Journal of Pioneering Medical Sciences
Received: March 29, 2025 | Accepted: April 28, 2025 | Published: August 05, 2025
Volume 14, Issue 07, Pages 20-24
DOI https://doi.org/10.47310/jpms2025140705

Social Anxiety Disorder among Medical Students at Northern Border University, Saudi Arabia

Mohamed M. Abd El Mawgod[1*], Awwad Alenezy[2], Rayan Ahmed Alaswad Alanazi[3], Yousef Fudhayl F. Alanazi[4], Jarah Talal Farhan Alenezi[5] and Saif Sari Zuhzum Alanazi[6]

[1,2]Department of Family and Community Medicine, College of Medicine, Northern Border University, 91431, Arar, Saudi Arabia
[1]Department of Public Health and Community Medicine, Faculty of Medicine, Al Azhar University. Assiut, Egypt
[3-6]College of Medicine, Northern Border University, 91431, Arar, Saudi Arabia

*Corresponding author: Mohamed M. Abd El Mawgod (e-mail: mossa20072006@yahoo.com).

Abstract **Background:** Social Anxiety Disorder (SAD), sometimes known as Social Phobia (SP), is described as the dread of social settings, including those involving interaction with strangers. People dread humiliating themselves in circumstances such as social events, talks and meeting new individuals. Individuals with SP have general anxieties about performing specific tasks, such as speaking in front of people or eating. For students, SP is an overpowering dread of speaking in front of people or making presentations. **Objective:** To assess the prevalence of SAD among the medical students at Northern Border University, Saudi Arabia. **Methods:** A cross-sectional study was undertaken. An anonymous, self-administered questionnaire was employed. The questionnaire consisted of two components. The first portion contains sociodemographic characteristics. The 2nd section is the validated Social Phobia Inventory (SPIN) questionnaire. **Results:** A total of 150 students participated in the survey, with a mean age of 22.5±1.6(19-26), more than half males (54%). Of the examined participants, more than half (56%) experienced SP with 21.3, 20 and 14.7% suffering from mild, moderate and severe social phobia, respectively. **Conclusion:** Our findings revealed a significant prevalence of SAD (56%) among the medical students at Northern Border University, most of them had a mild degree of illness.

Key Words Social Phobia, Social Anxiety Disorder, Medical Students, University Students, Saudi Arabia

INTRODUCTION

Social Phobia (SP) or Social Anxiety Disorder (SAD) is defined as an overwhelming fear of shame, disgrace, or rejection when exposed to potential unfavorable appraisal by others during a public performance or social engagement [1]. The contribution of genetic elements as an etiological component in SAD is thought to be heavily influenced by environmental circumstances [2].

Individuals with SAD dread responding in a certain way that would be shameful and unpleasant, such as presenting noticeable anxiety symptoms, which may result in avoidance of social and performance situations [3]. Situations might be classified as either social or performance based. Meeting strangers, speaking with someone in authority and being the focus of attention are all examples of social settings. Examples of performance circumstances include public speaking, workplace observation and public eating and drinking. Individuals in jobs that demand regular public speaking, such as musicians, dancers and sports, may have special anxieties of performance-only scenarios [4].

SAD is marked by exaggerated sympathetic excitement, resulting in symptoms including perspiration, tremors, trouble speaking, tachycardia and apparent flushing. These symptoms can produce feelings of embarrassment and discomfort [3,4].

The global prevalence of SAD is reported to be 8.3% in adolescents and 17% in young adults [2]. The prevalence of SAD has been shown to vary greatly among medical students in various nations and cultures.

In Western nations, such as the UK, the prevalence is 10%, but in Saudi Arabia it is 60% and in India it is 31% among medical students. 56% of medical students in a Malaysian institution showed symptoms of SAD, while prior research done in Oman reported that 37% of college students showed SAD symptoms, with 8% supporting severe symptoms.

The occurrence of SAD has been shown to vary substantially among medical students from different countries and cultures. In Western nations such as the UK, the prevalence is 10%, however in Saudi Arabia it is 60% [5] and in India it is 31% [6]. About 56% of medical students at a Malaysian school showed signs of SAD [7], whereas a previous study done in Oman revealed that 37% of college students showed SAD symptoms [8].

SAD is a common mental health problem that severely hinders social relationships, academic achievement and professional functioning in adolescents and young people [2].

The current research aimed to assess the prevalence of SAD and its potential demographic correlates among medical students at Northern Border University in Saudi Arabia.

