ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

https://bjpsychiatry.org/

Bengal Journal of Psychiatry

Original Article

Self-Esteem and Mindfulness among Undergraduate Medical Students with Social Anxiety Disorder

Srikanth Lella[1], Therissa Benerji[1], Madhavi Kodali[1], Pranay Aditya Chennuri[1]

[1]Department of Psychiatry, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation, Vijayawada, Andhra Pradesh, India

***Corresponding author:**
Therissa Benerji,
Assistant Professor,
Department of Psychiatry,
Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation,
Vijayawada, Andhra Pradesh, India
teresabenerji@gmail.com

Received: 15 July 2024
Accepted: 30 August 2024
Epub Ahead of Print: 05 December 2024
Published: 10 December 2024

DOI
10.25259/BJPSY_2_2024

Quick Response Code:

ABSTRACT

Objectives: To assess self-esteem and mindfulness among undergraduate medical students with social anxiety disorder.

Material and Methods: Four hundred and six undergraduate medical students were assessed using the Liebowitz Social Anxiety Scale (LSAS) and diagnosed using DSM-5 criteria. Self-esteem and mindfulness were assessed using the Rosenberg Self-Esteem Scale (RSE) and Mindful Attention Awareness Scale (MAAS), respectively. Data was analyzed using SPSS software version 26.0. Association between social anxiety and self-esteem, social anxiety, and mindfulness, self-esteem and mindfulness were assessed using Chi-square test.

Results: Among the participants, 63.5% were found to have social anxiety disorder. Of them, 37.7% had moderate levels of social anxiety, 26% severe social anxiety, and 20.6% marked social anxiety. Low self-esteem was reported by 89.9% of those with social anxiety disorder. Social anxiety disorder was found to be significantly associated with low self-esteem and lower levels of mindfulness.

Conclusion: Our results underlined the relationship between social anxiety disorder, self-esteem, and mindfulness among undergraduate medical students, shedding light on potential avenues for tailored interventions to promote their holistic well-being.

Keywords: Social anxiety disorder, Self-esteem, Mindfulness, Undergraduate medical students

INTRODUCTION

Social anxiety disorder (SAD), also known as social phobia, is a marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others.[1] The prevalence of SAD in India is reported to be between 0.47% and 41.1% and is listed as the fourth most common mental health disorder.[2,3] SAD within the undergraduate medical student population has garnered increasing attention due to its impact on academic performance, professional development, and overall well-being. Undergraduate medical students, tasked with rigorous academic demands, face unique challenges exacerbated by the interplay of social anxiety, self-esteem, and mindfulness.

Self-esteem, defined as the subjective evaluation of one's worth and capabilities, holds significant relevance within the context of medical education. Its impact on academic performance, stress coping mechanisms and interpersonal interactions cannot be overstated. Earlier research on the association of SAD and self-esteem among young adults indicated that low self-esteem may be a

risk factor for the development of SAD.[4] It was observed that low self-esteem weakens the individual's ability to adapt to the social environment, causing sensitivity to interpersonal rejections and increasing the level of social anxiety.[5] Conversely, high self-esteem was associated with fewer emotional and behavioral problems.[6]

Mindfulness, characterized by non-judgmental present-moment awareness, offers a potential avenue for mitigating the adverse effects of SAD by fostering emotional regulation and resilience. It allows individuals to perceive thoughts and events the way they are, keeping them away from judging them critically.[7] Individuals with higher mindfulness are less likely to be consumed by thoughts and emotions that characterize low self-esteem.[8]

Hence, the compounding effect of SAD on self-esteem and the potential mediating role of mindfulness necessitate comprehensive exploration to elucidate targeted interventions and support strategies tailored to the unique needs of undergraduate medical students experiencing SAD. Limited literature is available on the effects of SAD on self-esteem and mindfulness in this specific cohort. While research on the relationship between self-esteem and mindfulness has gained momentum in various contexts, very few studies have explored this dynamic among undergraduate medical students with SAD. Thus, this study aims to assess the levels of self-esteem and mindfulness among undergraduate medical students with SAD.

