Social Phobia among Medical Students: Prevalence and Socio-Academic Correlates

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ABSTRACT

Extreme fear of social situations is the hallmark of the common mental health condition known as social phobia, affecting academic performance and daily life. Medical students may be particularly vulnerable due to the demands of their studies. The purpose of this study is to evaluate social phobia's incidence and socio-academic correlates among Saudi Arabian medical students studying in Riyadh. A cross-sectional study was conducted using a paper-based questionnaire distributed to a stratified random sample of 828 medical students from three universities in Riyadh. The Mini-Social Phobia Inventory (MINI-SPIN) was utilized to identify students with social phobia, while the Patient Health Questionnaire-4 (PHQ-4) assessed comorbid anxiety and depression. Social phobia prevalence was 47.2%, higher among males (51.17%) than females (37.17%). Significant socio-academic factors associated with social phobia included lower academic performance (GPA < 3.75), lack of participation in extracurricular activities, and living away from family. Students with a history of generalized anxiety disorder (GAD) and depression were more likely to experience social phobia. Multivariate analysis revealed that female gender, second-year academic level, and previous experience remained significant predictors of social phobia. The study highlights a high prevalence of social phobia among medical students in Riyadh, with significant socio-academic correlations. The findings underscore the need for targeted interventions to address social anxiety, improve academic performance, and support the overall well-being of medical students.

Keywords: Social phobia; medical students

INTRODUCTION

Social phobia, also referred to as social anxiety disorder (SAD), is a prevalent and debilitating mental illness characterized by a strong fear of social situations where one can be the target of others' observation. This fear frequently results in avoidance behaviors and severe distress, which negatively affects a person's capacity to operate daily and their quality of life. SAD typically begins in adolescence and can persist into adulthood, affecting various aspects of life, including educational and professional achievements[1].

Medical students are subjected to a uniquely challenging environment that includes high academic demands, intense competition, and frequent assessments, which can exacerbate pre-existing mental health conditions like social phobia. The pressure to perform in both academic and clinical settings, where interaction with peers, faculty, and patients is constant, can heighten anxiety levels. Social phobia in this context may manifest as difficulty in participating in group discussions, presenting in front of others, or interacting confidently with patients, leading to potential academic underperformance and reduced clinical competence[2].

Studies indicate that medical students may have greater rates of social anxiety due to the demanding nature of their training. The estimated prevalence of social anxiety in the general population is 7.1% 3. For instance, a Malaysian study found that 16.6% of medical students had substantial social anxiety, which is significantly higher than the whole population[2].

Social phobia in medical students not only leads to personal distress but also carries significant academic and professional consequences. Students with social phobia are more likely to avoid participating in essential educational activities, such as group discussions or patient presentations, which are critical for their learning and professional development. This avoidance can result in lower academic performance, increased likelihood of academic failure, and inadequate preparation for future medical practice[4].

Moreover, not enough research has been done on the connection between social anxiety and academic achievement as well as other sociodemographic variables including gender, age, and socioeconomic level. Understanding these relationships is crucial for developing

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targeted interventions that can help medical students manage their anxiety and succeed academically[2].

Many studies have been conducted in different countries to evaluate the frequency, risk factors, effects, and interventions for social anxiety. However, as far as we are aware, not many studies have looked at social anxiety in Saudi medical students. Therefore, the current study's goal was to ascertain how prevalent social anxiety was among a group of medical students in Riyadh. This study will assist healthcare organizations in recognizing the potential threat that social phobia and anxiety disorders pose to patients' quality of life and in developing appropriate interventions for them. In addition, medical students will definitely need to present in clinical meetings, significant academic and administrative events, and a lot of social interactions in their future professions, regardless of the specialization they choose. This makes the study essential to their comprehension of social anxiety and its treatment. The purpose of this study is to evaluate social phobia's incidence and socio-academic correlates among Saudi Arabian medical students studying in Riyadh.

METHODS

A paper-based questionnaire was given to students at two governmental medical schools in Riyadh (Imam Mohammad Ibn Saud Islamic University and Princess Nourah bint Abdulrahman University) and one private medical school (Almarefah College) in a convenient cross-sectional sample. Stratified random sampling was used to ensure that students were represented from different years of study and genders. Eight hundred twenty-eight, senior and junior students were targeted by the questionnaire in January 2016. Students with diagnosed psychiatric conditions other than social phobia or those currently receiving treatment for social phobia were excluded.

