

# Social Anxiety Disorder amongst University Students in the UAE

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## Abstract

**Objectives:** The aim of this study is to assess the prevalence, impact and associating factors of Social Anxiety Disorder (SAD) amongst University students in the UAE.

**Methods:** A cross sectional study was conducted amongst 352 undergraduate students from year 1-3 in Gulf medical University and City university college Ajman chosen using a convenience sampling method. Social anxiety was assessed using a self-administered questionnaire which included socio-demographics, general questions on age of onset, impact and duration and the Leibowitz Social Anxiety Scale (LSAS). The data was assessed using SPSS version 25 in form of tables, figures and texts. Associations between factors and Social anxiety was assessed using chi-squared and logistic regression analysis.

**Results:** Amongst the 352 students who participated, 24.5% self-reported social anxiety. The study reported mild anxiety (22.2%), Moderate (16.5%), marked (20.7%) and severe and very severe (17.1%). The study established students fear mostly participation related questions, it suggests the most feared situation was acting, performing and giving a talk in front of an audience. The proportion of participants with Social Anxiety Disorder is higher among those who have younger age of onset. A statistically significant association was seen between Social anxiety and age with students 20 and above having the highest severity of Social Anxiety Disorder (44.8%). 81.5% of participants self-reported Social Anxiety Disorder having an effect on their daily activities while almost half of the participants (49.5%) self-reported Social Anxiety Disorder having effect on achievement.

**Conclusion:** Females, Single and Eastern Mediterranean students have a higher prevalence rate of social anxiety compared to their counterparts. Social Anxiety Disorder can have a debilitating impact on a person's quality of social, emotional and educational life. Since our study showed a high prevalence of Social Anxiety Disorder, efforts should be made to continuously increase awareness and encourage students affected to speak up about it.

**Keywords:** Social Anxiety Disorder (SAD) • Leibowitz Social Anxiety Scale (LSAS) • Impact • Prevalence • Association • Achievement • Adolescence

## Introduction

SAD is classified as a psychological disease in which a person is under constant fear of their social surroundings [1]. Social Anxiety can be presented as physical symptoms while performing tasks such as playing a

sport or giving a speech. SAD can start from an early age in people who show signs of being shy. Research done in the UK in 2009 and in Sweden in 2007 found a 10-16% prevalence of SAD in students [2, 3].

Social Anxiety is said to be a common mental health condition. Social Anxiety ranks as the third most common mental health disorder after depression and alcohol abuse [4]. Various studies from different researchers across the globe have suggested a similar high prevalence of this condition in people. A study by Essau et al in the USA included adolescents aged 12-17 found that almost 50% of the participants had a social fear [5]. The most common fears in a school environment have been found to pertain to reading in a class or doing speech and drama performances [6].

While looking at the widespread prevalence, certain features such as gender, age, low income and lower education, Severe Family Dysfunction, Quality of Life, Coping, depressive symptoms and confidence had been associated with Social Anxiety among Youth [7]. A study showed that Social anxiety is more prevalent in females than males [8]. The authors explain that by the social freedom given more to males to speak about their feelings and emotions.

Social anxiety can adversely affect the health and social relation of youth. Persons with SAD have higher alcohol abuse rates than other individuals with other anxiety disorders. Studies have found persons with SAD to be functionally impaired in the areas of education, employment, and social relationships and to have poorer health-related quality of life. Social Anxiety can interfere with daily life, adolescents with Social anxiety tend to have fewer friends, and are more likely to avoid extracurricular activities. Van Ameringen et al. stated that dropping out of school early and underachievement are of particular concern among children and 47 adolescents with social anxiety [9].

The onset of Social Anxiety is usually during late adolescence or early adulthood. However, some researchers argue that the found age of social anxiety is during childhood and progresses and worsens throughout the years only to be diagnosed during late adolescence [10]. Failure to find treatment during adolescents could result in the anxiety progressing till adulthood. Person having SAD is often negatively stigmatized by other people. Due to this, teenagers with this condition often have an unwillingness to talk about it and therefore goes unnoticed and untreated [11].

Different researchers use various methods when it comes to its measurement. Henceforth making interpretations of figures fragile in determining the prevalence. Leibowitz social anxiety Scale-Self- Report (LSAS-SR) is an easy to use 24-item questionnaire and it is one of the most common tools to assess the severity of the symptoms of SAD. Social Phobia Inventory (SPIN) is a 17- item questionnaire that commonly used for screening and measuring generalised SAD [12,13]. Mini-Social Phobia Inventory (Mini-SPIN) is an abbreviated version of the SPIN which was by Jonathan Davidson at Duke University [13]. It is a 3-item questionnaire and despite how brief the mini-SPIN is, it can accurately differentiate between people that have and do not have SAD. Other tools have been developed and proved to be helpful in detecting or finding positive symptoms in people with SAD [13, 14].

