

Social Anxiety Disorder Among Medical Students at King Abdulaziz University in Rabigh, Saudi Arabia

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Abstract

Background and aims: Social anxiety disorder is documented to have a huge prevalence among young adults and college students, and multiple research references the higher occurrence in medical students. This study is aimed to assess the prevalence of social anxiety disorder among the medical students at King Abdulaziz University- Rabigh branch and its associated risk factors.

Methods: This cross-sectional study was conducted on 218 students aged between 18 and 26, which was managed by sending an online questionnaire that included participants' demographic information and the Liebowitz Social Anxiety Scale (LSAS).

Results: Regarding participants, 52.8% of them are aged between 21 and 23, and most of them (54.6%) were males. About one-third of the students who participated (29.4%) had a marked social anxiety disorder, and only 6.4% of the students were found to have mild to no symptoms. Social anxiety disorder was found to increase in severity in females, younger students, and students with less satisfaction with their weight and appearance.

Conclusion: Social anxiety disorder is found to be significantly common among the participating medical students and correlated positively with multiple relevant factors, showing the effort needed for earlier detection of social anxiety disorder to manage it accordingly.

Keywords: medical students, social anxiety disease, mental health, Rabigh, Saudi Arabia

Introduction

Social anxiety disorder is characterized by a constant fear of embarrassment and humiliation in social situations in which an individual feels as if they are being observed by others, in addition to the fear that they will show symptoms of anxiety in front of others and then be rejected by them. Accordingly, social situations are either tolerated with intense fear or avoided completely (1).

Anxiety disorders are the most common mental disorders in adolescence with a global prevalence that ranges from 15% to over 30%. Furthermore, social anxiety disorder is the commonest anxiety disorder; approximately 9% of adolescents met the criteria for any social phobia in their lifetime. Of these adolescents, 55.8% were affected with the generalized subtype and 44.2% exhibited non-generalized social phobia, compared to the adult state where this prevalence is between 10% and 20%. Furthermore, studies have shown that anxiety disorders with the highest burden are found in both males and females, adolescents and young adults (2,3).

Multiple studies have indicated that social anxiety is a prevalent disorder among university students (5,6,7). A study from Sweden has examined the prevalence of social phobia and its subgroups in a university student population. The point prevalence of social phobia among Swedish university students was 16.1%, comparable with 15.6% previously reported for the general population (5).

A study from Turkey discussed the prevalence of social phobia, and the sociodemographic variables, substance use patterns, and comorbid psychiatric disorders associated with it. The impact of social phobia on quality of life, academic achievement in university students, and identity formation was also examined. They found 20.9% of the participants had social phobia during the previous year and 21.7% had a social phobia for a lifetime. In total, 74.6% of those who had a social phobia during the previous year and 76.5% of those who had a social phobia for their whole lives also had a specific social phobia (6).

A study that was done in Brazil discussed the prevalence of social phobia and the academic impact of this disorder in a large sample of Brazilian college students. The final result of this study showed that the prevalence of social phobia among university students was 11.6% (7).

In a study that finds out the prevalence and determinations of social anxiety disorder among 404 medical undergraduate students of a Medical College in East Delhi, data was collected using a Social Interaction Anxiety Scale (SIAS), and the result found that 5.95% of the study participants had a social anxiety disorder (8).

A study that evaluated medical students of either gender from first to final year attending Allama Iqbal Medical College in Pakistan, concluded that females have a greater tendency for fear and avoidance as compared to males, and students from urban backgrounds have a greater tendency for fear and avoidance resulting in social anxiety disorder, based on the results of 150 included students (9).

In a study conducted in Malaysia on the prevalence of social anxiety problems and potential risk factors that may be associated with the disorder among medical students, the result showed that 56% of the medical students scored >19 in the Social Phobia Inventory (SPIN) suggesting that they had a social anxiety problem (10).

In general, the reported rates of social anxiety disorder in Saudi Arabia vary widely between studies. Previously published studies on social anxiety disorder in Saudi Arabia in undergraduate students showed the following: a study from Taif female university determined the prevalence of social anxiety disorder as 16.3%. Most of the affected students had a moderate degree of the disorder in 43.5% of cases (11). Another study was conducted at Taif university, but the target population was medical students in their clinical years. The result found that 29.3% of the medical students in the clinical years were diagnosed with social anxiety disorder. The students who reported often parental criticism reported the highest rate of social anxiety disorder (43.3%) whereas those who reported no parental criticism showed the lowest rate (19.8%) (12).