MATERIAL AND METHODS

The present study was a cross-sectional observational study conducted among undergraduate medical college students after obtaining approval from the Institutional Ethics Committee. The study was conducted between June 20, 2023, and December 20, 2023. Written informed consent was obtained from all participants who consented to the two-step process of the study, after introducing them to the nature and purpose of the research, assuring confidentiality and personal data protection. Students between 18 and 25 years of age were included, while those with a history of diagnosed medical conditions and psychiatric illnesses were excluded.

The sample size was determined by using the formula, $n = Z^2 P(1-P)/d^2$, where n is the sample size, Z is the level of confidence (taken as 95%), P is expected prevalence (taken as 41%), and d is precision (taken as 0.05).

Step one: Sociodemographic data were obtained, including age, gender, year of study, place of stay, region, socioeconomic status, and family type (joint/nuclear). Details regarding the presence of a language barrier and the adequacy of social support were also recorded. Social anxiety was assessed using the Liebowitz Social Anxiety Scale (LSAS).

Step two: The students who scored ≥30 on the LSAS were assumed to have social anxiety. These students were further interviewed by a consultant psychiatrist, and DSM-5 diagnostic criteria were applied to diagnose SAD. All the students who scored ≤29 on the LSAS were considered as not having social anxiety. The Rosenberg Self-Esteem Scale (RSE) and Mindful Attention Awareness Scale (MAAS) were applied to the total sample. The scales were administered to assess self-esteem and mindfulness among the participants.

The LSAS is a widely used measure of social anxiety. It comprises 24 social situations that are each rated for level of fear (0 = none to 3 = severe) and avoidance (0 = none to 3 = usually). Total scores are calculated by summing up all the fear and avoidance ratings, which yields a maximum of 144 points. Scores of 0–29 on this scale are considered normal, 30–49 indicates the presence of mild social anxiety, 50–64 moderate social anxiety, 65–79 marked social anxiety, 80–94 severe social anxiety, and >95 very severe social anxiety.[9,10] The scale has high test-retest reliability, internal consistency, and convergent and discriminant validity.[11]

The RSE, a widely used self-report instrument for evaluating individual self-esteem, is a 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree. Higher scores indicate higher self-esteem.[12] The Rosenberg Self-Esteem Scale (RSES) is one of the most widely used measures of self-esteem in research, has adequate internal consistency, two-week retest reliability, as well as convergent and discriminant validity.[13,14]

The MAAS is designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place. It contains 15 statements that participants are asked to rate on a six-point scale ('almost never' to 'almost always'). The mean (average) of the 15 items sums up the total score. Higher scores reflect higher levels of dispositional mindfulness.[15] The scale shows strong psychometric properties and has been validated with college, community, and cancer patient samples.[16] It has demonstrated adequate internal reliability, with Cronbach alpha coefficients reported at 0.82–0.86 in separate studies.[15,17] It is also found to be highly reliable in the Indian population, with Cronbach's alpha of 0.914.[18]

Data were entered in Microsoft Excel and analyzed with Statistical Package for Social Sciences (SPSS) software version 26.0. The mean and standard deviation of the quantitative variables were measured. The association between social anxiety and self-esteem, social anxiety and mindfulness, self-esteem, and mindfulness were assessed using the Chi-square test. A probability value of ≤0.05 was taken as statistically significant.

RESULTS

The total sample comprised 406 undergraduate medical college students between 18 and 25 years of age. Females (n = 262; 64.5%) outnumbered males (n = 144; 35.5%), with a mean age of 19.96 ± 1.45 years. Most of them (n = 144; 35.5%) were in their first professional year of under graduation, while 114 (28.2%) were in their third professional year—part 1, 100 (24.6%) in their second professional year, and 48 (11.8%) in third professional year—part 2. Of the total sample, 207 (51.2%) were day scholars, and 199 (48.9%) were living in the hostel. The majority were hailing from urban background (n = 283; 69.7%), belonged to middle socioeconomic status (n = 248; 61.2%), and lived in a nuclear family (n = 215; 53.1%), reported no language barrier (n = 398; 98.0%), and adequate social support (n = 393; 96.8%), as shown in Table 1. Of the total sample, 63.5% (n = 258) were found to have social anxiety.

