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Original Research Article

Social Phobia among Undergraduate Medical Students: A Study of its Prevalence and Correlating Factors

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Abstract:

Background: Social anxiety disorder (SAD), also referred to as social phobia, demonstrates a high prevalence among student populations, with particularly elevated rates observed in individuals enrolled in academically rigorous programs such as medical colleges. It involves a persistent and excessive fear of social performance and social interactions, which can hinder academic, clinical, and interpersonal functioning. Despite its clinical significance, social phobia tends to go unnoticed and untreated among students.

Aim: The purpose of this study is to investigate the frequency of social phobia among undergraduate medical students and the factors that may contribute to its development.

Methods: This cross-sectional study was conducted on 250 undergraduate medical students. A semi-administered structured questionnaire was used for data collection. socio-demographic and Social Phobia Inventory data was completed by all participants. Data was analyzed with SPSS 26.0. Binary logistic regression was used to uncover social phobia predictors and report adjusted odds ratios (AORs) with 95% CIs.

Results: Prevalence of social phobia was 43.6%, and 24.4% had mild, 12.0% had moderate, and 7.2% had severe symptoms. The average SPIN score was 20.12 ± 12.88. Female gender (AOR: 1.98, p = 0.004), rural background (AOR: 1.67, p = 0.038), low maternal education (AOR: 3.25, p = 0.013), humiliation in the past (AOR: 2.40, p = 0.001), conflict at home (AOR: 2.60, p = 0.004), and poor parent-adolescent relationships (AOR: 2.10, p = 0.021) had significant associations with increased odds for social phobia.

Conclusion: Social phobia is a serious issue among medical undergraduates, with almost half of the students having varying degrees of social anxiety. The results highlight the need for early detection and focused mental health intervention.

Keywords: Social Phobia, Social Anxiety Disorder, Medical Undergraduates, Prevalence, Correlating Factors, SPIN.

Introduction

The majority of young adults, particularly students in academically rigorous programs, suffer from social phobia, often known as social anxiety disorder (SAD) [1]. A hallmark of this disorder is an irrational dread of being in public places where one can be judged or criticised by others [2]. Among medical students, who need to engage in oral presentations, interactions with patients, and discussions with peers, this disorder can severely hamper academic and professional growth [3]. It is important to explore how prevalent social phobia is among this population and what are the determinants of its presence, since it is increasingly being realized that there is a substantial mental health burden in medical education.

1. **Understanding Social Phobia in Academic Settings**

- A prevalent and debilitating mental disorder, social phobia (SAD) leads an individual to dread criticism, embarrassment, or judgement when they are in social or performance situations. Distress and avoidance are symptoms that can have an effect on one's day-to-day functioning, relationships, and academic or occupational success [4].
- Social anxiety can hinder student's participation in group discussions, presentations, and clinical sessions, which are crucial to their academic and professional development. Despite its clinical importance, social phobia is commonly undiagnosed and remains untreated.

2. **Rationale for the Study Among Medical Students**
    - Medical students face strong academic pressure, constant evaluations, and interpersonal issues that can worsen anxiety disorders like social phobia **[5].** Untreated social phobia in this group can lead to poor communication, scholastic failure, depression, substance use and a diminished quality of life**.**
    - Very little is known about the prevalence of social phobia or the factors that put medical students in India at risk for developing the disorder **[6]**. This study aimed to assess the prevalence and associated factors of social phobia among undergraduate medical students of a tertiary care hospital with the objective of facilitating early diagnosis and intervention.

Methodology

Study Design: This cross-sectional observational study utilized a self-administered questionnaire to examine the prevalence of social phobia among undergraduate medical students and its association with various socio-demographic and psychological factors. The study was purely descriptive in nature, with no interventional component.

Study Population: Participants enrolled were undergraduate medical students of tertiary care hospital in Bihar India.

Inclusion Criteria:

- Undergraduate MBBS students (1st to final year) present at the time of the research.
- Students available during the time of data collection.
- Individuals who provided voluntary, informed written consent for participation .
- Participating individuals who were ready to provide personal background information.