The study by the faculty of Medicine at Jazan University assessed the prevalence, severity, disability, and quality of life of social anxiety disorder among undergraduate students. The most commonly reported feared situations in the target sample were acting, performing, or giving a talk in front of an audience followed by taking a test, and the most commonly avoided situations were blushing in front of people followed by having to give speeches; and they found that social anxiety disorder is associated with impairment in the area of work, social life, and family life. The results of this study of 476 students showed that 25.8% were screened positive for social anxiety disorder and 10.5% had severe to very severe symptoms of social anxiety disorder (13).

Another study on medical students at Taibah University in Medina city aimed to assess the prevalence of social anxiety disorder and its associated factors and its effect on the performance of medical students. The study included 504 medical students. The result found that social anxiety disorder was relatively high among medical students and was correlated negatively with academic performance (14). The Clark and Wells (15) model foretold that social anxiety is maintained through a negative feedback loop, consisting of poor self-expectations, anticipatory anxiety, and cognitive impairment. Poor performance and reinforcing negative self-beliefs may be positively interrupted through social and clinical interventions tailored to improve personal confidence, self-awareness, and social skills. Based on this, we think students with social anxiety should engage more in public speaking and group interaction to develop confidence and skills in public speaking and anxiety-management (16). Based on diagnostic interview data from National Comorbidity Survey Replication (NCS-R), an estimated 12.1% of U.S. adults have experienced a social anxiety disorder at some time in their lives.

Data from the Saudi national mental health survey showed a high prevalence of social phobia in Saudi Arabia which is about 5.6% (4). Still, there is a gap in the literature and

a lack of studies assessing this health problem in Saudi Arabia. This makes it mandatory to study social phobia prevalence among medical students at King Abdulaziz University (Rabigh branch).

This study aimed to determine the prevalence and risk factors of social anxiety disorder among medical students at King Abdulaziz University in Rabigh, Saudi Arabia.

Subjects and Methods

Study design, setting, and time frame:

A cross-sectional study was done at King Abdulaziz University in Rabigh, Saudi Arabia from June to August 2022.

Study participants:

The inclusion criteria were all medical students registered at King Abdulaziz University, Faculty of Medicine in Rabigh of Saudi nationality of both genders. The exclusion criteria were non-medical students, non – Saudi students, and those from other universities.

Sample size:

With a 95% confidence level and 5% margin of error and with using Raosoft online (17) sample size calculator, a sample size of 212 participants was the minimum allowed sample.

Data collection:

A pre-designed questionnaire was distributed through an online link and sent to all medical students through class group leaders. The links directed the participants to the consent form and respondents were not able to proceed with the survey unless they agree. The questionnaire included two sections, the first included items about participants' demographic data and the second included the Liebowitz Social Anxiety Scale (LSAS) [Fear or Anxiety] and [Avoidance] (18).

The Liebowitz Social Anxiety Scale (LSAS) is widely used to measure the scale of social anxiety. It has been used in studies of pharmacotherapy of social anxiety and cognitive behavioral group treatment for social anxiety (19,20). The LSAS comprises 24 items that measure fear, and avoidance separately for 24 social situations over the past week. Participants were classified according to the scale score into having no, or mild social anxiety disorder with a score ranging from (0-49), moderate social anxiety disorder (50-69), marked social anxiety disorder (70-89), severe social anxiety disorder (90-109) and very severe social anxiety disorder (≥ 110) (19,20).

Ethical considerations:

Ethical approval for the study was obtained from the research ethics committee at King Abdulaziz University.

Data analysis:

Data were analyzed statistically using (SPSS) version 26. (Armonk, NY: IBM Corp.). For testing different relationships between variables and qualitative data, which were expressed in numbers and percentages, we used the Chi-squared test (χ^2). A p-value of less than 0.05 was considered statistically significant.

Results

(Table 1) shows that from the 218 (total medical students), 52.8% of the participants had an age that ranged from 21-23 years, 54.6% were males and 40.4% had a monthly income > 15000 SR. 18.3% of the participants were in either second, third or the fourth academic year.

