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Social Phobia (Social Anxiety Disorder) in Medical and Paramedical First Year Undergraduates

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ABSTRACT

Background: Studies carried out in the past have shown that Social Anxiety Disorder (SAD) is a commonly occurring anxiety disorder & is associated with serious role impairment. Studies on Indian student population are scanty. Hence the current study was planned to gain information about the disorder among medical &paramedical students
Aims: To determine the frequency, subtype and severity of social phobia & its association with selected socio-demographic variables in medical & paramedical first year undergraduates.
Methods: 100 subjects, 50 from first year medical & 50 from first year paramedical course were evaluated. Tools used were General Health Questionnaire (GHQ) to rule out Axis I psychiatric disorders, MINI (Mini International Neuropsychiatric Interview) Plus to diagnose Social Anxiety Disorder, Social Phobia Inventory (SPIN) to assess severity of SAD & Modified Kuppuswamy's Social Scale to assess the Socio-economic status (SES).
Results: The frequency of SAD was found to be 25% among the students in a medical college. Non-generalized type & mild degree of Social Phobia were more common. Socio-demographic variables like sex, socio-economic status, location of residence & type of family correlated with higher frequency of psychopathology.
Conclusion: The frequency of Social Phobia in a medical college is high with no differences between the medical & paramedical students.
Keywords: Social Anxiety disorder, Medical &Paramedical students, Socio-demographic variables.

INTRODUCTION

Social Anxiety Disorder (SAD) is a debilitating & chronic illness characterized by a "marked & persistent fear of one or more social or performance situations involving exposure to unfamiliar people or possible scrutiny by others".[1,2] Data from clinical population as to onset of the first episode of social phobia have consistently indicated that social phobia is a disorder with early onset, generally in the mid-teens. Several studies have shown that majority of individuals with social phobia report onset before 18years, with a mean age of onset of 10-13years.Onset appears to be especially early for the more severe (generalized) subtype. Data have also shown that the incidence of social phobia beginning in adulthood is very low (4-5 per 1000 per year) and that these new cases of social phobia are mostly secondary to another disorders especially panic disorder or major depression.[3] In India, the main documented cause of anxiety among school, children and adolescents is parent's high educational expectations and pressure for academic achievement. After the secondary examination, all students appear in the Class XII Board examination. Competition is again ferocious, as performance in this examination determines the University entrance. Admission to courses in Medicine, Engineering and Management are the most preferred choices for parents because, these qualifications seem to guarantee future job prospects.[4]
The 2008 National Comorbidity Survey – Replication (NCS-R) provides prevalence estimates of 12 month and life-time prevalence of DSM-IV SAD as 7.1% and 12.1% respectively with a higher prevalence in females.[5] rendering SAD the fourth most common psychiatric disorder, behind Major

Depression (16..6%), Alcohol abuse (13..2%), and Specific Phobia (12.5%).[6]
The incidence of SAD in India is 2.79% and the prevalence of 1.47 %(2004).[7,8] Studies on Indian student population(who are in the vulnerable age group),especially a comparative study on Social Anxiety Disorder are scanty. Therefore the current study was planned to gain insights about the disorder among medical and paramedical students with the following objectives: a) To determine the frequency of social phobia in students in a medical college. b) To identify individuals with generalized (more than four social situations) and non- generalized social phobia in each group. c) To compare the severity of social phobia in two different student population. d) To determine the association of social phobia with selected socio-demographic variables (sex, place of residence, religion & socio-economic status).

METHODOLOGY

The clinical study was conducted in a Medical College in Mangalore between 1st September 2009 to 31st August 2011.The sample for the study consisted of 50 medical & paramedical first year students, selected based on gender, using stratified sampling technique. The Inclusion Criteria included: a) Medical students aged 18-25, studying in the first year. b) Paramedical students (Physiotherapy, Radiography & Lab technician courses) aged 18-25, studying in the first year.
The Exclusion Criteria included: a) Medical & Paramedical students <18years &>25years.b) those with substance use disorders. c)Those with seizure disorder, past history of head injury, endocrine disorders, respiratory diseases(asthma), cardio-vascular diseases (e.g.; arrhythmias, atypical chest pain) & drugs that are likely to produce panic like symptoms(e.g.; bronchodilators). d) Students who refused to give consent.
Ethical clearance was obtained by the Institutional ethical committee.
A structured proforma was administered to the study population after explaining about the purpose of the study & obtaining informed consent. The proforma consisted of socio-demographic information such as age, gender, religion, parental education & monthly income & the area of residence. General Health Questionnaire (GHQ)[9] was used for all subjects to screen for Axis I psychiatric disorders. All subjects scoring more than the cut-off score of 5or above, were further evaluated using the structural clinical interview MINI Plus[10] (Mini International Neuropsychiatric Interview), to diagnose Social Phobia. All of them were then rated with Social Phobia Inventory (SPIN)[11], to assess the severity. Socio-economic status assessment was done using Modified Kuppuswamy's Scale for Social Classification.[12]

Statistical Analysis

The collected data were then analysed using the t-test, chi-square test & fisher's exact test.