Exclusion Criteria:

- Those with a pre-existing diagnosis of clinical depression, anxiety disorders, or other psychiatric illness (clinically documented or self-reported).
- Those taking psychotropic medication at the time of the study.
- Those who did not complete the questionnaire fully or dropped out halfway.
- Reluctant participants.

Sample Size

The sample size for the study was 250 students, calculated based on feasibility, time, and institutional approval. Convenience sampling was used to recruit participants who were easily available and willing to participate.

1. **Section A: Socio-demographic Data**
    - Age, sex, study year, residential place (urban/rural), family type (nuclear/joint), education and occupation of parents, etc.
2. **Section B: Psychosocial Variables**
    - Data on the nature of family life, previous histories of humiliation or bullying, nature of relationships with parents, incidence of family fights, and degree of stress from studies.
3. **Section C: Standardized Assessment Tool**
    - The Social Phobia Inventory (SPIN) was employed to screen for and measure the severity of social phobia. It is a validated 17-item self-rating scale. Higher scores indicate more severe cases of social anxiety; each question is scored on a 5-point Likert scale from 0 (not at all) to 4 (very).

The participants were provided with 20–25 minutes to fill in the questionnaire within a controlled class environment. Confidentiality and anonymity were ensured.

Outcome Measures

- **Primary Outcome:** Prevalence of social phobia in undergraduate medical students as assessed by SPIN.
- **Secondary Outcomes:** Identification of factors that correlate significantly with social phobia such as gender, residence, education of parents, psychosocial history, and emotional experiences like humiliation and family conflict.

Statistical Analysis

- SPSS, version 26.0, was used for data entry and processing.
- To summarise socio-demographic data and SPIN scores, descriptive statistics were utilised, including percentage, frequency, mean, and standard deviation.
- Standardised SPIN cut-off points were used for the classification of social phobia severity and presence.
- We utilised binary logistic regression to identify important predictive factors of social phobia.
- We utilised 95% Confidence Intervals (CIs) and Adjusted Odds Ratios (AORs) to quantify the intensity of the link.
- Statistical significance was determined with a p-value less than 0.05.

Results

Research participants were 250 medical undergraduate students in 2023, 2024 from a retiary care hospital. The SPIN, which measures social phobia, asked participants to fill out a series of socio-demographic questions. Assessment results showed 43.6% of undergraduates had social phobia at various severity levels. Studies found strong links between social phobia and personal and familial features.

Table 1: Socio-Demographic Profile of the Participants

This study examined 250 undergraduate medical students' socio-demographic data in Table 1. Data points help researchers comprehend study participants' backgrounds to anticipate social phobia linkages.

Table 1: Socio-Demographic Profile of the Participants

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	92	36.8%
	Female	158	63.2%
Residence	Urban	147	58.8%
	Rural	103	41.2%
Type of Family	Nuclear	162	64.8%
	Joint	88	35.2%
Year of Study	1st Year	52	20.8%
	2nd Year	61	24.4%
	3rd Year	72	28.8%
	Final Year	65	26.0%