METHODS

Setting and Design

A cross-sectional study was undertaken at the College of Medicine, Northern Border University**,** during this time from March 1, 2023, to June 30, 2023.

Sample Size

The sample size was calculated using the Epi Info software statistical package version 7.0.2.0. The criteria for estimating sample size were the following: Confidence level 95%, expected prevalence of SP16.3% from a previous study [9] and 5% margin of error. Using the previous defined parameters, the sample size was estimated to be 148. We raised the sample size to 150.

Sampling Method

The study included students from the second to sixth years, both males and females. Participants answered an online questionnaire using Google Forms sent by WhatsApp and Telegram. To avoid duplicate responses, this survey was intended to accept only one response per participant.

Study Tool

An anonymous, self-administered questionnaire was employed. The questionnaire consisted of two components. The first portion contains sociodemographic data such as age, gender, marital status, education year, Grade Point Average (GPA), birth order, housing arrangement, smoking habits and family income.

The 2nd section is the validated Social Phobia Inventory (SPIN) questionnaire [10]. The SPIN questionnaire has a 5-point Likert scale that includes 17 items. It is designed to assess SP symptoms such as dread and avoidance. The answers range from 0, indicating not at all, to 4, which means extremely. The inventory allows for a maximum score of 68. The severity of SAD is determined as follows: 0-20 (none), 21-30 (mild), 31-40 (moderate), 41-50 (severe) and 51-68 (extremely severe) [11].

Statistical Analysis

This study employed the Statistical Package for Social Sciences, version 26 (IBM SPSS Statistics for Windows, Version 26.0, Armonk, NY: IBM Corp). The descriptive statistics were reported as frequencies and percentages. A chi-square test examined the association between SP and sociodemographic factors.

Ethical Issue

The approval by the local bioethical committee at Northern Border University (HAP-09-A-034) was obtained with decision no. 32-44-H dated 03/05-2023. The participants provided informed consent by including a statement describing the study aim at the start of the questionnaire and asking them to complete the sheet if they agreed to share. The data was utilized solely for scientific purposes. Anonymity and confidentiality were assured during every stage of the study.

RESULTS

A total of 150 students participated in the survey, with a mean age of 22.5±1.6(19-26), more than half males (54%), the majority unmarried (90.7%), more than two-thirds from the clinical years (70.6%), more than half (53.3%) with GPA 3.5-4.49, slightly less than quarter smokers (23.3%), more than 60% with monthly income more than 15000 SAR and the majority living with their family (Table 1).

Figure 1 displays the prevalence and the intensity of social phobia among the examined participants; more than half (56%) experienced social phobia, with 21.3, 20 and 14.7% suffering from mild, moderate and severe social phobia, respectively.

Table 2 shows the association of SP and different demographic features of the studied participants. Female students significantly experienced social phobia compared to males (p-value = 0.03), while clinical years (4th, 5th, 6th) had more SP compared to academic years (2nd, 3rd)

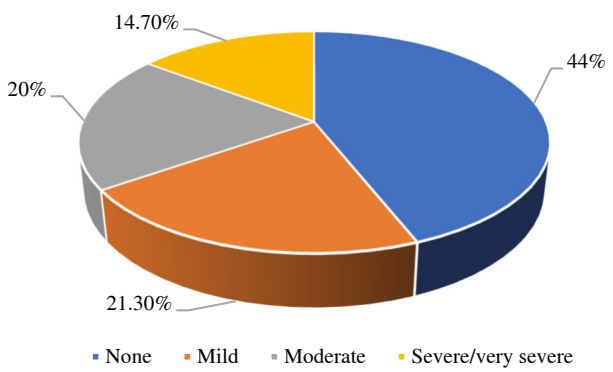

Figure 1: The distribution of SP among respondents studied

Table 1: Sociodemographic characteristics of the participants studied

Items		No.	Percentage
Gender	Male	81	54
	Female	69	46
Marital Status	Married	14	9.3
	Single	136	90.7
Educational grade	2nd	13	8.7
	3rd	31	20.7
	4th	36	24
	5th	27	18
	6th	43	28.6
GPA*	2.5-3.49	21	14
	3.5-4.49	80	53.3
	4.5-5	49	32.7
Birth order	First	46	30.7
	Middle	83	55.3
	Last	21	14
Family income per month	5000 SR or less	8	5.3
	5000-10000 SR	25	16.7
	1000-15000	24	16
	More than 15000 SR	93	62
Smoking habit	Smoker	35	23.3
	Not smoker	115	76.7
Accommodation	With family	128	85.3
	Apartment	22	14.7