RESULTS

Frequency of Social Phobia in students in the Medical College (Fig 1):

The occurrence of Social Phobia was found to be 26% (n=13) among Medical students & 30% (n=15) among paramedical students. There was no statistically significant difference between the two groups (χ^2=0.198, p=0.656). Among the Paramedical student population diagnosed with Social Phobia, 12% (n=6) were lab technician students, 10% (n=5) were radiotherapy & 8% (n=4) were Physiotherapy first year students & there was no statistically significant difference in the distribution of Social Phobia among these divisions (χ^2=1.829,p=0.401).

Socio-demographic variables among student population (Table 1):

There was a statistically significant difference in the frequency of social phobia among the medical students with respect to sex & distribution of family. However there was no significant difference in regard to age, religion and location of residence,

except socio-economic status among female medical students.

There was a highly significant difference among the paramedical students in the frequency of Social phobia with respect to sex. However there was no significant difference in regard to age, religion, socio-economic status, except location of residence in females & type of family among male paramedical students.

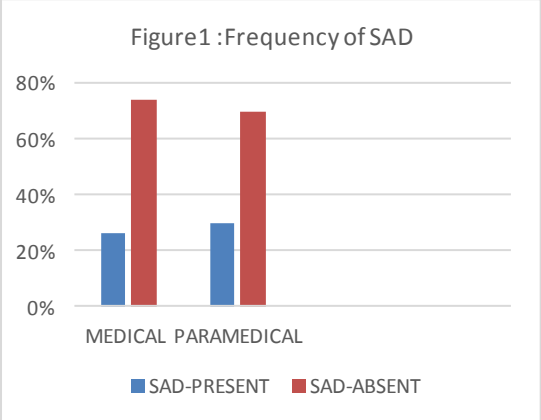


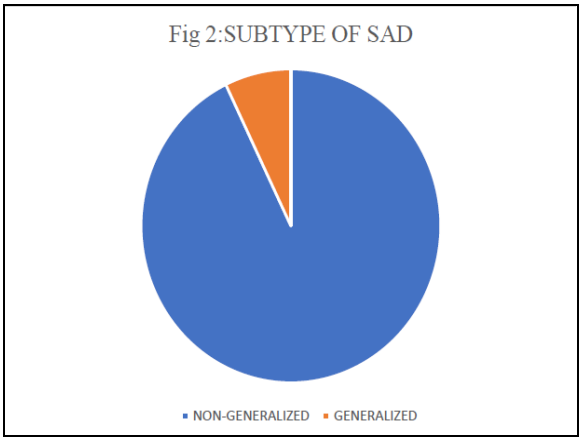
Table 1: Socio-demographic variables among the Student Population

Socio-demographic variables	Medical Students- Social Phobia				P value	Paramedical students-Social Phobia				P value
	Present		Absent			Present		Absent		
	Males	Females	Males	Females		Males	Females	Males	Female	
Sex	10(20%)	3(6%)	15(30%)	22(44%)	0.024*	3(6%)	12(24%)	22(44%)	13(26%)	0.005**
Age										
18	7(14%)	3(6%)	12(24%)	12(24%)	0.924(M)	2(4%)	9(18%)	9(18%)	8(16%)	0.399(M)
19	3(6%)	-	3(6%)	10(20%)	0.250(F)	1(2%)	2(4%)	11(22%)	4(8%)	0.471(F)
20	-	-	-	-		-	1(2%)	2(4%)	1(2%)	
21	-	-	-	-		-	-	-	-	
Socio-economic status										
Upper class	3(6%)	-	4(8%)	5(10%)	0.856(M)	-	-	-	-	0.250(M)
Upper middle	7(14%)	1(2%)	11(22%)	17(34%)	0.143(F)*	-	7(14%)	10(20%)	6(12%)	0.543(F)
Lower middle	-	2(4%)	-	-		3(6%)	5(10%)	12(24%)	7(14%)	
Upper lower	-	-	-	-		-	-	-	-	
Lower class	-	-	-	-		-	-	-	-	
Religion										
Hinduism	2(4%)	-	6(12%)	4(8%)	0.405(M)	2(4%)	4(8%)	10(20%)	6(12%)	0.588(M)
Islam	1(2%)	-	1(2%)	1(2%)	0.752(F)	-	1(2%)	1(2%)	1(2%)	0.543(F)
Christianity	7(14%)	3(6%)	8(16%)	17(34%)		1(2%)	7(14%)	11(22%)	6(12%)	
Location of residence										
Rural	1(2%)	2(4%)	2(4%)	10(20%)	0.258(M)	1(2%)	2(4%)	11(22%)	10(20%)	0.595(M)
Urban	9(18%)	1(2%)	13(26%)	12(24%)	0,499(F)	2(4%)	10(20%)	11(22%)	3(6%)	0.003(F)**
Type of family										
Nuclear	10(20%)	3(6%)	15(30%)	22(44%)	-	1(2%)	9(18%)	22(44%)	13(26%)	0.01(M)*
Extended	-	-	-	-		1(2%)	1(2%)	-	-	0.155(F)
Joint	-	-	-	-		1(2%)	2(4%)	-	-	