(Table 2) shows that only nine participants (4.1%) had psychological disorders, six (66.7%) of them, had depression, and three (33.3%) of them had anxiety. Only 5.5% had chronic diseases. Most of the participants (52.8%, 82.6%, and 56.9%) were satisfied with their weight, facial appearance, and body image, respectively. About 18% had a history of physical or sexual abuse and 20.2% had a family history of anxiety disorders. Only 14.7% tried to access mental health services and 39.9% knew how to access mental health services when they needed help. Only fourteen participants (6.4%) had no or mild social anxiety disorder, while 204 (93.6%) had several grades of a social anxiety disorder (Figure 1).

(Table 3) demonstrates that participants with an age range from 21-23 years, females, and those with 7000-15000 SR monthly income had a significantly higher percentage of those who suffered from very severe social anxiety disorder ($p < 0.05$). On the other hand, a non-significant relationship was found between the level of social anxiety disorders and participants' academic year ($p > 0.05$).

(Table 4) demonstrated that participants who had chronic illnesses had a higher percentage of those who suffered from marked social anxiety disorder, this finding was not statistically significant ($p > 0.05$). At the same time, participants who had no satisfaction with weight or facial appearance and who did not know how to access mental health services when needed help had a significantly higher percentage of those who suffered from very severe social anxiety disorder ($p < 0.05$).

Table 1. Distribution of studied participants according to their demographic characters and academic year (No.=218)

Variable	No. (%)
Age groups (years)	
• 18-20	44 (20.2)
• 21-23	115 (52.8)
• 24-26	59 (27.1)
Gender	
• Female	99 (45.4)
• Male	119 (54.6)
Monthly income (SR)	
• Less than 3000	18 (8.3)
• 3000-5000	18 (8.3)
• 5001-7000	25 (11.5)
• 7001-15000	69 (31.7)
• More than 15000	88 (40.4)
Academic year	
• 2nd	40 (18.3)
• 3rd	40 (18.3)
• 4th	40 (18.3)
• 5th	35 (16.1)
• 6th	33 (15.1)
• Intern	30 (13.8)

Table 2: Distribution of studied participants according to medical history, satisfaction with appearance, and access to mental health services (No.=218)

Variable	No. (%)
Psychological disorders	
• No	209 (95.9)
• Yes	9 (4.1)
If yes, specify: (No.:9)	
• Depression'	6 (66.7)
• Anxiety	3 (33.3)
Chronic illness	
• No	206 (94.5)
• Yes	12 (5.5)
Satisfaction with weight	
• No	103 (47.2)
• Yes	115 (52.8)
Satisfaction with facial appearance	
• No	38 (17.4)
• Yes	180 (82.6)
Satisfaction with body image	
• No	94 (43.1)
• Yes	124 (56.9)
History of physical or sexual abuse	
• No	178 (81.7)
• Yes	40 (18.3)
Family history of anxiety disorders	
• No	174 (79.8)
• Yes	44 (20.2)
Tried to access mental health services	
• No	186 (85.3)
• Yes	32 (14.7)
Know how to access mental health services when need help	
• No	131 (60.1)
• Yes	87 (39.9)

