



# A Study on Social Phobia and Functional Disability among University Students of Dakshina Kannada District

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## ABSTRACT

**Introduction:** Social phobia is gathering increased attention and recognition as impairing but treatable condition that often starts in adolescence. This study was conducted to study the magnitude of social phobia and functional disability among the first year university students and to study the association of social phobia and functional disability.

**Method:** A cross sectional study was conducted among the first year students of a university situated in Mangalore, Dakshina Kannada district of Karnataka, for a period of one month. Socio-demographic profile of the study participants and information on social phobia and functional disability was collected using a pre-designed and pre-tested questionnaire.

**Results:** Prevalence of social phobia was found to be 41.7%. Female gender, Muslim religion and various faculties were the statistical significant attributes of social phobia ( $p < 0.05$ ). For each disability areas, the difference between the two groups was statistically significant ( $p < 0.001$ ) and SPIN scores was found to have positive correlation with SDS scores ( $p < 0.001$ ).

**Conclusion:** Prevalence of social phobia is high among the university students and requires stringent efforts for early diagnosis and planning appropriate interventions.

**Keywords:** Social phobia, functional disability, socio-demographic, university students, Dakshina Kannada

## INTRODUCTION

Social phobia has been classified according to DSM-IV and ICD-10 classification as phobic (anxiety) disorder and is also known as social anxiety disorder<sup>1</sup>. Social phobia seldom starts in adolescence<sup>2</sup>, though neglected in the past, has now gained increased focus as a impairing and treatable condition<sup>1</sup>. Social phobia affects both sexes equally and usually results in avoidance of social situations. The condition can be discrete or diffuse, involving virtually all social situations outside the family circle and typically associated with low self esteem and fear of criticism<sup>2</sup>.

The psychological, behavioural or autonomic symptoms must be primary manifestations of anxiety, restricted to or predominating in particular

social situations and avoided whenever possible, are the criteria for a definite diagnosis<sup>2</sup>. Individuals affected are usually shy, hush in groups, withdrawn in unfamiliar social settings and upon interaction with others, they may or may not show indication of discomfort but customarily experience intense emotional or physical symptoms or both such as fear, tachycardia, sweating, trembling, trouble concentrating<sup>1</sup>. The symptoms may progress to panic attack, marked avoidance and in severe cases to complete social isolation<sup>2</sup>.

The National co-morbidity survey provides prevalence estimates of a 12 month and lifetime DSM-IV social anxiety disorder as 7.1% and 12.1% respectively with higher prevalence among females<sup>3,4</sup> and the National epidemiological survey on Alcohol

and related conditions provides prevalence estimates of a 12 month and lifetime DSM-IV social anxiety disorder as 2.8% and 5% respectively<sup>6</sup>. In India, there has been only few studies, one such study on social phobia among high school adolescents<sup>5</sup> and another study among young adults of University of India<sup>7</sup>, provides a prevalence of 12.8% and 19.5% respectively. Study of social phobia among high school students also found an impairment in academic functioning in individuals with social phobia<sup>5</sup>.

Individuals with social phobia have disability in varied functional areas such as lower educational achievements, unstable employment, increased absenteeism at work and reduced productivity that can lead to dependence from family, state, society, and country<sup>8</sup>. Disability in diverse functional areas and impaired quality of life are the two important domains of consequences of social phobia.<sup>9,10</sup>

Thus the present study was undertaken to assess the prevalence of Social phobia and magnitude of functional disability among the 1<sup>st</sup> year students of various faculties of a university and also to study the association of social phobia with functional disability and various socio-demographic variables.

## METHODOLOGY

A cross-sectional study was conducted among the first year students, belonging to various faculties of a university situated in Mangalore, Dakshina Karnataka District of Coastal Karnataka. The study was carried out for a period of one month during the year 2015.

All first year students aged 18 years to 25 years willing to participate on voluntary basis and without any psychiatric morbidity were included. Those with any psychiatric morbidity and drugs that are likely to produce panic like symptoms were excluded from the study.

Total enumeration method was employed for selecting study participants and thus the total number of study participants were 326. The study was approved and ethical clearance was obtained by the institutional ethics committee and necessary permission was sought from the concerned authority of the selected university. After obtaining written informed consent from all the study participants, the data was collected using a pre-designed and pre-tested questionnaire along with Social phobia Inventory scale (SPIN). The scale was created and validated by Dr KM Connor<sup>11</sup> to assess social phobia. It is a 17-item scale and each item is rated from 0 (not at all) to 4 (extremely). The score ranges from 0-68 and a score of 19 and above sug-

