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Prevalence of social anxiety disorder among medical students: A cross-sectional descriptive study

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A B S T R A C T

Introduction: Mental disorders, affecting around 800 million people globally, are a major public health concern. These issues often peak during the youth years and can impact individuals and their social lives. Social anxiety disorder (SAD) is a mental health condition that can significantly impact academic performance by leading to avoidance behaviors in essential social activities.

Material and Methods: A validated Liebowitz Social Anxiety Scale questionnaire was used to assess social anxiety disorder among the participants. A total of 200 students (131 females, 69 males) with a mean age of 22.87 ± 2.2 years participated in the study.

Results: The findings revealed that 37.5% of the respondents experienced some degree of social anxiety. The prevalence of social anxiety disorder differed significantly between genders and age groups, with younger students showing a higher prevalence. However, no significant association was found between the academic field and social anxiety disorder.

Conclusion: The study highlighted the high prevalence of social anxiety disorder among medical students, particularly in younger individuals. These findings underscore the importance of early identification and tailored intervention strategies to support affected students and improve their academic performance and overall well-being, in line with the global public health priority of focusing on the mental health of young people.

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INTRODUCTION

Mental disorders are recognized as a significant public health issue, emphasizing the importance of prevention and the provision of appropriate mental health care [1]. Around 800 million people worldwide are affected by mental health problems [2]. These issues peak between the ages of 12 and 25 and can have serious consequences on the individual and their social life. Therefore, one of the global public health priorities is to focus on the mental health of young people [3]. Early identification of mental disorders and interventions can increase the likelihood of young individuals enjoying a healthy future [4].

One of the most common mental disorders is anxiety disorders. Social anxiety disorder (SAD), also known as social phobia, is a specific type of anxiety disorder characterized by a persistent fear of social situations involving interaction with others [5]. This disorder can significantly impact an individual's quality of life [6]. The prevalence of social anxiety disorder is estimated to be around 2-7% in adults and up to 25% in students [7]. Individuals with social anxiety disorder tend to avoid activities that involve social interactions and public tasks, such as public speaking, attending social events alone, engaging in communication with others, and being the center of attention [8].

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Some individuals with social anxiety disorder may refrain from seeking treatment due to the fear of negative evaluation by healthcare professionals. Research has indicated that approximately half of mental illnesses can be effectively treated with early recognition. Therefore, it is essential to equip healthcare professionals with the skills for early detection of social anxiety to prevent its progression into social anxiety disorder and associated complications. Furthermore, studies have revealed that the absence of follow-up and treatment for social anxiety among adolescents and younger age groups can lead to impairment in their functional abilities.

Some of these may refrain from seeking treatment due to the fear of negative evaluation by healthcare professionals [9]. Research has indicated that approximately half of mental illnesses can be effectively treated with early recognition [10]. Therefore, it is essential to equip healthcare professionals with the skills for early detection of social anxiety to prevent its progression into social anxiety disorder and associated complications [11]. Furthermore, studies have revealed that the absence of follow-up and treatment for social anxiety among adolescents and younger age groups can lead to impairment in their functional abilities [12].

On the other hand, adapting to student life poses a significant challenge for many students as they navigate new types of stress and social demands [13]. Also, the fear of others' judgment is a threat to the self-actualization of young people especially students in educational environments [14]. Anxiety and fear of public speaking can have a detrimental impact on academic performance. For instance, individuals with this disorder may avoid situations that involve speaking with others, which is essential in educational environments. Alternatively, when individuals are compelled to speak in such situations, they may exhibit avoidance behaviors such as speaking rapidly and avoiding eye contact [15]. Consequently, this disorder can impede an individual's academic advancement [16].

Therefore, recognizing and understanding this anxiety, its various manifestations, and severity levels are essential steps in addressing these challenges. Accordingly, this study aimed to examine the prevalence of social anxiety disorder among students at the Varastegan Institute for Medical Sciences in Mashhad.

MATERIAL AND METHODS

Study design

This cross-sectional descriptive study was conducted in 2023. After the description of the research, the students entered the study with informed consent, and all their information was used confidentially and without revealing their names. This study was approved by the ethics committee of Mashhad University of Medical Sciences (approval number IR.MUMS.REC.1402.124). All methods were performed according to the guidelines, regulations, and declaration of Helsinki.