*GPA: Grade point average

Table 2: Association between severity of social phobia and demographic characteristics

Variable	Categories	Present N = 84 No. (%)	Absent N = 66 No. (%)	p-value
Gender	Male	39(46.4)	42(63.6)	0.036
	Female	45(53.6)	24 (36.4)	
Marital Status	Married	5(6)	9(13.6)	0.1
	Single	79(94)	57(86.4)	
Educational grade	2nd	9(10.7)	4(6.1)	0.003
	3rd	12(14.3)	19(28.8)	
	4th	29(34.5)	7(10.6)	
	5th	11(13.1)	16(24.2)	
	6th	23(27.4)	20(30.3)	
GPA	2.5-3.49	12(14.3)	9(13.6)	0.7
	3.5-4.49	47(56)	33(50)	
	4.5-5	25(29.8)	24(36.4)	
Birth order	1st	26(31)	20(30.3)	0.4
	Middle	45(53.6)	38(57.6)	
	Last	13(15.5)	8(12.1)	
Income	5000 SR or less	5(6)	3(4.5)	0.19
	5000-10000 SR	18(21.4)	7(10.6)	
	1000– 15000	15(17.9)	9(13.6)	
	More than 15000 SR	46(54.8)	47(71.2)	
Smoking	Yes	17(20.2)	18(27.3)	0.3
	No	67(79.8)	48(72.7)	
Living arrangement	Living with family	72(85.7)	56(84.8)	0.8
	Apartment	12(14.3)	10(15.2)	

p-value = 0.003). However, there was no significant association between SP and marital status, GPA, birth order, income, smoking, or housing situations.

DISCUSSION

Regarding the prevalence of social phobia, more than half (56%) of the students had social phobia, with mild, moderate and severe cases accounting for 21.3, 20 and 14.7%, respectively.

Previous research in Saudi Arabia revealed similar findings. A survey done by Al-Johani *et al.* [12], found 51% of Saudi medical students had SP, with mild, moderate and severe categories corresponding to 20.2, 18.3 and 12.5%, respectively [12]. Al-Hazmi *et al.* [13] in Madinah, discovered that among medical students 51% of participants had SP, with 18.8% mild, 19.6% moderate and 13.5% severe. Alhazmi in Riyadh revealed that 47.5% of nursing students exhibited SP, with 22% mild, 16.3% moderate and 9.2% severe [11]. In Makkah, Quronfulah *et al.* [14] observed that 56.2% of health profession students experienced SP, with 39.3% having mild to moderate and 16.9% having severe to very severe SP. In Jazan, southern Saudi Arabia,

Hakami *et al.* [15] reported that 25.8% of university students showed social anxiety disorder. In Oman, Kadhim *et al.* [16] identified a substantial prevalence of SAD among medical students (64%).

In Turkey, Alnemr *et al.* [17] discovered that 61% of the non-Turkish university students suffered from social phobia. 23.7% had mild symptoms, 21.3% had moderate symptoms and 15.6% had severe or very severe symptoms.

Many comparable studies have been undertaken in Ethiopia to determine the prevalence of social phobia, including one by Reta *et al.* [3], who found that 32.8% of medical students suffer from social phobia. Desalegn *et al.* [18] 31.1%; Nakie *et al.* [19] 40.2%, Hajure and Abdu [20] 26 percent.

According to an Indian study, 37% of school-age teenagers suffered from SP. Additionally, slightly less than a quarter (23.7%) of the research respondents exhibited mild SP. Moderate and severe SP were detected by 11.5% and 2.3%, respectively [21].

In Palestine, Ayed *et al.* [22] noticed that among undergraduate nursing students, 29% demonstrated social anxiety disorder, with 19% mild, 6.1% moderate and 3.1% severe social anxiety.

Concerning the relationship between SP and the demographic characteristics, the study reveals that female students had significantly greater SP than males (p-value = 0.03) as we expected and clinical years (4th, 5th, 6th) had more SP than academic years (2nd, 3rd) (p-value = 0.003). This is in line with Al-Johani *et al.* [12], who reported similar results in Saudi Arabia, this result is pertinent in light of the diagnostic and statistical manual of mental disorders, 5th edition (DSM-5) argument, which found that the frequency of SAD is greater in females, with this difference being more prominent among teenagers [23]. In Oman, Kadhim *et al.* [16], observed that SAD is more frequent among female university students than males. In Ethiopia, Nakie *et al.* [19] found that SAD is significantly more frequent among females (60%) than males (60%). Furthermore, research in the Canadian populations provided comparable findings [24]. Additionally, Anderson *et al.* [25], in the USA indicated that anxiety disorders are more frequent in females than males.