Table 1: Descriptive statistics for socio-demographic variables.

Variable		Number (%)
Gender	Male	144 (35.5)
	Female	262 (64.5)
Year of study	First professional year	144 (35.5)
	Second professional year	100 (24.6)
	Third professional year—part 1	114 (28.2)
	Third professional year—part 2	48 (11.8)
Place of stay	Hostel	199 (48.9)
	Day scholar	207 (51.2)
Region	Rural	123 (30.3)
	Urban	283 (69.7)
Socioeconomic status	Lower	76 (18.7)
	Middle	248 (61.2)
	Upper	82 (20.1)
Type of family	Nuclear	215 (53.1)
	Joint	191 (47.0)
Language barrier	Present	8 (1.9)
	Absent	398 (98.0)
Adequate social support	Yes	393 (96.8)
	No	13 (3.2)
Liebowitz social anxiety scale	Moderate social anxiety	97 (37.7%)
	Marked social anxiety	53 (20.6%)
	Severe social anxiety	67 (26%)
	Very severe social anxiety	41 (15.8%)

Of the 258 participants found to have SAD, 97 (37.7%) had moderate levels of social anxiety, 67 (26%) had severe social anxiety, 53 (20.6%) marked, and 41 (15.8%) had very severe social anxiety. The majority were females (n = 174; 66.4%), while 58.3% (n = 84) were males. Most of them were in their first professional year of under graduation (n = 97; 37.5%), while 25.9% (n = 67) were in their second professional year, 25.9% (n = 67) in third professional year—part 1, and 10.4% (n = 27) in third professional year—part 2. Majority were day scholars (n = 166; 64.3%) and 92 (35.6%) were hostellers, hailing from urban background (n = 176; 68.2%), belonging to middle socioeconomic status (n = 223; 86.4%), and living in a nuclear family (n = 184; 71.3%), reported no language barrier (n = 251; 97.2%), and adequate social support (n = 247; 95.7%).

Low self-esteem was reported by 89.9% (n = 232) of those with SAD. The mean score on the RSE was 9.83 ± 3.97 in those observed to have SAD, as shown in Table 2.

A significant association (p = 0.0001) was found between SAD and low self-esteem in our sample of participants, as depicted in Table 3.

Students with SAD scored low (3.46 ± 0.8) on the MAAS when compared to those without SAD (3.67 ± 0.89). Lower levels of mindfulness were found to be significantly associated with SAD (p = 0.016), as shown in Table 4.

No significant association was found between self-esteem and mindfulness in SAD, as depicted in Table 5.

Table 2: Mean self-esteem and mindfulness scores in social anxiety.

	Mean	S.D
Rosenberg self-esteem scale (RES)	9.83	3.97
Mindful attention awareness scale (MAAS)	3.46	0.81

S.D: Standard deviation.

Table 3: Association between social anxiety and low self-esteem.

Liebowitz social anxiety scale	Mean RES score	S.D	*P* value
≥30	9.83	3.97	0.0001
≤29	24.47	1.05	

RES: Rosenberg self-esteem scale, S.D: Standard deviation.

Table 4: Association between social anxiety and mindfulness.

Liebowitz social anxiety scale	Mean MAAS score	S.D	*P* value
≥30	3.46	0.81	0.016
≤29	3.67	0.89	

MAAS: Mindful attention awareness scale, S.D: Standard deviation.

Table 5: Association between self-esteem and mindfulness in social anxiety.

Rosenberg self-esteem scale (RES)	Mean MAAS	S.D	*P* value
Normal	3.67	0.961	0.158
Low	3.43	0.793	

MAAS: Mindful attention awareness scale, S.D: Standard deviation.

DISCUSSION

The present study was a cross-sectional observational study taken up with the aim of assessing the levels of self-esteem and mindfulness among undergraduate medical students with SAD.