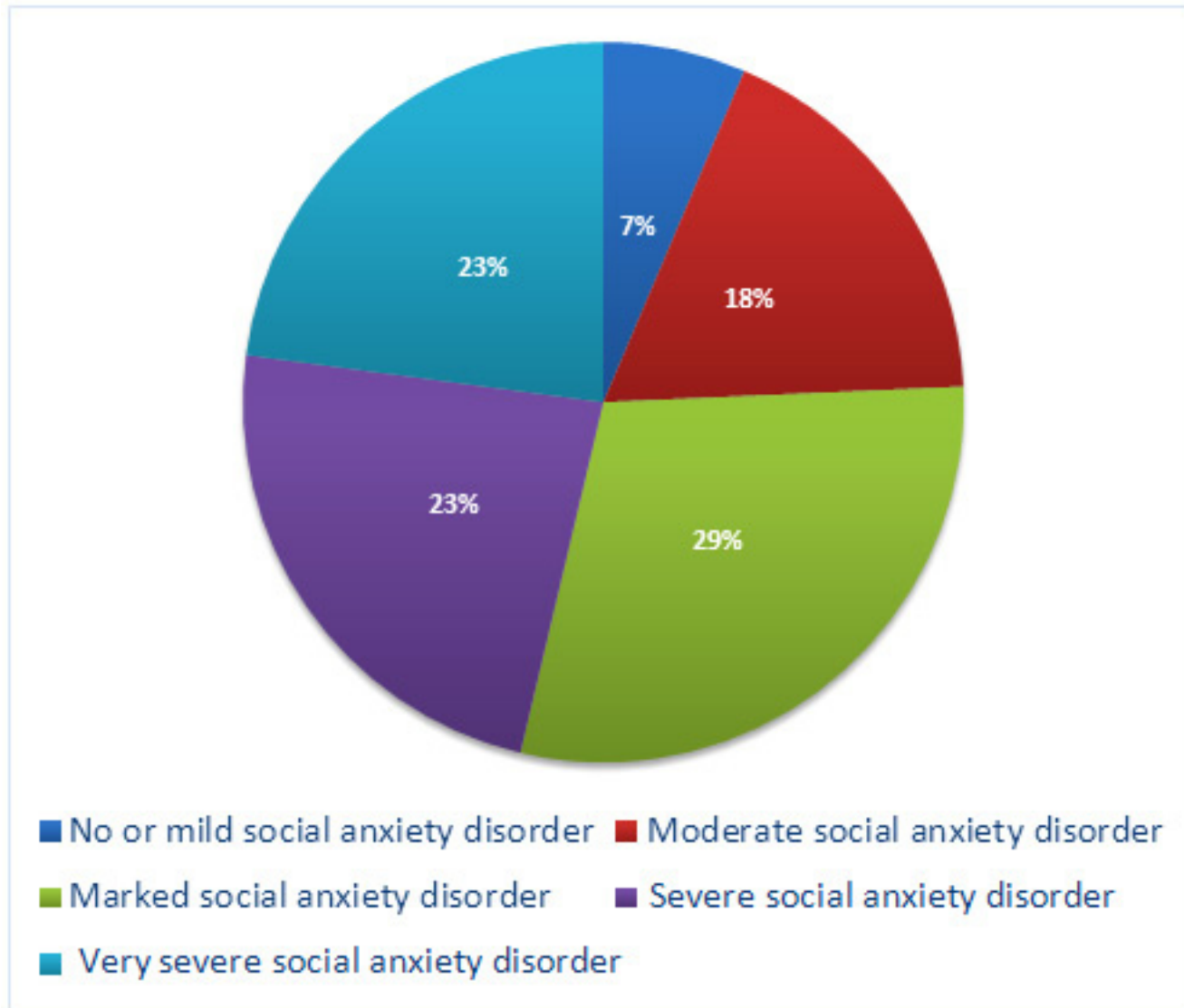
Figure 1: Distribution of studied participants according to the level of social anxiety disorder

Table 3. Relationship between the social anxiety disorder levels with participants' demographic characters, and academic year (No.=218)

Variable	Social anxiety disorder levels					Chi-square	P. value
	No or mild No. (%)	Moderate No. (%)	Marked No. (%)	Severe No. (%)	Very severe No. (%)		
Age groups (years)							
18-20	5 (11.4)	5 (11.4)	20 (45.5)	5 (11.4)	9 (20.5)	18.18	0.02*
21-23	7 (6.1)	24 (20.9)	24 (20.9)	28 (24.3)	32 (27.8)		
24-26	2 (3.4)	10 (16.9)	20 (33.9)	18 (30.5)	9 (15.3)		
Gender							
Female	8 (8.1)	22 (22.2)	16 (16.2)	21 (21.2)	32 (32.3)	20.77	0.00*
Male	6 (5)	17 (14.3)	48 (40.3)	30 (25.2)	18 (15.1)		
Monthly income (SR)							
Less than 3000						32.26	0.00*
3000-5000	0 (0.0)	0 (0.0)	9 (50)	6 (33.3)	3 (16.7)		
5001-7000	1 (5.6)	4 (22.2)	5 (27.8)	4 (22.2)	4 (22.2)		
7001-15000	6 (24)	2 (8)	5 (20)	8 (32)	4 (16)		
More than 15000	3 (4.3)	9 (13)	24 (34.8)	15 (21.7)	18 (26.1)		
	4 (4.5)	24 (27.3)	21 (23.9)	18 (20.5)	21 (23.9)		
Academic year							
2nd	5 (12.5)	3 (7.5)	13 (32.5)	8 (20)	11 (27.5)	28.19	0.10
3rd	1 (2.5)	5 (12.5)	16 (40)	7 (17.5)	11 (27.5)		
4th	3 (7.5)	10 (25)	7 (17.5)	7 (17.5)	13 (32.5)		
5th	3 (8.6)	11 (31.4)	7 (20)	8 (22.9)	6 (17.1)		
6th	0 (0.0)	5 (15.2)	12 (36.4)	12 (36.4)	4 (12.1)		
Intern	2 (6.7)	5 (16.7)	9 (30)	9 (30)	5 (16.7)		