Each university has a student's representer who participated as coauthor in this study, coordinating and supervising questionnaire distribution and recollection among his colleagues. Questionnaire distribution and recollection last 2-4 weeks as every academic level targeted at different time in accordance with their academic activities' convenience. Some of the students filled in the questionnaire on the spot but some of them chose to take it home and retain it another day.

Every questionnaire begins with an explanation of its aim, how long it should take, and the study's objective. The questionnaire was clearly prepared and stated that completing it gives permission for the data to be used for study.

Data collection stressed that answering the questionnaire was voluntary and that no rewards or promises would be made. The distribution and recollection of the questionnaire did not involve any members of the academic staff. Anonymity of questionnaire respondents was promised in the introduction statement and assured through avoiding direct and indirect questions which may disclose respondent's identity. The study got institutional review board approval from Imam Mohammad ibn Saud Islamic University.

Three components make up the study questionnaire. Social-demographic details including gender, academic year, GPA, place of residence, parental status, marital status, number of children, smoking status, and level of physical activity are included in the first section. The Mini-Social Phobia Inventory (MINI-SPIN) [5], a condensed form of the Social Phobia Inventory (SPIN) [6] was used in the second portion to assess students for social phobia. A 5-point Likert scale is used to rate each of the three MINI-SPIN items, with 0 denoting "not at all" and 4 denoting "extremely."

The following items assess the main signs and symptoms of social anxiety: Fear of being evaluated or embarrassed by others, avoiding social interactions out of a concern for receiving a bad grade, and discomfort in situations where one could be the center of attention.

Table 1. Distribution of the cases studied according to different parameters (n = 828)

	No. (%)
Sex	
Male	594 (71.7%)
Female	234 (28.3%)
Age	
Mean ± SD.	22.0 ± 2.2
Median (Min. – Max.)	22.0 (18.0 – 40.0)
Residence	
With the family	681 (82.2%)
With a relative	16 (1.9%)
With friends	32 (3.9%)
Alone	59 (7.1%)
University dormitory	40 (4.8%)
University	
Governmental	618 (74.6%)
Private	210 (25.4%)
Academic year	
Preparatory year	22 (2.7%)
1st year	181 (21.9%)
2nd year	179 (21.6%)
3rd year	189 (22.8%)
4th year	158 (19.1%)
5th year	99 (12.0%)
Grade Point Average	
<2 out of 5 =F	9 (1.1%)
2-2.74= out of 5 =D	84 (10.1%)
2.75-3.74 out of 5 =C	328 (39.6%)
3.75-4.49= out of 5 =B	272 (32.9%)
4.5-5 out of 5 =A	135 (16.3%)
Student's activities	
Yes	405 (48.9%)
No	423 (51.1%)
Previous experience	
Yes	521 (62.9%)
No	307 (37.1%)
Generalized anxiety disorder	
<3 Negative	597 (72.1%)
≥3 positive	231 (27.9%)
Mean ± SD.	1.97 ± 1.53
Median (Min. – Max.)	2.0 (0.0 – 6.0)
Depression (DEP)	
<3 Negative	554 (66.9%)
≥3 positive	274 (33.1%)
Mean ± SD.	2.13 ± 1.58
Median (Min. – Max.)	2.0 (0.0 – 6.0)
Social phobia	
<6 Negative	437 (52.8%)
≥6 positive	391 (47.2%)
Mean ± SD.	5.3 ± 3.4
Median (Min. – Max.)	5.0 (0.0 – 12.0)

SD: Standard deviation

The overall score is between 0 and 12. Usually, a cut-off score of six or higher is used to determine the likelihood that a person has social anxiety disorder. We used the Arabic version of this scale, which was translated from English to Arabic and then retranslated from Arabic to English and the two copies were matched together and to ensure that everyone understood the statements equally, the version was used in a pilot study with a group of students. The sentences were also reworded multiple times to ensure that everyone understood them similarly.

The Patient Health Questionnaire-4 (PHQ-4) was used in the third section to evaluate the mental health of medical students. It was translated into Arabic [7]. The four items in this questionnaire are four-point Likert scale categories, coded from "not at all" (zero) to "nearly every day" (three). The patients' anxiety and depression levels are gauged by the first two and the last two questions, respectively. A mental health condition is indicated by a score of three or above.