A vulnerability stress perspective may help explain why females are more likely to get SAD. Exposure to diverse psychosocial stresses and a greater physiological and psychological predisposition to anxiety in females might explain the gender variations in anxiety-related conditions [26].

Taha *et al.* [9] in Taif, Saudi Arabia, observed a negative correlation between SP, age and educational years.

CONCLUSIONS

Our findings revealed a significant prevalence of SAD (56%) among the medical students at Northern Border University, most of them had a mild degree of illness. Personal characteristics were strongly related to SAD in univariate analysis, including female gender and students in the academic years compared to the clinical years.

Study Limitations

The study has a few limitations, including a lack of temporality and causality between the factors and the outcome because it is a cross-sectional design; additionally, the possibility of response bias is unavoidable; and at last, the SPIN test employed in the study is a method for screening and high-risk cases require additional diagnostic steps.

REFERENCES

[1] Rose, Gregory M., and Prasanna Tadi. *Social anxiety disorder* StatPearls Publishing, 2022, https://www.ncbi.nlm.nih.gov/books/NBK555890/.

[2] Salari, Nader *et al.* "Global prevalence of social anxiety disorder in children, adolescents and youth: A systematic review and meta-analysis." *Journal of Prevention,* vol. 45, no. 5, June 2024, pp. 795-813. https://link.springer.com/article/10.1007/s10935-024-00789-9.

[3] Reta, Yared *et al.* "Social anxiety disorder among undergraduate students of Hawassa University, College of Medicine and Health Sciences, Ethiopia." *Neuropsychiatric Disease and Treatment,* vol. 16, February 2020, pp. 571-577. https://www.tandfonline.com/doi/full/10.2147/NDT.S235416.

[4] Dos Santos, Rafael Guimarães *et al.* "Modulation of the endocannabinoid and oxytocinergic systems as a potential treatment approach for social anxiety disorder." *CNS drugs,* vol. 33, no. 10, October 2019, pp. 1031-1038. https://link.springer.com/article/10.1007/s40263-019-00669-5.

[5] Elhadad, Ayman A. *et al.* "Social phobia among Saudi medical students." *Middle East Current Psychiatry,* vol. 24, no. 2, April 2017, pp. 68-71. https://journals.lww.com/mecpsychiatry/fulltext/2017/04000/social_phobia_among_saudi_medical_students.4.aspx.

[6] Dsouza, Madonna J. *et al.* "Social anxiety disorder among medical students in a tertiary care hospital in Davangere, Karnataka." *International Journal of Community Medicine and Public Health,* vol. 6, no. 4, April 2019, pp. 1434-1436. https://www.academia.edu/download/112081875/2904.pdf.

[7] Gill, J., and S. Mohammad. "P01-139-Social anxiety among medical undergraduate students in Malaysia." *European Psychiatry,* vol. 25, no. S1, April 2020, pp. 25-E344. https://www.cambridge.org/core/journals/european-psychiatry/article/p01139-social-anxiety-among-medical-undergraduate-students-in-malaysia/ECAF24EC053F3924670028DEE1CCFF54.

[8] Al-Hinai, Saleh S. *et al.* "Culture and prevalence of social phobia in a college population in oman." Mental health and coping strategies, edited by M.V. Landow, Oman, Nova Science Publishers, 2006, pp. 115-132. https://psycnet.apa.org/record/2006-09656-006.

[9] Taha, Azza Ali *et al.* "Social anxiety disorder and its correlates among female students at Taif University, Saudi Arabia." *Psychology Research and Behavior Sciences,* vol. 5, no. 2, 2017, pp. 50-56.

[10] Connor, Kathryn M. *et al.* "Psychometric properties of the Social Phobia Inventory (SPIN): New self-rating scale." *The British Journal of Psychiatry,* vol. 176, no. 4, January 2018, pp. 379-386. https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/article/psychometric-properties-of-the-social-phobia-inventory-spin/9E4A3EE20D2B1A6C222CDB5807AC086A.

[11] Alhazmi, Rehab. "The association between social anxiety disorder and parenting style among nursing students." *BMC nursing,* vol. 23, no. 1, December 2024. https://link.springer.com/article/10.1186/s12912-024-02584-7.

