	Rural (21)	20.5±9.1	29.4±9.1
	Urban (129)	25.1±12.8	31.1±11.9

Table 3: Frequency (%) of fear and avoidance among respondents.

Severity	Fear Scale N (%)	Avoidance Scale N (%)
None	3 (2%)	1 (0.7%)
Mild Fear (Score up to 24)	73 (48.7%)	43 (28.7%)
Moderate Fear (Score 25 - 48)	69 (46.0%)	96 (64%)
Severe Fear (Score 49 - 72)	5 (3.3%)	10 (6.7%)

The 24 items were first rated from 0-3 on the basis of fear felt during the given situations and then the same items were rated regarding avoidance of the situation with a total score of 72 in each. The mean average score on fear scale is 24.5 ± 12.4 and on avoidance scale is 30.87 ± 11.61. 48-64% of students suffer from mild to moderate social phobia (Tables 3, 4).

A cross-tabulation study to quantitatively analyze the relationship between fear of situation and how the two genders perceive it shows that the all the female respondents had some degree of fear of social situations and the frequency was more than in males. The percentage of females with mild, moderate and severe social phobia is 61.6%, 50.7% and 60% respectively as compared to males with 38.4%, 49.3% and 40% (Tables 5,6).

A similar cross-tabulation was calculated for the degree of avoidance of particular situations between the two genders. Table 7 shows that the tendency to avoid routine social situations is more frequent in females. The percentage of female respondents with mild, moderate and severe degree of avoidance is 65.1%, 49% and 80% respectively, as compared to males with 34.9%, 51% and 20% (Table 7). Thus, Tables 6 ,7 show that the

Table 4: Gender and Fear/Avoidance scale cross tabulation.

Severity		Fear Scale			Avoidance scale		
		Male	Female	Total	Male	Female	Total
None	Count	3	0	3	1	0	1
	% within Scale	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Mild Fear (Score up to 24)	Count	28	45	73	15	28	43
	% within Scale	38.4%	61.6%	100.0%	34.9%	65.1%	100.0%
Moderate Fear (Score 25 - 48)	Count	34	35	69	49	47	96
	% within Scale	49.3%	50.7%	100.0%	51.0%	49.0%	100.0%
Severe Fear (Score 49 - 72)	Count	2	3	5	2	8	10
	% within Scale	40.0%	60.0%	100.0%	20.0%	80.0%	100.0%
Total	Count	67	83	150	67	83	150
	% within Scale	44.7%	55.3%	100.0%	44.7%	55.3%	100.0%

Table 5: Chi square test's results.

Chi-Square Tests			
Pearson Chi-Square	Value	df	Asymptomatic Significance (2-sided)
Gender and Fear	5.530[a]	3	.137
Gender And Avoidance	6.944[a]	3	.074

Table 6: Residential Status and Fear/Avoidance scale cross tabulation.

Severity		Fear Scale			Avoidance scale		
		Rural	Urban	Total	Rural	Urban	Total
None	Count	0	3	3	0	1	1
	% within Scale	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Mild Fear (Score up to 24)	Count	15	58	73	7	36	43

	% within Scale	20.5%	79.5%	100.0%	16.3%	83.7%	100.0%
Moderate Fear (Score 25 - 48)	Count	6	63	69	14	82	96
	% within Scale	8.7%	91.3%	100.0%	14.6%	85.4%	100.0%
Severe Fear (Score 49 - 72)	Count	0	5	5	0	10	10
	% within Scale	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Total	Count	21	129	150	21	129	150
	% within Scale	14.0%	86.0%	100.0%	14.0%	86.0%	100.0%

Table 7: Chi square test results.

Chi-Square Tests			
Pearson Chi-Square	Value	df	Asymptomatic Significance (2-sided)
Residential status and Fear	5.514[a]	3	.138
Residential status And Avoidance	2.003[a]	3	.572

differences in severity of social phobia are significant between males and female gender.

Cross tabulated results showing relation between residential status and severity of fear and avoidance are shown. Pearson Chi test was applied in relation to the urban and rural respondents and the calculated value of 0.138 and 0.572 were obtained, respectively for the severity of fear and degree of avoidance, showing that there is a significant difference in levels of social phobia between respondents from the urban and rural background.

DISCUSSION

The main purpose of the present study was to investigate SAD frequency and severity, among medical undergraduate students at Allama Iqbal Medical College and its socio-demographic correlates. SAD symptoms may overlap with other diseases making it challenging to recognize and separate SAD from shyness or poor social skills. Many studies of SAD from different countries and cultures reported widely varied estimates of the prevalence ranging from 1.9% and 20.4% among the general population and depending on the diagnostic threshold [10].

Independent studies provide evidence for a subset of people suffering from social anxiety, reporting disinhibited behavior tendencies and social isolation. In one study, cluster analytic techniques were used to determine whether the interpersonal behavior, dimensions of dominance-submissiveness and nurturance-cold-heartedness provide a framework for classifying people with SAD [11]. There was support for two groups with the first characterized by prototypical avoidant and submissive behaviors and the second one by dominant and hostile behaviors [11].