The participants' mean age was 19.96 ± 1.45 years. A similar trend of age group, as observed in our study, was reported by Agha Mohammad Hasani P et al. in their study to assess the prevalence of social phobia among undergraduate medical students.[19] Females outnumbered males in our study, which is in line with the study by Sherin Roshan et al., whose sample was comprised of 70.7% females.[4] Most of the participants of our study were day scholars in their first professional year of undergraduate, hailing from an urban background, belonging to middle socioeconomic status, and living in a nuclear family. A study on the symptom profile and sociodemographic risk factors of SAD in medical students reported similar sample characteristics.[20]

The study reveals a noteworthy prevalence of SAD among undergraduate medical students, affecting 63.3% of participants. This finding aligns with contemporary literature emphasizing the vulnerability of medical students to mental health issues, including anxiety disorders.[21,22] The severity distribution of social anxiety within the sample sheds light on the diverse impact, ranging from moderate to very severe, highlighting the multifaceted nature of this condition.

A significant association was found between SAD and low self-esteem in our study participants, with 89.9% of those diagnosed with SAD reporting diminished self-worth. This concurs with recent research stressing the reciprocal relationship between social anxiety and self-esteem in young adults.[23] The observed mean score on the RSE provides quantifiable evidence supporting this association, contributing to the growing body of literature acknowledging the bidirectional relationship between social anxiety and self-perception.

Furthermore, the study delves into the realm of mindfulness, unveiling a significant association between lower levels of mindfulness and SAD among medical students. Earlier research suggested that higher levels of self-esteem and mindfulness significantly predicted lower levels of social anxiety and that this effect was partially enhanced by the significant positive effect of mindfulness on self-esteem.[2] The positive impact of mindfulness on self-esteem was consistent with research that has shown that individuals with higher levels of mindfulness are more likely to experience higher levels of self-esteem.[15,24] The lower scores on the MAAS for students with SAD reinforce the potential therapeutic value of mindfulness interventions in managing social anxiety.[25] This aligns with current trends in mental health research, advocating for mindfulness-based interventions as viable adjuncts in anxiety disorders' comprehensive management.

Contrastingly, the study does not identify a significant association between self-esteem and mindfulness in the context of SAD. This nuanced finding prompts further exploration into the intricate relationship between these psychological constructs, calling for additional research to unravel the underlying dynamics.

The limitation of this study includes its sample being collected from a single center, restricting the extrapolation of results. The strengths of our study are the use of well-validated questionnaires, a relatively large sample size, and the participants that included students of all professional years of medical college.

CONCLUSION

In conclusion, this research provides valuable insights into the prevalence and intricate associations of SAD, self-esteem, and mindfulness among undergraduate medical students. The unique pressures of medical training, including academic rigor, clinical responsibilities, and the imperative to exhibit competence, exacerbate the challenges faced by undergraduate students grappling with social anxiety in addition to low self-esteem. It is possible that mindfulness training may subvert the negative self-schemas that elicit and maintain social anxiety. Thus, it may be beneficial for clinicians and researchers to address self-esteem and consider mindfulness-based treatment strategies for individuals diagnosed with SAD. The findings underscore the need for holistic mental health interventions tailored to address the multifaceted challenges faced by this demographic.

The above manuscript was checked with a plagiarism detection tool, and the work is free of plagiarism.