* Means the P value <0.05 is statistically significant

Table 4. Relationship between level of social anxiety disorders and psychological & chronic diseases history, satisfaction with weight, facial appearance, body image, and access to mental health services (No.:218)

Variable	Social anxiety disorder					Chi-square	P.value
	No or mild No. (%)	Moderate No. (%)	Marked No. (%)	Severe No. (%)	Very severe No. (%)		
Psychological disorders							
No	13 (6.2)	36 (17.2)	62 (29.7)	49 (23.4)	49 (23.4)	2.31	0.67
Yes	1 (11.1)	3 (33.3)	2 (22.2)	2 (22.2)	1 (11.1)		
Chronic illness							
No	13 (6.3)	38 (18.4)	59 (28.6)	49 (23.8)	47 (22.8)	1.64	0.80
Yes	1 (8.3)	1 (8.3)	5 (41.7)	2 (16.7)	3 (25)		
Satisfaction with weight							
No	1 (1)	20 (19.4)	29 (28.2)	25 (24.3)	28 (27.2)	10.98	0.02*
Yes	13 (11.3)	19 (16.5)	35 (30.4)	26 (22.6)	22 (19.1)		
Satisfaction with facial appearance							
No	2 (5.3)	2 (5.3)	5 (13.2)	11 (28.9)	18 (47.4)	20.89	0.00*
Yes	12 (6.7)	37 (20.6)	59 (32.8)	40 (22.2)	32 (17.8)		
Satisfaction with body image							
No	1 (1.1)	18 (19.1)	27 (28.7)	23 (24.5)	25 (26.6)	8.6	0.07
Yes	13 (10.5)	21 (16.9)	37 (29.8)	28 (22.6)	25 (20.2)		
History of physical or sexual abuse							
No	13 (8.3)	36 (20.2)	49 (27.5)	42 (23.6)	38 (21.3)	6.31	0.17
Yes	1 (2.5)	3 (7.5)	15 (37.5)	9 (22.5)	12 (30)		
Family history of anxiety disorders							
No	16 (8)	31 (17.8)	53 (30.5)	39 (22.4)	37 (21.3)	5.3	0.258
Yes	0 (0.0)	8 (18.2)	11 (25)	12 (27.3)	13 (29.5)		
Tried to access mental health services							
No	14 (7.5)	34 (18.3)	52 (28)	43 (23.1)	43 (23.1)	3.42	0.49
Yes	0 (0.0)	5 (15.6)	12 (37.5)	8 (25)	7 (21.9)		
Know how to access mental health services when need help							
No	11 (8.4)	19 (14.5)	34 (26)	29 (22.1)	38 (29)	10.89	0.02*
Yes	3 (3.4)	20 (23)	30 (34.5)	22 (25.3)	12 (13.8)		

*Means the P value $p < 0.05$ is statistically significant

Discussion

This study aimed to identify the prevalence of social anxiety disorder among medical students in King Abdulaziz University- Rabigh branch and its associated factors and effect on students. The data was collected from 218 students aged from 18 years to 26 years, from the second academic year to the sixth year, with different socioeconomic levels and variable demographic backgrounds.

The prevalence results are almost evenly distributed among medical students, as it shows that the percentage of the students who reported no to mild social anxiety disorder is 6.4%, students with moderate social anxiety disorder is 17.9%, and students with marked social anxiety disorder is 29.4%, and students with severe social anxiety disorder is 23.4%, and students with very severe social anxiety disorder is 22.9%.