Table 2. Relation between social phobia and different parameters (n = 828)

	<6 Negative (n = 437)	**≥6 positive (n = 391)**	**Test of Sig.**	**p**
Sex				
Male	290 (66.4%)	304 (77.7%)	χ^2= 13.200*	<0.001*
Female	147 (33.6%)	87 (22.3%)		
Age				
Mean ± SD.	22 ± 2.2	22.1 ± 2.2	U= 83799.50	0.630
Median (Min. – Max.)	22 (18 – 36)	22 (18 – 40)		
Residence				
With the family	373 (85.4%)	308 (78.8%)	χ^2= 13.717*	0.008*
With a relative	7 (1.6%)	9 (2.3%)		
With friends	9 (2.1%)	23 (5.9%)		
Alone	24 (5.5%)	35 (9%)		
University dormitory	24 (5.5%)	16 (4.1%)		
University				
Governmental	346 (79.2%)	272 (69.6%)	χ^2= 10.070*	0.002*
Private	91 (20.8%)	119 (30.4%)		
Academic year				
Preparatory year	13 (3%)	9 (2.3%)	χ^2= 16.907*	0.005*
1st year	100 (22.9%)	81 (20.7%)		
2nd year	72 (16.5%)	107 (27.4%)		
3rd year	99 (22.7%)	90 (23%)		
4th year	93 (21.3%)	65 (16.6%)		
5th year	60 (13.7%)	39 (10%)		
Grade Point Average				
<2 out of 5 =F	5 (1.1%)	4 (1%)	χ^2= 12.761*	0.013*
2-2.74= out of 5 =D	32 (7.3%)	52 (13.3%)		
2.75-3.74 out of 5 =C	164 (37.5%)	164 (41.9%)		
3.75-4.49= out of 5 =B	157 (35.9%)	115 (29.4%)		
4.5-5 out of 5 =A	79 (18.1%)	56 (14.3%)		
Student's activities				
Yes	248 (56.8%)	157 (40.2%)	χ^2= 22.749*	<0.001*
No	189 (43.2%)	234 (59.8%)		
Previous experience				
Yes	323 (73.9%)	198 (50.6%)	χ^2= 47.912*	<0.001*
No	114 (26.1%)	193 (49.4%)		
Generalized anxiety disorder				
<3 Negative	331 (75.7%)	266 (68%)	χ^2= 6.103*	0.013*
≥3 positive	106 (24.3%)	125 (32%)		
Mean ± SD.	1.8 ± 1.5	2.1 ± 1.6	U= 76835.0*	0.010*
Median (Min. – Max.)	2 (0 – 6)	2 (0 – 6)		
Depression (DEP)				
<3 Negative	315 (72.1%)	239 (61.1%)	χ^2= 11.190*	0.001*
≥3 positive	122 (27.9%)	152 (38.9%)		
Mean ± SD.	1.9 ± 1.6	2.4 ± 1.6	U= 69898.50	<0.001*
Median (Min. – Max.)	2 (0 – 6)	2 (0 – 6)		

SD: Standard deviation U: Mann Whitney test χ^2: Chi square test
p: p value for comparing between different categories
*: Statistically significant at $p \leq 0.05$

Statistical analysis: The data analysis was performed using IBM SPSS version 20.0 (IBM Corp, Armonk, NY). Categorical data were presented as frequencies and percentages, with the Chi-square test applied for comparisons between groups. The normality of continuous data was assessed using the Kolmogorov-Smirnov test. Quantitative data were described using the range (minimum and maximum), mean, standard deviation, and median. For comparisons between groups with non-normally distributed data, the Kruskal-Wallis test was used, followed by Dunn's multiple comparisons test for pairwise analysis. The Mann-Whitney test was employed to compare two groups with non-normally distributed quantitative variables. Correlations between irregularly distributed quantitative variables were evaluated using the Spearman coefficient. Univariate logistic regression was conducted to identify potential predictors of social anxiety by examining the relationship between each independent variable and the presence of social anxiety. Variables that showed significant associations in the univariate analysis were included in a multivariate logistic regression model to adjust for confounding factors and identify independent predictors of social anxiety. Statistical significance was set at the 5% level.