Ethical approval

The research/study approved by the Institutional Review Board at Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation, number PG/1008/23, dated 15th July 2023.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript, and no images were manipulated using AI.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA.
2. Suhas S, Jayasankar P, Patley R, Manjunatha N, Rao GN, Gururaj G, et al.; NMHS National Collaborators Group. Nationally Representative Epidemiological Study of Social Anxiety Disorder From India. Indian J Psychiatry. 2023;65:1261–8.
3. Sundaram R, Srinivasan V, Malik SRA, Mahalingam G, Saradham HRT, Kalidossani HRS, et al. Prevalence of Social Phobia and Its Determinants Among Undergraduate Medical Students of Tamil Nadu, India: A Cross-Sectional Study. J Clin Diagn Res. 2023;17:24–8.
4. Sherin Roshan, Roshan George Varkey, Gikky Ann Philip, Abhiram Suresh Babu. Association of Social Anxiety Disorder and Self-Esteem Among Young Adults – A Single Center Study. Int J Curr Sci Res Rev. 2022;5:737–41.
5. Deng YH, Xiang RY, Zhang YH, Liu XP. Response Bias After Social Exclusion Among Individuals With Social Anxiety. Chin J Clin Psychol. 2018;26:336–40.
6. Fernandes B, Newton J, Essau CA. The Mediating Effects of Self-Esteem on Anxiety and Emotion Regulation. Psychol Rep. 2022;125:787–803.
7. Bajaj B, Robins RW, Pande N. Mediating Role of Self-Esteem on the Relationship Between Mindfulness, Anxiety, and Depression. Pers Individ Differ. 2016;96:127–31.
8. Pepping CA, O'Donovan A, Davis PJ. The Positive Effects of Mindfulness on Self-Esteem. J Posit Psychol. 2013;8: 376–86.
9. Liebowitz MR. Social Phobia. Mod Probl Pharmacopsychiatry. 1987;22:141–73.
10. Liebowitz MR. Liebowitz Social Anxiety Scale. Psychology Tools [accessed 2024 April 2]. https://psychology-tools.com/test/liebowitz-social-anxiety-scale.
11. Baker LS, Heinrichs N, Kim HJ, Hofmann SG. The Liebowitz Social Anxiety Scale as a Self-Report Instrument: A Preliminary Psychometric Analysis. Behav Res Ther. 2002;40:701–15.
12. Rosenberg M. Society and the Adolescent Self-Image. Middletown, CT: Wesleyan University Press, 1989.
13. Heatherton TF, Wyland CL. Assessing self-esteem. In: Lopez SJ and Snyder CR, Editors. Positive Psychological Assessment: A Handbook of Models and Measures. American Psychological Association; 2003. p. 219–33.
14. Schmitt DP, Allik J. Simultaneous Administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the Universal and Culture-Specific Features of Global Self-Esteem. J Pers Soc Psychol. 2005;89:623–42.
15. Brown KW, Ryan RM. The Benefits of Being Present: Mindfulness and its Role in Psychological Well-Being. J Pers Soc Psychol. 2003;84:822–48.
16. Carlson LE, Brown KW. Validation of the Mindful Attention Awareness Scale in a Cancer Population. J Psychosom Res. 2005;58:29–33.
17. Baer RA, Smith GT, Hopkins J, Krietemeyer J, Toney L. Using Self-Report Assessment Methods to Explore Facets of Mindfulness. Assessment. 2006;13:27–45.
18. Tuteja S, Dhaliwal A. Impact of Meditation on Mindfulness Among the Young Adults: The Psychometric Assessment of the Mindful Attention Awareness Scale. Humanist Psychol. 2023;e0000336.
19. Agha Mohammad Hasani P, Mokhtaree MR, Asadollahi Z, Fereidoni MJ. The Prevalence of Social Phobia Among Students of Rafsanjan University of Medical Sciences, Iran, and its Relation with Personality Traits in 2013. J Occup Health Epidemiol. 2016;5:72–82.
20. Mercy N, Meda A, Kesavareddy SR. A Cross-Sectional Study of Symptom Profile and Sociodemographic Risk Factors of Social Anxiety Disorder. Int Arch Integr Med. 2021;8:9–14.
21. Al-Hazmi BH, Sabur SS, Al-Hazmi RH. Social Anxiety Disorder in Medical Students at Taibah University, Saudi Arabia. J Family Med Prim Care. 2020;9: 4329–32.
22. Quek TT, Tam WW, Tran BX, Zhang M, Zhang Z, Ho CS, et al. The Global Prevalence of Anxiety Among Medical Students: A Meta-Analysis. Int J Environ Res Public Health. 2019;16:e2735.
23. Murad OS. Social Anxiety in Relation to Self-Esteem Among University Students in Jordan. Int Educ Stud. 2020;13:e9039.
24. Bajaj B, Gupta R, Pande N. Self-Esteem Mediates the Relationship Between Mindfulness and Well-Being. Pers Individ Differ. 2016;94:96–100.
25. Creswell JD. Mindfulness Interventions. Annu Rev Psychol. 2017;68:491–516.

How to cite this article: Leela S, Benerji T, Kodali M and Chennuri PA. Self-Esteem and Mindfulness among Undergraduate Medical Students with Social Anxiety Disorder. Bengal J Psychiatry. 2024;29:39–43. doi: 10.25259/BJPSY_2_2024