**Table 1. Socio-demographic profile of the study participants (n=326)**

Characteristics	Frequency (%)
<b>Age</b>	
17 years	50(15.3)
18 years	215(66.0)
19 years	49(15.0)
20 years	12(3.7)
<b>Gender</b>	
Male	246(75.5)
Female	80(24.5)
<b>Religion</b>	
Hindu	112(34.4)
Muslim	204(62.6)
Christian	10(3.1)
<b>Type of family</b>	
Nuclear	289(88.7)
Joint	37(11.3)
<b>Occupation of Head of family</b>	
Employed	324(99.4)
Unemployed	02(0.6)
<b>Education of Head of family</b>	
Literate	317(97.2)
Illiterate	09(2.8)
<b>Faculties</b>	
Mechanical	122(37.4)
E&E	13(4.0)
E&C	35(10.7)
Computers	98(30.1)
Bio-technology	12(3.7)
Civil	46(14.1)
<b>Socio-economic status</b>	
Class-I	89(27.3)
Class-II	80(24.5)
Class-III	93(28.5)
Class-IV	39(12.0)
Class-V	25(7.7)

gests social phobia. Information about the functional disability secondary to social phobia was obtained by Sheehan Disability Scale (SDS). The SDS developed by David V Sheehan<sup>12</sup> is a simple and commonly used rating scale to evaluate functional impairments/disability in the domains of work, social life/leisure and family life/home responsibility as a result of an anxiety disorder. Each domain is rated on an 11-point continuum from 0 = no impairment to 10 = most severe, where a score of 1 to 3, 4 to 6, 7 to 9 and 10 indicates mild, moderate, marked and extreme functional disability respectively. Information regarding age of the participant, religion, type of family, education status of the head of the family, occupation of the head of the family, marital status of the participant, study branch, per capita monthly income and socio-economic status using modified Kuppaswamy classification<sup>13</sup>, was also collected.

Analysis was done using the SPSS Version 16.0. Descriptive statistics in terms of mean and standard deviation (S.D) was applied for continuous variables and in terms of frequency, percentages

and proportions for categorical variables. Logistic regression, chi-square test using Yate’s correction for continuity and the Fisher’s exact test were applied for Categorical variables. Continuous variables were analyzed by the t-test. Correlation analysis was done using the Pearson correlation coefficient.

**RESULTS**

Total 326 students participated in the study.

Table 1 shows that majority of the study participants, are in the age group of 17 to 19 years (96.3%) and are male (75.5%), belonging to Muslim (62.6%) by religion. Majority of them have a nuclear type of family (88.7%), with their head of the family being literate (97.2%) and employed (99.4%). Majority of study participants belongs to class I, II and III socio-economic status (80.3%) according to modified Kuppuswamy classification.

In our study prevalence of social phobia has been found to be 41.7% among the study participants.

**Table 2. Association of socio-demographic variables with social phobia (n=326)**

Variables	SPIN Score (%)		χ <sup>2</sup>	df	P value	OR	P value (95% CI)
	≥ 19 (n=136)	< 19 (n=190)					
<b>Age (years)</b>							
17-18	113 (83.1)	152 (80.0)	0.497	1	0.565	1.2281	0.481(0.69 -2.17)
19-20 <sup>r</sup>	23 (16.9)	38 (20.0)					
<b>Gender</b>							
Male <sup>r</sup>	90(66.2)	156(82.1)	10.861	1	0.01	1 2.345	0.001 (1.40-3.91)
Female	46(33.8)	34(17.9)					
<b>Religion</b>							
Muslim	96 (70.6)	108(56.8)	6.396	1	0.01	1.822	0.012(1.14-2.90)
Hindu & Christian <sup>r</sup>	40(29.4)	82(43.2)					
<b>Type of family</b>							
Nuclear <sup>r</sup>	119 (87.5)	170 (89.5)	0.307	1	0.580	1	-
Joint	17 (12.5)	20 (10.5)					
<b>Family head occupation</b>							
Employed <sup>r</sup>	135 (99.3)	189 (99.5)	0.000	1	1.000*	1	-
Unemployed	01 (0.7)	01 (0.5)					
<b>Family head education</b>							
Literate <sup>r</sup>	133 (97.8)	184 (96.8)	0.030	1	0.740*	1	-
Illiterate	03 (2.2)	06 (3.2)					
<b>Faculties</b>							
Mechanical	50(36.8)	72(37.9)	17.725	3	0.01	1.22	0.54 (0.64-2.33)
E&E + E&C	10(7.4)	38(20.0)					
Computers	55(40.4)	43(22.6)					
Bio-technology + Civil <sup>r</sup>	21(15.4)	37(19.5)					
<b>Socio-economic status</b>							
Class I & II	71 (52.2)	98 (51.6)	0.256	1	0.880	1.13	0.683 (0.62-2.03)
Class III	40 (29.4)	53 (27.9)					
Class IV & V <sup>r</sup>	25 (18.4)	39 (20.5)					

<sup>r</sup> reference; \* Fisher’s exact test with Yates continuity correction

**Table 3. Mean scores and proportion of Functional Disability across various domains among the study participants (n=326)**

Sheehan’s disability domains (SDS)	Number of students (%)	Mean(S.D)
<b>Work</b>		2.21 (2.130)
Mild (SDS score 1-3)	143 (62.44)	
Moderate (SDS score 4-6)	75 (32.75)	
Marked/extreme (SDS score 7-10)	11 (4.81)	
<b>Social life</b>		1.88 (2.078)
Mild (SDS score 1-3)	142 (69.27)	
Moderate (SDS score 4-6)	50 (24.39)	
Marked/extreme (SDS score 7-10)	13 (6.34)	
<b>Family life</b>		1.95 (2.541)
Mild (SDS score 1-3)	122 (64.89)	
Moderate (SDS score 4-6)	42 (22.34)	
Marked/extreme (SDS score 7-10)	24 (12.77)	
<b>Overall disability</b>		6.04 (5.766)

As seen in table 2, female gender and study participants belonging to Muslim religion had 2.345 (CI: 1.40-3.91) and 1.822 (CI: 1.14-2.90) odds of social phobia when compared to male gender and Hindu and Christian religion respectively and that has been found to be statistically significant ( $p < 0.05$ ).