(M=Males, F=Females, *= significant **=highly significant)

Type & Severity of SAD (Fig 2):

Among the students diagnosed with Social phobia 92.85 %(n=26) had non-generalized & 2paramedical students had generalized social phobia. However, all of them had mild degree of severity (21-30).



Socio-demographic variables in students diagnosed with Social Phobia (Table 2):

There was a statistically highly significant difference between medical & paramedical students with respect to gender & a significant difference with regard to socio-economic status & type of family.

Table 2: Socio-demographic variables in students with social phobia

Sociodemographic variables	Medical students	Paramedical students	Total	P value
Age				
18	10(35.71%)	11(39.28%)	21(75%)	0.847
19	3(10.71%)	3(10.71%)	6(21.4%)	
20	-	1(3.5%)	1(3.5%)	
21	-	-	-	
Sex				
Male	10(35.71%)	3(10.71%)	13(46.4%)	0.003**
Female	3(10.71%)	12(42.85%)	15(53.57%)	
Socio-economic status				
Upper class	3(10.71%)	-	3(10.71%)	0.037*
Upper middle	8(28.57%)	7(35%)	15(53.5%)	
Lower middle	2(7.14%)	8(28.57%-	10(35.71%)	
Upper lower	-	-	-	
Lower	-	-	-	
Religion				
Hinduism	2(7.14%)	6(21.42%)	8(28.57%)	0.0337
Islam	1(3.5%)	1(3.5%)	2(7%)	
Christianity	10(46.42%)	8(28.57%)	18(64.28%)	
Location of residence				
Rural	3(10.71%)	3(10.71%)	6(21.42%)	0.0846
Urban	10(35.71%)	12(42.85%)	22(77.56%)	
Type of family				
Nuclear	13(46.42%)	10(35.71%)	23(78.58%)	0.043*
Extended	-	2(7.14%)	2(7.14%)	
Joint	-	3(10.71%)	3(10.71%)	

(*= significant **=highly significant)

DISCUSSION

This study was conducted in a Charitable Health Institute in Mangalore which offers medical & various paramedical courses. The candidates are selected for this course through Common Entrance Test, after their 12th standard &mostly hail from Karnataka &neighbouring states. The study was conducted from August 2009 & completed by 31st July 2011.

Socio-demographic variables:

The two groups do not significantly differ in terms of age, sex, type of family, religion & location of residence, indicating that both the medical & paramedical groups are matched.

Psychopathology:

Frequency of social Phobia:

The results of this investigation reveal that the frequency of social phobia was 25% among the students in the medical college. The paramedical students had a higher frequency (30%) when compared to the medical students. Earlier studies conducted among adolescents found a prevalence of Social anxiety disorder to vary from 1.6% to 56%.Studies which showed lower prevalence of social phobia used more validated instruments like DIS,CIDI,DSM-IV & MINI for diagnosis, whereas those showing higher prevalence used instruments like SPIN,LSAS & other tools ,which are screening tools.[13-22]

Type of Social Phobia:

This study showed that most of the students had non-generalized social phobia which is similar to earlier studies.[23] The generalized subtype indicates a severe form of Social anxiety disorder & there is a significant overlap between generalized social phobia & anxious avoidant Personality disorder.[24]

Severity of Social phobia:

All the students diagnosed with social phobia had milder degrees of severity with no significant difference between the groups, which was similar to the studies done in the general population. This suggests that socially anxious individuals also apply for higher education & must have been having a milder degree of severity.[23]

Association with selected socio-demographic variables:

Age: The present study shows that the frequency of social phobia decreases with age in both the groups. This could be because, most of the student population join

professional courses after their 12th standard i.e; at the age of 17-18years & also the majority of the students in the study were in the similar age group. Data from previous studies have shown that the onset of first episode of social phobia occurs in mid-teens, with majority reporting the onset before 18years & the new cases that occur in adulthood were mostly to be another disorder especially panic disorder or major depression.[3] Certain factors during adolescence like (i)cognitive maturation(the capacity of taking others perspective & evaluating self in comparison to others → concerns about negative evaluation from others), (ii)increase in social challenges with daily scrutiny from peers & teachers(especially transition to university life, leaving existing sources of social support) &(iii)increase in the fear of social evaluation in adolescence may account for the onset of SAD during this period, However, a 5yr old follow-up study has challenged this notion that SAD is rare in old age.[25]