A recent study was conducted in Saudi Arabia which showed that the percentage of medical students with mild social anxiety disorder is 20.22%, students with moderate social anxiety disorder is 18.32%, students with severe social anxiety disorder is 8.21%, and students with very severe social anxiety disorder is 4.21% (19). Another similar study in Saudi Arabia has found the percentage of moderate social anxiety disorder among students is 19.6%, severe social anxiety disorder among students is 8.5%, and very severe social anxiety disorder among 5.0% of medical students which shows how common social anxiety disorder is among medical students (14).

Our study shows that more severe social anxiety disorder is found more among the female participants, in accordance with our presented findings. It is shown in other similar studies referring to higher social anxiety disorder severity results among female medical students as compared to male students (20,22,27), however, other studies found that males have a higher incidence of social anxiety disorder (21), while some studies showed no marked difference between genders (14).

Regarding age-divided groups, we found that students aged between 21 and 23 have a significantly higher number of severe social anxiety disorder, which could be attributed to the fact that the fourth academic year which is within this range of age, is practically the period that they start their clinical years and contact with patients, their families, and supervising professors and doctors, as the fourth academic year shows more severe social anxiety disorder results within our current study too. However, the occurrence of social anxiety disorder gradually decreases in severity and quantity in older students as they progress through higher academic years. This can be explained by the fact that more senior students and house officers gain more experience about the medical field, which is consistent with the findings of multiple studies that show decreased percentage of social anxiety disorder among older students (14,20).

An unexpected finding of our study is that students with higher income are shown to have more severe social anxiety disorder, which can be due to the probability of students with higher income having higher expectations and therefore being pressured by their limited academic accomplishments, yet the study provides no consistent finding to support this claim. On the contrary, another similar study in Taibah University showed students with higher income are less likely to have social anxiety disorder (14).

One interesting finding is that there is an unexpectedly low association between students with previous psychological disorders and students with social anxiety disorder, which could be referred to the lack of access to mental health facilities and services among students, and the lack of mental health awareness among young adults in Saudi Arabia, as it's shown in this study conducted in Jazan University, undergraduate students mostly have an intermediate mental health literacy (23).

Our study has found a relationship between dissatisfaction with weight and body image and severe social anxiety disorder, which are two different factors as the body image category could include certain scars or deformities and not only overweight or an underweight appearance. However, they both have the same outcome. These results could be explained by multiple factors; it could be that a student already having social anxiety disorder develops the habit of overeating as a way to cope with the resulting stress and thus gains more weight which is common in anxiety patients (26), and also that students in both categories are more vulnerable to bullying and having lower levels of self-esteem and are more susceptible to social pressure. These results are mirrored by multiple studies that support an association between dissatisfaction with weight and social anxiety disorder (11,24,25). There was an insignificant finding that there was a weak correlation between dissatisfaction with facial appearance and social anxiety disorder.

Another interesting finding is the negative correlation between the history of anxiety in the family and social anxiety disorder among students in the study, which was not surprising due to the wide range of stigma against psychological cases in Saudi Arabia and the high probability of not telling a family member of a current psychological diagnosis as mentioned by this research (28), and it shows more than half of the patients with a mental disorder try to hide their illness.

The current study has also found that students who reported having access to mental health services had lower severity of social anxiety disorder compared to other students. This can be attributed to specific barriers, one of them being "low perceived need" for mental health services, or in other cases they perceive the need to access mental health services, but barriers could be related to either attitudinal factors (e.g., believing they can overcome their condition alone) or structural factors (e.g., inability to access mental health services or lack of financial freedom), which points

to the necessity of awareness of mental health services among students and faculty (29).

In conclusion, we have collectively found that the prevalence of social anxiety disorder among medical students of King Abdulaziz University-Rabigh branch is relatively high. It was positively associated with age in a major way, and academic year. It was also negatively associated with the diagnosis of psychological disorders, and it was positively associated with satisfaction with body image and weight, and positively associated with their lack of access to mental health services.

We acknowledge certain limitations in our study; one of them is using self-reported questionnaires, which cannot always be depended on in the matters of verifications of minute details, and could certainly provide a small percentage of bias to the study, and we had a conveniently small source of students, since The Medical College in King Abdulaziz University- Rabigh branch is a new and growing college, and the cross-sectional design of the questionnaire could provide more limited detection of a possible relationship between our study variables to a certain degree.

Declaration of Interest:

The authors declare no conflict of interest.

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