Participants

The research population included all students of Varastegan Institute for Medical Sciences, including four fields nutrition science, laboratory science, health information technology, and food industry (number: 625). An available sampling method was used.

Data collection

The prevalence of social anxiety disorder among students was investigated using the self-report version of the Leibowitz Social Anxiety Scale (LSAS) questionnaire. This scale is the first clinical tool designed to assess a wide range of social situations that individuals with SAD find challenging. The questionnaire comprised 24 items, including a performance anxiety scale (13 items) and anxiety related to social situations (11 items). Each statement was rated and scored separately for anxiety and fear (0=not at all, 1=low, 2=moderate, 3=severe) and avoidance behavior (0=never, 1=rarely, 2=often, 3=always) [17]. In a study by Suryaningrum et al., the reliability of this questionnaire was assessed (Cronbach's alpha: 0.90-0.96) [18].

To enhance accessibility for students and streamline data collection, the questionnaire was developed in an online format and shared with the students through a provided link. The questionnaire included items to calculate a general social anxiety score, a performance anxiety subscale, and a social situation anxiety subscale. The overall score was computed by aggregating the scores from each subscale, enabling an assessment of each individual's level of social anxiety based on the total score. Interpretation of the total scores obtained from Leibowitz's social anxiety scale as is:

Mild social anxiety: 55-65

Moderate social anxiety: 65-80

Severe social anxiety: 80-95

Very severe social anxiety: ≥ 95

Statistical analysis

Standard deviation and mean were utilized to describe continuous variables, while percentage and frequency were employed for analyzing descriptive data. ANOVA and independent T-tests were conducted to examine the relationships between classification variables, and Pearson's correlation coefficient was used to assess the relationship

between the social anxiety variable and three other variables. A P-value <0.05 was considered statistically significant. The data analysis was performed using SPSS version 22.

RESULTS

A total of 200 participants, comprising 131 women (65%) and 69 men (35%), responded to the questionnaire, resulting in a response rate of 100%. The average age of women was 22.66 ± 2.31 years, while the average age of men was 23.28 ± 1.92 years. The majority of the students (65%) were women. The distribution of students' fields of study included nutrition science (39%), laboratory science (33%), health information technology (28%), and food industry (0%) respectively (Table 1).

Table 1: Demographic information of students participating in the study

Variable		N (%)/Mean ± SD
Age		22.87 ± 2.2
Gender	Male	69 (35)
	Female	131 (65)
Field of Study	Nutrition Sciences	78 (39)
	Laboratory Sciences	66 (33)
	Health Information Technology	56 (28)
	Food Industry	0 (0)

Based on the data presented in Table 2, a notable proportion of women (40.63%) reported never experiencing social anxiety disorder among the participants in the study.

Table 2: Prevalence of anxiety (%) field of study (undergraduate)

Gender	N (%)	Field of Study			Prevalence of anxiety (%)				
		Health Information Technology	Nutrition Sciences	Laboratory Sciences	Not at All	Low	Mild	Moderate	Very Severe
Female	131 (65)	18%	25%	22%	40.63	11.05	6.82	3.57	2.93
Male	69(35)	10%	14%	12%	21.87	5.95	3.68	1.92	1.57

The prevalence of social anxiety among the study participants is depicted in Table 3. It indicates that 37.5% of students reported experiencing some degree of social anxiety.

Table 3: The overall level of social anxiety of students participating in the study

Degrees	N	%
Mild	34	17
Average	21	10.5
Intense	11	5.5
Very Intense	9	4.5
Without Anxiety	125	62.5
Total	200	100

To explore the association between the variables under study (gender, field of study, and age) and the level of social anxiety, the Kolmogorov-Smirnov normality test was initially employed. Following the assessment of data normality, an independent t-test (T-test) was utilized to examine the correlation between gender and social anxiety. With a P-value of 0.022, a significant difference was found between gender and social anxiety, indicating that gender influenced the level of social anxiety. An analysis of variance (ANOVA) was conducted to examine the association between academic field and social anxiety, revealing a non-significant P-value of 0.588. Therefore, there was no significant difference observed between the academic fields of students about social anxiety. In other words, there was no significant association between academic fields and social anxiety. Pearson's correlation coefficient was employed to explore the relationship between age and social anxiety. The findings revealed a significant correlation between the two variables (r=-0.289, P<0.001), indicating that as age increases, the level of social anxiety decreases.