RESULTS

Of the 828 medical students, 71.7% were men and their mean age was 22 years. Most lived with their families (82.2%) and attended governmental universities (74.6%). In terms of academic performance, 39.6% had a GPA between 2.75 and 3.74 (C). About 48.9% participated in extracurricular activities, and 62.9% had previous experience in the medical field. Generalized Anxiety Disorder (GAD) was found in 27.9% of students, depression in 33.1%, and 47.2% exhibited signs of social phobia [Table 1].

Table 3. Relation between social phobia and different parameters (n = 828)

	N	Social phobia			Test of Sig	p
		Mean ± SD.		Median (Min. – Max.)		
Sex						
Male	594	5.6 ± 3.3		6.0 (0.0 – 12.0)	U= 58070.0*	<0.001*
Female	234	4.7 ± 3.6		4.0 (0.0 – 12.0)		
Residence						
With the family	681	5.2	3.4	5.0 (0.0 – 12.0)	H= 20.660*	<0.001*
With a relative	16	6.0 ± 3.8		6.5 (1.0 – 12.0)		
With friends	32	7.4	3.0	8.0 (1.0 – 11.0)		
Alone	59	6.4	3.4	7.0 (0.0 – 12.0)		
University dormitory	40	4.7	2.8	5.0 (0.0 – 12.0)		
University						
Governmental	618	5.1	3.3	5.0 (0.0 – 12.0)	U= 53188.0*	<0.001*
Private	210	6.1	3.5	6.0 (0.0 – 12.0)		
Academic year						
Preparatory year	22	5.5	3.6	4.5 (0.0 – 11.0)	H= 16.488*	0.006*
1st year	181	5.2	3.4	5.0 (0.0 – 12.0)		
2nd year	179	6.2	3.2	6.0 (0.0 – 12.0)		
3rd year	189	5.2	3.4	5.0 (0.0 – 12.0)		
4th year	158	4.9	3.5	4.0 (0.0 – 12.0)		
5th year	99	5.0	3.2	5.0 (0.0 – 12.0)		
Grade Point Average						
<2 out of 5 =F	9	6.1	5.1	5.0 (1.0 – 12.0)	H= 20.173*	<0.001*
2-2.74= out of 5 =D	84	6.4	3.2	6.0 (0.0 – 12.0)		
2.75-3.74 out of 5 =C	328	5.6	3.4	5.5 (0.0 – 12.0)		
3.75-4.49= out of 5 =B	272	4.8	3.2	4.0 (0.0 – 12.0)		
4.5-5 out of 5 =A	135	4.9	3.6	4.0 (0.0 – 12.0)		
Student's activities						
Yes	405	4.6	3.2	4.0 (0.0 – 12.0)	U= 63794.0*	<0.001*
No	423	6.1	3.4	6.0 (0.0 – 12.0)		
Previous experience						
Yes	521	4.7	3.2	4.0 (0.0 – 12.0)	U= 55687.5*	<0.001*
No	307	6.5	3.3	6.0 (0.0 – 12.0)		
Generalized anxiety disorder						
<3 Negative	597	5.2	3.4	5.0 (0.0 – 12.0)	U= 61458.0*	0.015*
≥3 positive	231	5.8	3.4	6.0 (0.0 – 12.0)		
Depression (DEP)						
<3 Negative	554	5.0	3.3	5.0 (0.0 – 12.0)	U= 62456.5*	<0.001*
≥3 positive	274	6.1	3.5	6.0 (0.0 – 12.0)		

SD: Standard deviation U: Mann Whitney test H: H for Kruskal Wallis test
p: p value for comparing between different categories
*: Statistically significant at $p \leq 0.05$

Social phobia affected more men (51.17%) compared to females (37.17%). in this research involving 828 medical students and among students living away from family (21.2%). Students attending private universities (30.4%) showed higher rates of social phobia compared to those in governmental institutions (69.6%). Social phobia was also more common in second-year students (27.4%) and those with lower GPAs. Additionally, students not participating in extracurricular activities (59.8%), those without prior medical experience (49.4%), and those with generalized anxiety disorder (32%) or depression (38.9%) were more likely to exhibit social phobia [Table 2].