In our study, our findings suggest that two genders perceive it differently with all the female respondents had some degree of fear of situations and the frequency was more than in males. The percentage of females with mild, moderate and severe social phobia is 61.6%, 50.7% and 60% as compared to males with 38.4%, 49.3% and 40% respectively.

In a second unpublished study, cluster analytic techniques were used to determine whether people with social anxiety disorder (SAD) can be classified according to temperamental novelty seeking (Kashdan & Hofmann, in press). Results elucidated the presence of two distinct subgroups; with the first being characterized by low novelty seeking and over-regulated and controlled behaviors; the second by high novelty seeking and exploratory tendencies in response to impulsive decision-making. In a third study, people with excessive social anxiety with positive expectancy beliefs for risky behaviors reported the greatest intentions to get engaged in aggressive acts and unsafe sexual practices over the next six months (even more than the people with minimal social anxiety and positive expectancies [12].

Our study shows that the tendency to avoid routine social situations is more frequent in females. The percentage of female's respondents with mild, moderate and severe degree of avoidance is 65.1%, 49% and 80% as compared to males with 34.9%, 51% and 20% respectively. Bener et al conducted a study to see the prevalence of common phobias in children and adolescents and found that phobias were more prevalent in female students (21.9%) than in males (16.8%), with a female to male sex ratio of 1.3:1 [13]

Similarly our study shows a significant difference in levels of social phobia between respondents from the urban and rural background. This is in contrast to study conducted by Prabu on Arts and Science College students about social phobia, and it showed that rural and urban area students do not differ significantly in their social phobia scores [14].

In the past two decades, significant advances have been made in the nosology, epidemiology, psychobiology, pharmacotherapy, and psychotherapy of social anxiety disorder. At the same time, many challenges remain to be addressed. Despite validation of the diagnostic construct, the opinion that social anxiety disorder is merely shyness or an entity designed by the pharmaceutical industry to expand the market is still common and hence the prevalence of stigmatization around mental illnesses. Moreover,

SciMedCentral

most of the studies conducted have targeted only university students and it is necessary to choose a community representative sample to generalize the results.

Our study has certain limitations. It doesn't address the prevalence of any psychological comorbidity among the subjects. Relationship of SAD with professional adjustment and the affects of SAD on academic performance were not assessed. Similarly, we drew a sample from undergraduate medical students and some of the results can't be generalized to the whole population.

CONCLUSION

The conclusion of our study was that female gender has a moderately greater tendency for fear and avoidance as compared to males. Students from urban background have been found to have a greater tendency for fear and avoidance resulting in social anxiety disorder but results are not statistically significant.

ACKNOWLEDGEMENTS

REFERENCES

1. Ganapathi KC, .Duraimurugan M, Kokila K, Gopal.AM. Study on prevalence of social anxiety disorder among medical undergraduate and its relation with self esteem. Stanely Med Jou 2016; 4(3): 31 – 35.

2. Mehtalia K, Vankar GK. Social Anxiety in Adolescents. Indian J Psychiatry. 2004; 46: 221–227.

3. Gültekin BK, Dereboy IF. The prevalence of social phobia, and its impact on quality of life, academic achievement, and identity formation in university students. Türk Psikiyatri Derg. 2011; 22: 150–158.

4. Hamzai RM, Mahfouz MS, Adwai AM, Maha AJ, Athathi AJ, Dhagreerhi

HH et al. Social anxiety disorder and its impact in undergraduate students at Jazan University, Saudi Arabia. Mental Illn. 2017; 9: 7274.

5. Kessler RC, Chiu WT, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-Month DSM-IV. Disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005; 62: 617.

6. Buckner JD, Heimberg RG. Drinking behaviors in social situations account for alcohol-related problems among socially anxious individuals. Psychol Addict Behav. 2010; 24: 640–648.

7. Bruzzese JM, Fisher PH, Warner CM. Asthma and social anxiety in Adolescent. J Pediatr. 2009; 155: 398–403.

8. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders -- IV; Washington, DC: 1994.

9. Bender BG, Zhang L. Negative affect, medication adherence, and asthma control in children. J Allergy Clin Immunol. 2008; 122: 490–495.

10. Furmark T, Tillfors M, Everz P. Social phobia in the general population: prevalence and sociodemographic profile. Soc Psychiatry Psychiatr Epidemiol 1999; 34: 416-424.

11. Kachin KE, Newman MG, Pincus AL. An interpersonal problem approach to the division of social phobia subtypes. Behav Ther. 2001; 32: 479–501.

12. Kashdan TB. Social anxiety spectrum and diminished positive experiences: Theoretical synthesis and meta-analysis. Clin Psychology Rev. 2007; 27: 348–365.

13. Bener A, Ghuloum S, Dafeeah EE. Prevalence of common phobias and their socio-demographic correlates in children and adolescents in a traditional developing society. African J Psychiatr. 2011; 14: 140-145.

14. Prabu S. Social Phobia among Arts and Science College Students. International Journal of English Language, Literature and Humanities. 2015; 3: 203-215.