DISCUSSION

Social anxiety disorder, a mental health condition that can detrimentally affect an individual's well-being and prospects, was the focus of this study conducted among students at Varastegan Institute for Medical Sciences. The results indicated that more than 37% of students reported experiencing varying levels of social anxiety, underscoring the considerable prevalence of social anxiety disorder within this student cohort.

Suryaningrum et al. conducted a study to identify the level of social anxiety of students on 364 students, based on their findings, more than 50% of students have experienced some level of social anxiety, and it indicates that social anxiety disorder has a high prevalence among students [18]. Ahmad et al. conducted a study in 1980 to explore the prevalence of social anxiety disorder and its associated factors among students of educational sciences. The study findings revealed that the prevalence of social anxiety disorder exceeded 80% among the student population [15]. Furthermore, in a study conducted by Ablao et al. to assess the severity of social anxiety disorder and its correlates among nursing students,

they found that approximately 40% of nursing students are affected by this disorder, potentially impacting their academic performance and education [19]. The results of these three studies align with the outcomes of our research.

In this context, technology-based interventions can be utilized for their accessibility, distance reduction, and cost-effectiveness, aiming to promote self-management and empower patients [20, 21]. For example, Ghaddaripour et al. concluded that utilizing virtual reality technology to reduce children's anxiety is a safe and effective intervention [22].

In the current study, a significant difference was observed between gender and social anxiety disorder, with a higher prevalence of this disorder in women compared to men. In line with this, Al-Johani noted that the incidence of social anxiety disorder was higher among females [23]. Ejaz et al. also observed in their study that the prevalence of this anxiety was higher in women than in men [8]. In a study conducted by Alhujaili et al. to investigate the prevalence of social anxiety disorder among medical students, it was found that the prevalence of this disorder was higher in women [24].

According to the findings of our study, this disorder decreases with age. Al-Hazmi et al. conducted a study to investigate the prevalence and factors related to social anxiety disorder and its effect on academic performance among 504 medical students. The results showed that although the prevalence of this disorder was high among students, it was even higher in younger age groups [25].

One of the strengths of this study is the use of the valid Liebowitz Social Anxiety Scale (LSAS) questionnaire to assess the prevalence of social anxiety disorder among students. However, this study was limited to undergraduate students in four specific fields at the university, which restricts the generalizability of the results. Additionally, the study only included participants who were willing to take part, potentially excluding individuals with social anxiety disorder who may have chosen not to participate. Despite these constraints, the study yielded valuable findings that may be beneficial for individuals living with social anxiety disorder.

CONCLUSION

The results of this survey indicate a relatively high prevalence of social anxiety disorder among students. Given the importance of early prediction and treatment of mental disorders, it is recommended that universities and educational institutions identify and provide treatment for individuals with social anxiety disorder.

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AUTHOR'S CONTRIBUTION

MH: Acquisition, analysis, and interpretation of data, and drafting the work; MA: Design of the work, revising it critically for important intellectual content; KG: Drafting the work, revising it critically for important intellectual content; AK: Drafting the work, revising it critically for important intellectual content; MMA: Acquisition, analysis, and interpretation of data, and drafting the work; AEH: Acquisition, analysis, and interpretation of data, and drafting the work; MRMH: Design of the work, revising it critically for important intellectual content.

All authors contributed to the literature review, design, data collection, drafting the manuscript, read and approved the final manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest regarding the publication of this study.

ETHICAL APPROVAL

All participants voluntarily participated in this research and were orally informed of the confidentiality of their data. Verbal informed consent was obtained from all the participants before each interview. This study was approved by the ethics committee of Mashhad University of Medical Sciences (IR.MUMS.REC.1402.124).

FINANCIAL DISCLOSURE

No financial interests related to the material of this manuscript have been declared.

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