Sex: This study reveals that SAD is more common in males among the medical students (20%) & in females among paramedical students (24%) & this difference was found to be statistically significant when the two groups were compared. Earlier studies have shown mixed results with some showing female preponderance whereas others have shown no gender differences in the incidence of SAD.[14,15,17,20] Males with SAD were found to mask their symptoms with use of alcohol. The differences in this study could be because of variable rates of admission. Admission is based on the student's ranking in the entrance test & hence is not homogenous in terms of gender. The higher frequency among males in medical course could be because of (i) High expectations from a male child (ii) High chances of peer victimization among boys at an earlier age (iii) Less willingness in men to report symptoms of anxiety. The increased frequency of SAD in females among paramedicals could be because of various factors such as ,(i) Pronounced self consciousness in girls when compared to boys, especially their physical appearance, behaviours& others opinion about them (ii) Co-rumination i.e; to dwell on problems & focus on negative feelings together with another person,(iii)Females are closer to their parents & the changes that result with transition to a professional course could be stressful &(iv)Higher rates of internalizing disorders in females in response to inter-personal stress.

Socio-economic status: There was a variable distribution of SES among the medical students, whereas it was confined to middle class in paramedical students. The difference in SES was found to be significant among females in the medical course. Earlier studies have identified LSES as a risk factor for SAD, due to restricted social exposure & poorer self esteem, whereas others report it as a consequence.[26] The greater representation of upper social class among the medical students could be because of various reasons like,(i)Higher fees for the medical courses, which students with a better rank couldn't afford & those with lower rank might have taken up due to their affordability.(ii)Parents of most medical students were found to be doctors & they could have scored high on the Kuppuswamy SES scale. The greater representation of middle class among paramedicals could be because, (i)Inability to afford medical seat in spite of securing a better rank, (ii)Parents of these students though earned similar to those of parents of medical students, their qualification was usually semi professional, which could have lowered their scores.

Location of residence: Most of the students belonged to urban areas & studies have shown the variable influence of urbanization on SAD.[26]

Religion: Most of the students in the study population were Christians (70% among medical & 50% among paramedical). Among the medical students 20% of students & 16% of paramedical students with SAD were Christians. This is contrary

to earlier studies which have shown that Muslim students had higher prevalence of SAD, while non orthodox Christians had the lowest.[14,19] The institute where the study was conducted being a catholic institute has reservations for Christians & could be the reason for higher representation of Christian students in the study population.

Type of family: Most of the students belonged to nuclear families. Among paramedical students, statistically significant difference was found in females, based on the type of family. Though the frequency of SAD was 26% & 22.2% among medical & paramedical students living in nuclear families respectively, it was 100% among those belonging to extended & joint family. This could be because the relationship in nuclear families are more intimate than in a joint family, with greater financial stability ,freedom and comfort in the company of others, which eases any stress or discomfort.

CONCLUSION

This is the first study which compared first year medical & paramedical students in terms of psychopathology. The inclusion & exclusion criteria were specific. The sample size was sufficient to determine the objectives, but a larger sample would have enhanced the reliability & validity of the study. The tools used for the study have established reliability & validity. However the assessment was not blind due to constraints of the study & therefore rater bias is a possibility. The period of study was between 2009-2011 & subjects were assessed only on one occasion. The sample size was a selected one & not representative of the general population.

Clinical Implications:

Social anxiety symptoms in medical students may influence their academic performance, selection of future specialities in which they want to peruse& lead to other psychiatric comorbidities like depression, alcohol or other substance use disorders. Students with SAD may might clinical training quite taxing leading to worsening of stress & anxiety.

The findings in this study, although modest speak in favour of both effects of anxiety prevention & mental health promotion efforts aimed at adolescents & their parents. As SAD tends to begin around 13years, teaching stress & anxiety management techniques &facilitating the acquisition of competencies, including social skills in schools might help in the prevention of SAD. Education of parents, specially in Indian context, to deal with the phenomenon of educational pressure & comparison of the performance of one; s own child with the children with a better rank. Mental health promotion should be a cross disciplinary program involving resources & mental health care professionals, aided by the government & supported by mass media directed towards impressing parent's knowledge & attitudes towards the common issue of the adolescent.

Recommendation for future research:

1. Selection of sample representative of general population study.
2. Study the frequency & association of socio-demographic variables with socio-demographic variables among medical & paramedical students, including 1^{st} -4^{th} year.
3. Use of better diagnostic instruments like Schedule for Clinical Assessment in Neuropsychiatry (SCAN).
4. Conducting studies at multiple centres& students from different cultures.
5. Prospective assessment on multiple occasions, which could be blinded.

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