The study found that social phobia was more severe among male students (mean score 5.6) compared to females (mean score 4.7), and students living away from family, particularly those living with friends (mean score 7.4) or alone (mean score 6.4), had higher social phobia scores. Students in private universities (mean score 6.1), those in their second academic year (mean score 6.2), and those with lower Grade Point Average (GPAs), particularly in the D range (mean score 6.4), also showed higher levels of social phobia. Additionally, students without previous experience, those not participating in extracurricular activities, and those with generalized anxiety disorder or depression had significantly higher social phobia scores [Table 3].

The correlation analysis revealed that social phobia showed no significant association with age (rs = -0.002, p = 0.951). However, it was positively correlated with generalized anxiety disorder (rs = 0.105, p = 0.002) and depression (rs = 0.195, p < 0.001), indicating that higher levels of social phobia were associated with more severe generalized anxiety and depression [Table 4].

The univariate logistic regression analysis identified several factors significantly associated with social phobia. Female sex (p < 0.001), living with friends (p = 0.006), attending a private university (p = 0.002), being in the 2nd academic year (p < 0.001), a lower Grade Point Average (p = 0.002), involvement in student activities (p < 0.001), and having previous experience (p < 0.001) were all linked to higher levels of social phobia. The multivariate analysis confirmed that female sex (p < 0.001), 2nd academic year (p = 0.003), and previous experience (p < 0.001) remained significant predictors of social phobia, along with depression (p < 0.001). Other factors, such as residence, university type, and student activities, were not significant in the multivariate model [Table 5].

DISCUSSION

The study on social phobia among medical students revealed a high prevalence of 47.2%, indicating that nearly half of the students experience significant social anxiety. Compared to more general university student populations, this frequency is noticeably higher, where rates generally range between 10% and 30%, as observed in other studies[8,9]. By contrast, the general population has a generally lower prevalence of social phobia, often between 7% and 13%.[10,11]. In a study, King Khalid University medical students in Saudi Arabia reported social anxiety symptoms in 60% of cases[12]. Furthermore, a study conducted on 1,447 medical students in Saudi Arabia found a very high prevalence (92.1%) of social phobia, with mild and moderate cases accounting for 29% and 24.3%, respectively, and severe and extremely severe cases accounting for 19.1% and 19.8%[13]. A study conducted in Malaysia on medical students revealed that 56% of

Table 4. Correlation between social phobia and different parameters (n = 828)

	Social phobia	
	r_s	**p**
Age	-0.002	0.951
Generalized anxiety disorder	0.105*	0.002*
Depression (DEP)	0.195*	<0.001*

r_s: Spearman coefficient
*: Statistically significant at p ≤ 0.05

Table 5. Univariate and multivariate logistic regression analysis for the parameters affecting social phobia

	Univariate		**#Multivariate**	
	p	**B (LL – UL 95%C.I)**	**p**	**B (LL – UL 95%C.I)**
Sex (female)	<0.001*	0.565(0.414 – 0.770)	<0.001*	0.459(0.313 – 0.673)
Age	0.718	1.011(0.951 – 1.075)		
Residence				
With the family	0.014*	0.637(0.445 – 0.912)	0.299	0.793(0.511 – 1.229)
With a relative	0.468	1.447(0.534 – 3.923)		
With friends	0.006*	2.972(1.358 – 6.504)	0.735	1.174(0.463 – 2.978)
Alone	0.056	1.692(0.987 – 2.899)		
University dormitory	0.350	0.734(0.384 – 1.403)		
University (Private)	0.002*	1.663(1.213 – 2.281)	0.091	1.439(0.944 – 2.195)
Academic year				
Preparatory year	0.549	0.768(0.325 – 1.818)		
1st year	0.451	-0.127(0.632 – 1.226)		
2nd year	<0.001*	1.910(1.364 – 2.674)	0.003*	1.740(1.209 – 2.504)
3rd year	0.901	1.021(0.738 – 1.413)		
4th year	0.089	0.738(0.519 – 1.048)		
5th year	0.098	0.696(0.454 – 1.069)		
Grade Point Average	0.002*	0.789(0.679 – 0.918)	0.946	1.006(0.841 – 1.205)
Student's activities	<0.001*	0.511(0.388 – 0.674)	0.256	0.823(0.589 – 1.151)
Previous experience	<0.001*	0.362(0.271 – 0.485)	<0.001*	0.457(0.324 – 0.644)

B: Unstandardized Coefficients
C.I: Confidence interval LL: Lower limit UL: Upper Limit
#: All variables with p<0.05 were included in the multivariate
*: Statistically significant at p ≤ 0.05

them showed social phobia symptoms[14]. Furthermore, a prior study conducted in Prague, Czech Republic, found a high frequency (85%) among medical students. Nonetheless, it was discovered that social anxiety symptoms were 22% less common among Norwegian medical students[15].