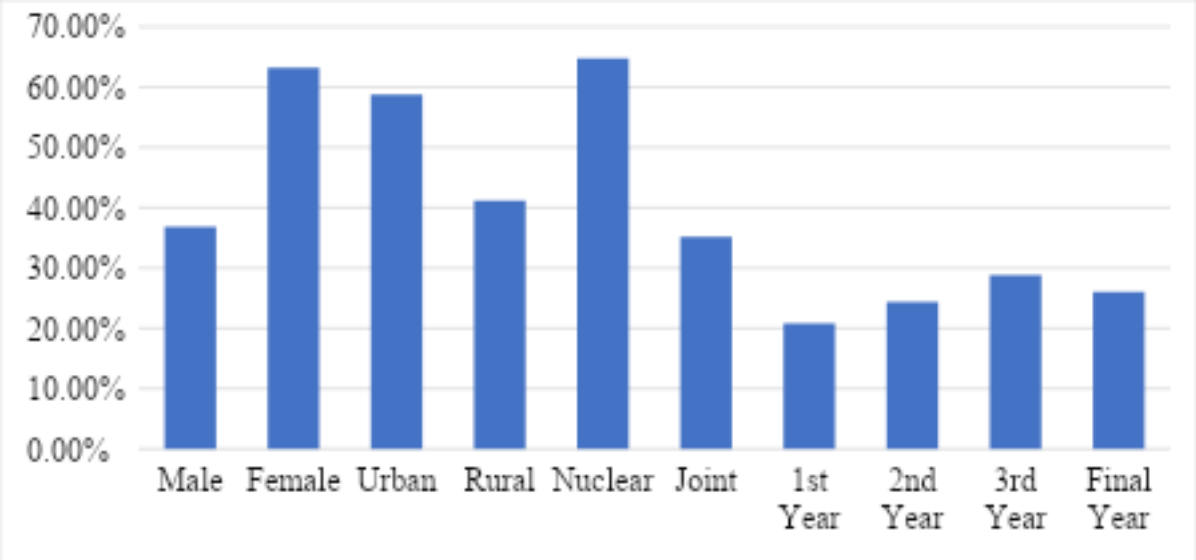

Figure 1: Graphical representation of Socio-Demographic Profile of the Participants

The study had 63.2% female and 36.8% male participants. Urban (58.8%) and rural (41.2%) residents were evenly represented in the study. Among urban families, 64.8% were nuclear in structure, while 35.2% were joint families. The survey included undergraduate medical students of all the years, although 3rd-year students were the largest (28.8%), followed by final-year (26.0%), 2nd-year (24.4%), and 1st-year (20.8%). The distribution strategy covers medical students of all levels to fully understand academic social phobia rates.

Table 2: Prevalence and Severity of Social Phobia Based on SPIN Score

Table 2 demonstrates how Social Phobia affects undergraduate medical students based on their ratings through the Social Phobia Inventory (SPIN). The scoring system divides results into levels that demonstrate the extent of participants' social anxiety symptoms.

Table 2: Prevalence and Severity of Social Phobia Based on SPIN Score

SPIN Score Range	Severity Category	Frequency (n)	Percentage (%)
0–20	No Social Phobia	141	56.4%
21–30	Mild Social Phobia	61	24.4%
31–40	Moderate Social Phobia	30	12.0%
>40	Severe Social Phobia	18	7.2%
Total		**250**	**100%**

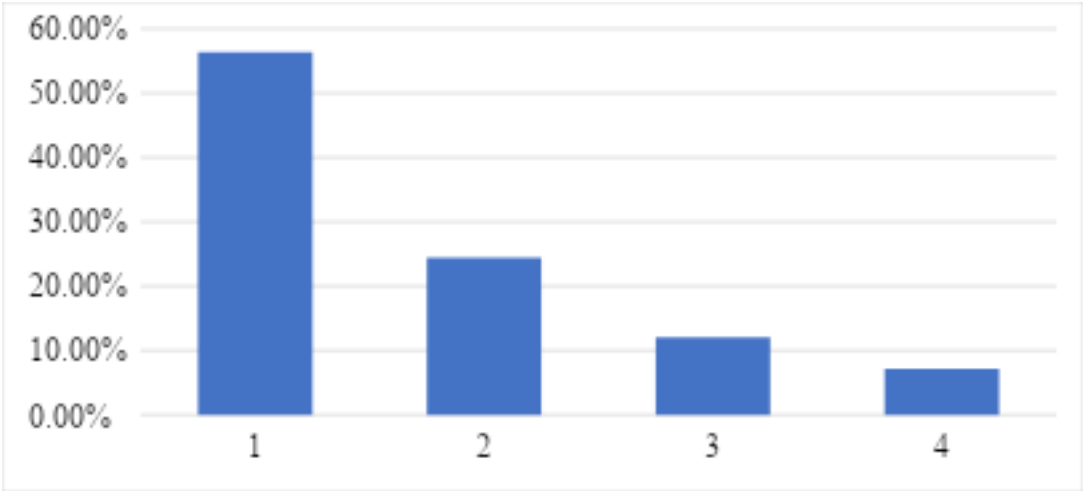

Figure 2: Graphical representation of Prevalence and Severity of Social Phobia Based on SPIN Score