Study participants belonging to computer science branch had 2.25 odds (CI: 1.15-4.39) of social phobia, when compared to bio-technology & civil branch and that has been found to be statistically significant ( $p < 0.05$ ).

Table 3 reflects mean scores of disability across various domains among all the study participants, showing mean scores of disability was higher in the work domain {mean 2.21(S.D 2.130)} followed by the family life domain {mean 1.95 (S.D 2.541)}. Table 3 also shows that majority of the study participants had mild functional disability in all the three domains viz., 62.44%, 69.27% and 64.89% in the work, social life and family life domain respectively.

Table 4 shows that for each disability areas, the difference between the mean scores of functional disability in various domains across the two groups viz., study participants with social phobia and without social phobia, was statistically significant ( $p < 0.001$ ). There was significantly more disability in all areas among the study participants having social phobia as compared to those without social phobia.

**Table 4. Disability among study participants with social phobia (n=326)**

Disability areas	SPIN score (Mean(S.D))		't' test	P value
	≥ 19 (n=136)	< 19 (n=190)		
Work	2.94(2.412)	1.69(1.731)	5.433	<0.001
Social Life	2.70(2.310)	1.29(1.667)	6.398	<0.001
Family Life	3.12(3.036)	1.11(1.682)	7.626	<0.001

We also observed that SPIN scores had positive correlation with SDS scores in all the areas viz., Work, social life, family life and overall disability domains (r value: 0.368, 0.415, 0.509 and 0.510 respectively), indicating as the severity of social phobia increases the disability in all the areas also increases and this has been found to be statistically significant with p value less than 0.001.

## DISCUSSION

The present study was conducted to assess the magnitude of social phobia and functional disability in various areas secondary to symptoms of social phobia among the first year students belonging to various faculties of a selected university.

Among the study participants interviewed in this study, majority of the study participants were in the age group of 17 to 19 years with the mean age of  $18.07 \pm 0.680$  years as they are pursuing education.

In our study prevalence of social phobia was found to be 41.7%, much higher than the study conducted by Shah P et al<sup>7</sup> on Social phobia and its impact in Indian University students, where the prevalence of social phobia was found to be 19.5%. The prevalence in our study was also found to be higher when compared to the study conducted by Furmark T et al<sup>14</sup> to assess social phobia among the Swedish general population, where the prevalence was found to be 15.6%. The difference in the prevalence estimates could be due to differences in the study settings as well as due to differences in the study population.

The present study found that female gender, Muslim religion and various faculties were the statistically significant attributes of social phobia. Similar findings with respect to female gender has been found in the studies conducted by Furmark T et al and Jager PD et al<sup>14,15</sup>. Study conducted by Shah P et al<sup>16</sup> also found that prevalence of social phobia was higher among females (23.5%) when compared to males (17.3%). Muslim religion though found to be the significant attribute of social phobia could be because majority of the study population were belonging to Muslim religion.

In our study we found that there was a statistically significant difference in the mean scores across various areas of disability between individuals with social phobia and without social phobia and a positive correlation between social phobia and function disability scores, indicating symptoms of social phobia significantly disrupting college work productivity, family life and social life, which was found to be similar with the study findings conducted by Shah P et al<sup>7</sup>, where individuals with social phobia had disability in areas of work, family life and social life. A study done by Davidson JRT et al<sup>9</sup> also found that individuals with social phobia had reduced work/employment productivity, reduced social interaction and impaired social support, which are in line with our study findings. Study conducted by Filho AS et al.<sup>17</sup> reported impairment in school, family, marriage and friendship in patients with social anxiety disorder. This reflects the need for early identification of social phobia amongst these young students and planning of interventions accordingly.

Social phobia or social anxiety disorder has its onset at an early age, which if undiagnosed and not being treated at an early age may have a profound impact on functional disability, increased financial assistance and reduced health related quality of

life<sup>1</sup>, which was also quantified by the study done among Iranian college students by Ghaedi Gh et al<sup>18</sup>, wherein the study reported extensive functional disability and lower well being among study participants with social phobia when compared to those without social phobia.

## CONCLUSION

The findings illustrated that there is a high prevalence of social phobia among the university students. Scores of social phobia significantly varied across gender, religion and various faculties of education and students with social phobia had marked functional disability across various domains when compared to those without social phobia. Thus the findings demonstrated the need for further studies to have an in depth understanding of the reasons of the significant predictors of social phobia. The study recommends strengthening of the counselling centres of the University for Early Identification of such common disorder and formulates appropriate preventive strategies.

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