Studies show that medical students are more prone than other students to struggle with social anxiety, potentially due to the intense interpersonal interactions required in clinical settings, public speaking, and the hierarchical nature of medical training. The elevated prevalence in medical students could be attributed to the unique pressures they face, including the demanding academic environment, frequent assessments, and the high expectations for professional conduct, all of which may exacerbate social anxiety.

The results of this study reveal significant associations between social phobia and various socio-academic parameters among medical students. Notably, social phobia is more prevalent among male students (51.17%) compared to females (37.17%)., aligning with existing research indicating higher rates of social anxiety among males in medical fields12, 16 some studies found that female had higher social phobia potentially due to societal expectations and differing stress responses[13]. A different study discovered no distinction in social anxiety between males and females[17,18].

The study's observations of socio-academic correlates, such as the correlation between higher levels of social anxiety and poorer academic achievement—students with GPAs below 3.75 being more likely to experience social anxiety—reflect findings from previous research[19-21] who demonstrated that social anxiety can negatively impact students' ability to participate in class, perform in examinations, and engage in clinical practice. Still, it differs from King Khalid University's conclusions[12]. This suggests that targeted interventions to reduce social anxiety in medical students could not only improve their well-being but also enhance their academic and professional performance.

Furthermore, social phobia was more prevalent in students who reported having both depression and generalized anxiety disorder (GAD), which is consistent with studies showing a high comorbidity between social anxiety, GAD, and depression[22]. A different study found that university students with social anxiety disorder often also battle with co-occurring mental health problems such depression and generalized anxiety disorder[23].

Remarkably, students with little extracurricular involvement expressed higher levels of social anxiety. This may suggest that active participation in social or academic activities can help mitigate social anxiety, as involvement in such activities often requires and fosters social interactions, thereby reducing anxiety over time[24,25].

These findings are corroborated by studies conducted on similar populations, which also found significant relationships between social phobia and factors such as living arrangements, academic performance, and comorbid mental health disorders and the students living away from family or in isolated settings exhibited higher levels of social anxiety[26]. The correlations found in this study emphasize the significance of early detection and intervention techniques specifically designed for medical students, who may be particularly vulnerable to social phobia due to the high-pressure academic environment and the demanding nature of their studies.

Students attending private universities also showed higher levels of social phobia (Mean = 6.1) than those at governmental universities (Mean = 5.1), possibly reflecting differences in the social environment and academic pressures between these institutions. The academic year was also a significant factor, with second-year students showing the highest levels of social phobia (Mean = 6.2). In line with a study that discovered advanced academic students experienced lower levels of social anxiety than those who were just starting their scholastic careers[18]. This could be due to the increased academic load and adjustment challenges faced during this critical period of medical education[21].

Limitations: A few of the study's limitations include its cross-sectional design, which restricts the conclusions that can be drawn about causality, and the use of self-reported data, potentially introducing response bias. Convenience sampling from only three universities in Riyadh may limit generalizability, and the exclusion of students with other psychiatric conditions could underestimate the true prevalence of social phobia. The study's limited geographical scope, lack of long-term follow-up, and potential non-response bias further constrain its findings. Additionally, reliance on a single measurement tool for social phobia and limited exploration of cultural factors may not fully capture the complexity of the condition. The absence of intervention analysis restricts insights into effective management strategies. Moreover, the cut-off point of the MINI-SPIN scale used in this study requires further validation and reliability testing within the Saudi cultural context to ensure its appropriateness and accuracy.

CONCLUSION

This study reveals that medical students have a high rate of social phobia, significantly higher than in the general student population. The unique pressures of medical education—such as rigorous academic demands, frequent assessments, and intense social interactions—contribute to this elevated anxiety. Key factors associated with higher social phobia include gender, lower academic performance, comorbid mental health disorders, and lack of involvement in extracurricular activities. These results emphasize how urgently focused interventions are needed to support medical students, aiming to reduce social anxiety and improve both their academic success and overall well-being.

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