Among 250 students evaluated 141 participants (56.4%) showed no sign of social phobia which indicated that social phobia symptoms were present in less than half of the population. Among the assessed students 24.4% showed mild social phobia and 12.0% had moderate social phobia and 7.2% reported severe social phobia. Research indicates that social phobia exists at a significant rate of 43.6% among the studied student population. The SPIN scores averaged 20.12 ± 12.88 points showed that participants experienced mostly low anxiety but their scores exhibited wide-ranging variations.

Table 3: Analysis of Significant Correlates of Social Phobia Using Binary Logistic Regression

For undergraduate medical students, Table 3 shows the findings of binary logistic regression on key socio-demographic and psychological risk variables for social phobia. To assess the relative importance of the factors and social phobia, the study provides adjusted odds ratios (AORs), 95% confidence intervals (CIs), and p-values.

Table 3: Analysis of Significant Correlates of Social Phobia Using Binary Logistic Regression

Variable	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)	p-value
Female Gender	1.98	1.25–3.12	0.004**
Rural Residence	1.67	1.03–2.70	0.038*
Low Maternal Education	3.25	1.28–8.22	0.013*
Past Humiliation Experience	2.40	1.40–4.00	0.001**
Family Conflict	2.60	1.30–5.10	0.004**
Weak Parent-Child Relationship	2.10	1.10–4.00	0.021*

*Significant at $p < 0.05$, *Significant at $p < 0.01$

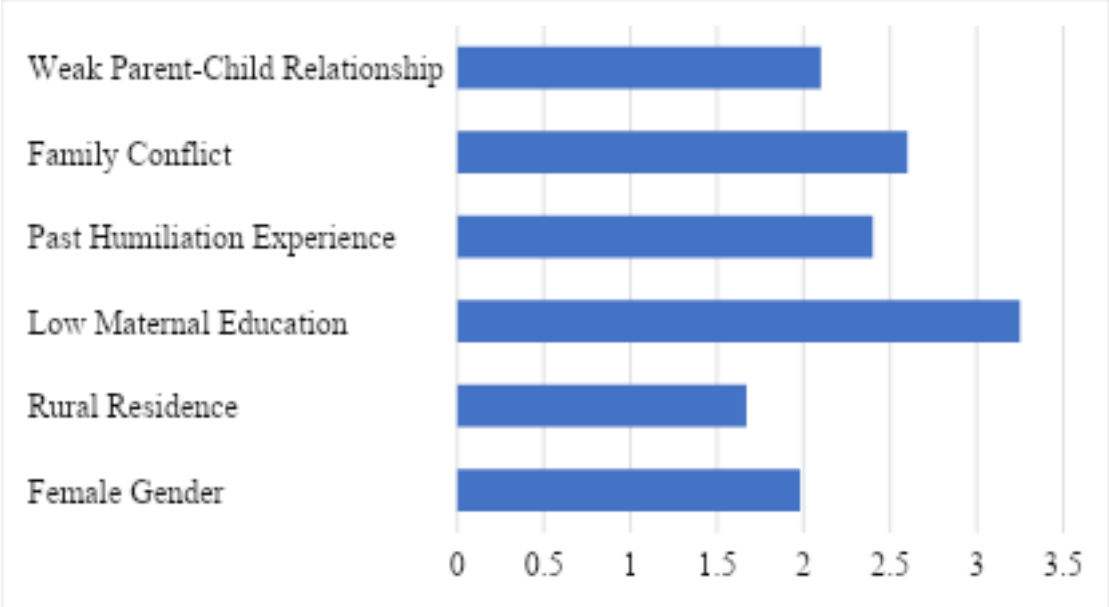

Figure 3: Graphical representation of Analysis of Significant Correlates of Social Phobia Using Binary Logistic Regression