[12] Al-Johani, Wejdan M. *et al.* "Social anxiety disorder and its associated factors: A cross-sectional study among medical students, Saudi Arabia". *BMC Psychiatry*, vol. 22, no. 1, July 2022, pp. 505-505. https://pubmed.ncbi.nlm.nih.gov/35896983/.

[13] Al-Hazmi, Bashaer Hassan *et al.* "Social anxiety disorder in medical students at Taibah University, Saudi Arabia." *Journal of Family Medicine and Primary Care,* vol. 9, no. 8, August 2020, pp. 4329-4332. https://journals.lww.com/jfmpc/fulltext/2020/09080/social_anxiety_disorder_in_medical_students_at.86.aspx.

[14] Quronfulah, Baraa Sami *et al.* "The prevalence of using beta-blockers and its relationship with social anxiety among health profession students at Umm Al-Qura University." *Plos One,* vol. 19, no. 8, August 2024. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0307163.

[15] Hakami, Ramzi M. *et al.* "Social anxiety disorder and its impact in undergraduate students at Jazan University, Saudi Arabia." *Mental Illness,* vol. 9, no. 2, October 2017, pp. 42-47. https://www.emerald.com/insight/content/doi/10.1108/mi.2017.7274/full/html.

[16] Kadhim, Rania A. *et al.* "Prevalence and demographic correlates of social anxiety disorder among medical students at Sultan Qaboos University: A cross-sectional study." *New Emirates Medical Journal,* vol. 5, no. 1, January 2024. https://www.benthamdirect.com/content/journals/nemj/10.2174/0102506882349926250123070359.

[17] Alnemr, Lujain *et al.* "Prevalence of social anxiety disorder and its associated factors among foreign-born undergraduate students in Türkiye: A cross-sectional study." *PLOS Global Public Health,* vol. 4, no. 7, July 2024. https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0003184.

[18] Desalegn, Getachew Tesfaw *et al.* "The prevalence and correlates of social phobia among undergraduate health science students in Gondar, Gondar Ethiopia." *BMC Research Notes,* vol. 12, no. 1, July 2019. https://link.springer.com/article/10.1186/s13104-019-4482-y.

[19] Nakie, Girum *et al.* "Prevalence and associated factors of social phobia among high school adolescents in Northwest Ethiopia, 2021." *Frontiers in Psychiatry,* vol. 13, October 2022. https://www.frontiersin.org/articles/10.3389/fpsyt.2022.949124/full.

[20] Hajure, Mohammedamin and Zakir Abdu. "Social phobia and its impact on quality of life among regular undergraduate students of Mettu University, Mettu, Ethiopia." *Adolescent Health, Medicine and Therapeutic,* vol. 11, June 2020, pp. 79-87. https://www.tandfonline.com/doi/full/10.2147/AHMT.S254002.

[21] Gupta, Kezia *et al.* "Do social phobia and depression go hand in hand? A cross-sectional study among school-going adolescents of Northern region of India." *Journal of Education and Health Promotion,* vol. 11, no. 1, 2022. https://journals.lww.com/jehp/fulltext/2022/11000/do_social_phobia_and_depression_go_hand_in_hand__a.313.aspx.

[22] Ayed, Ahmad *et al.* "Relationship between social anxiety and self-esteem among undergraduate nursing students." *The Journal of Health Care Organization, Provision, and Financing,* vol. 61, August 2024. https://journals.sagepub.com/doi/full/10.1177/00469580241276146.

[23] Edition, F. "Diagnostic and statistical manual of mental disorders". *Am Psychiatric Assoc.*, vol. 21, no. 21, 2013, pp. 591-643.

[24] MacKenzie, Meagan B. and Ken F. Fowler. "Social anxiety disorder in the Canadian population: Exploring gender differences in sociodemographic profile." *Journal of Anxiety Disorders,* vol. 27, no. 4, May 2013, pp. 427-434. https://www.sciencedirect.com/science/article/pii/S088761851300100X.

[25] Anderson, Sarah E. *et al.* "Adolescent obesity and risk for subsequent major depressive disorder and anxiety disorder: prospective evidence." *Psychosomatic Medicine,* vol. 69, no. 8, 2007, pp. 740-747. https://journals.lww.com/psychosomaticmedicine/FullText/2007/10000/Adolescent_Obesity_and_Risk_for_Subsequent_Major.6.aspx.

[26] Hallers-Haalboom, Elizabeth T. *et al.* "The role of sex and gender in anxiety disorders: Being scared "like a girl?." *Handbook of Clinical Neurology,* vol. 175, 2020, pp. 359-368. https://www.sciencedirect.com/science/article/pii/B9780444641236000242.