Female students were twice as likely to have social phobia (AOR = 1.98, p = 0.004) as male students. Symptoms of social phobia were more prevalent among students from rural backgrounds (AOR = 1.67, p = 0.038) and those whose mothers had lower levels of education (AOR = 3.25, p = 0.013). Additionally, students who experienced humiliation, family conflict, or poor parent-child relationships were 2.40 times more likely to exhibit symptoms of social phobia (p = 0.001). These findings underscore the multifactorial origins of social anxiety and highlight the need for comprehensive interventions addressing both academic and familial contexts.

Discussion

Social phobia disproportionately affects medical students by impairing academic performance, peer relationships, and the development of clinical competencies. This study investigated the prevalence and contributing factors of social phobia among undergraduate medical students [7], offering insight into its scope and underlying social and emotional determinants. The findings are presented in alignment with thematically relevant domains.

Prevalence of Social Phobia Among Medical Students: Social phobia afflicted 43.6% of undergraduate medical students, with 24.4% mild, 12.0% moderate, and 7.2% severe. Academic stress, performance standards, and continuous assessment induce anxiety, according to national and international studies [8]. The computed SPIN score of 20.12 ± 12.88 indicates that many students experience minor social anxiety concerns and poor academic performance.

The urban-rural transition zones may have higher frequency than global norms due to Indian cultural norms, academic rigidity, and limited mental health education in medical facilities. According to the study, schools must create systematic systems to monitor and help socially anxious adolescents [9].

Correlating Socio-Demographic Factors

Research found that demographic factors increased social phobia risk. Female students had twice the risk of social phobia as male students (AOR = 1.98) confirming previous research on women's higher sensitivity to internalize illnesses due to gender-based social training and societal demands.

The students from rural backgrounds had less public speaking experience, fewer early educational resources, and possibly more cultural reticence during social interactions, hence their social phobia rate was higher (AOR = 1.67) [10]. The students from urban backgrounds whose mothers had lower levels of education had greater rates of social phobia (AOR = 3.25) indicating that parental education influences children's coping and linguistic skills.

Impact of Psychosocial Stressors on social phobia: Psychosocial Stressors significantly contributed to the development of social phobia among students. Students with a history of humiliation, family conflict, and poor parent-child bonding had higher rates of social phobia (AOR = 2.40, 2.60, and 2.10). Reduced self-esteem, social isolation, and fear of criticism are the hallmarks of social anxiety [11].

The development of social phobia appears to be multifactorial, influenced by personality traits, adverse life events, and household environments, as evidenced by current research. Conversely, early emotional support, stable family relationships, and positive school experiences may foster

psychological resilience and enhance social competence.

Strengths of the Study

- The study exclusively studied undergraduate medical students because this group experiences severe academic and social pressures which makes the research findings relevant [12].
- The Social Phobia Inventory (SPIN) stood as the assessment tool because it represents a validated instrument which ensures both data reliability and consistency.
- The study assessed prevalence through extensive analysis of socio-demographic factors which created a complete understanding of social phobia associations [13].
- This study design enabled systematic evaluation of social phobia prevalence rates throughout the complete undergraduate educational continuum by including undergraduate students across all academic years.

Conclusion

In this study the overall prevalence of social phobia was found to be 43.6%. The results come out with evidence that social phobia is highly correlated with several socio-demographic and psychosocial variables, as female gender, rural origin, poor educational background, humiliation experiences, family conflicts, poor social supports and poor parent-child relationships. These findings highlight the multifactorial nature of social phobia and its possible effects on academic functioning, social relationships, and mental health among students. Early detection by means of regular mental health screening, building peer and faculty support networks, and evidence based interventions targeting core psychopathology in social anxiety disorder are key measures toward making the academic environment healthier. Treating social phobia at an institutional level will enable medical students to become resilient, enhance self-esteem, and perform better both academically and professionally.

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