The present study aims to investigate the prevalence, impact and associating factors of SAD amongst University students in the UAE. We expect that this study would create awareness about SAD in the UAE as it is becoming an increasingly common problem. Also, the study would encourage young people to speak up about social anxiety to reduce the number of cases that go untreated and reduce stigma.

## Material and methods

### Research design, study settings and duration of study

Cross sectional study design was used. Research was carried out in Gulf Medical University Ajman and City University College Ajman. The research was done in a period of nine months.

### Study population

University students who are enrolled in Gulf Medical University and City University College of Ajman between years one to three. Inclusion criteria- students of both genders, 18 and above, all nationalities who agreed to participate and sign an informed consent.

### Sampling technique

Convenience sampling method was used.

### Sample Size Calculation

Our sample included 352 students. A sample of 302 participants was estimated for the purpose of this study. The sample size was calculated using the formula for a cross-sectional study,  $n = [(z^2 * p * q)] / d^2$ . Sample size was calculated using the following parameters: p=prevalence of Knowledge 56% based on a similar study done in Malaysia, Z=1.96 confidence interval, d=standard error  $\leq 5\%$  [15].

### Study instrument & validation procedure Leibowitz social anxiety scale

The LSAS-SR it is a 24 - item questionnaire, 11 relating to how to deal with social situations and 13 relating to performance anxiety. LSAS is used to measure the severity of SAD by assessing the way it plays a role in different life situations [12]. No objection was obtained from author. A score of 0-29 suggest no social anxiety, 30-49 mild social anxiety, 50-64 moderate social anxiety, 65-79 marked social anxiety, 80-94 severe social anxiety and > 95 very severe social anxiety [16].

We have also used another questionnaire that included information on socio-demography, possible impact of SAD on achievement and daily activities, self-reported SAD, age of onset and receiving treatment. The questionnaire was validated by three experts in the field and the suggestions were incorporated.

### Ethical Issues

Protocol was sent to the IRB committee. Informed consent was obtained from the participants. The data will be accessible only to the Community department faculty members, statistician, and ethics committee members.

### Methodology

Initial approval was obtained from the sites of data collection and copyright holders; then an approval from IRB. A pilot study was done to check for feasibility. Questionnaire was distributed to eligible participants in the two sites of data collection. We checked that all consent forms were signed, and all questionnaires were answered.

### Data analysis.

The SPSS software version 24 was used to analyse the data. Data was presented in the form of tables, figures and texts. Chi square test and logistic regression was used to assess the association with and risk of SAD respectively.

## Results

From literature J.of Antimicrobial Agents (2021) Spike S.A.R.S.-COV-2 All 352 questionnaire given out were completed. Sociodemographic characteristics of participants showed the number of females' participants, 215 (61.1%) is higher than the number of males' participants, 137 (38.9%). The percentage of participants below the age of 20 years (53.7%) is greater than participants aged 20 and above (43.6%). The highest percentage of participants are from the Eastern Mediterranean region, 185 (52.6%) then South East Asia (100,28.4%), Africa (38,10.8%) and the least participants were from America + Europe + Western Pacific, 29 (8.2%). 96 % of

participants were single while the remaining 4% are married. 66.5 % of participants are from GMU and 33.5% of participants are from CUCA. There were more medical students, 227 (64.5%) who participated in the study than non-medical students, 125 (35.5%). The highest percentage of participants are 1st year students (39.8%) while the lowest percentage are 3rd year students (37.2%), 2nd year students were 114 (32.4%).

### Awareness and source of awareness of Social Anxiety

Amongst the 352 participants, 77.8% (273) are aware about social anxiety and 22.2% (78) are not aware about SAD. (Figure 1) showed most of the participants (71.2%) became aware of SAD through social media and were least aware through workshops (4.9%).

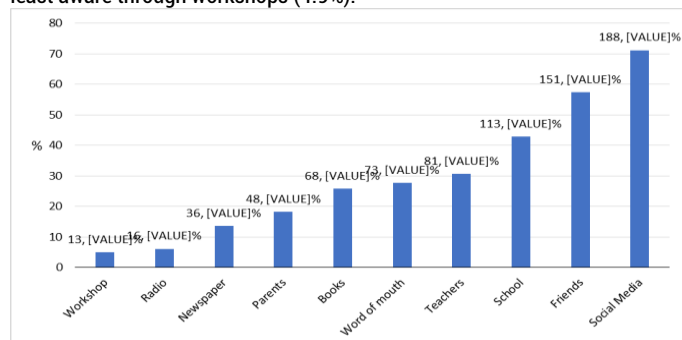


Figure 1. Distribution of the participants by source of awareness about social anxiety.

### Prevalence of social anxiety

In our study, amongst participants who are aware of what social anxiety is, 75.5% of them self-reported having social anxiety and 24.5% self-reported no social anxiety. Mini-SPIN scale was answered by all 352 participants and results on (Figure 2) showed 39.2% of participants had social anxiety while 60.8% didn't have social anxiety using a cut off score of 6. "Being embarrassed or looking stupid are amongst my worst fears" was the question which was most extremely bothered the participants.

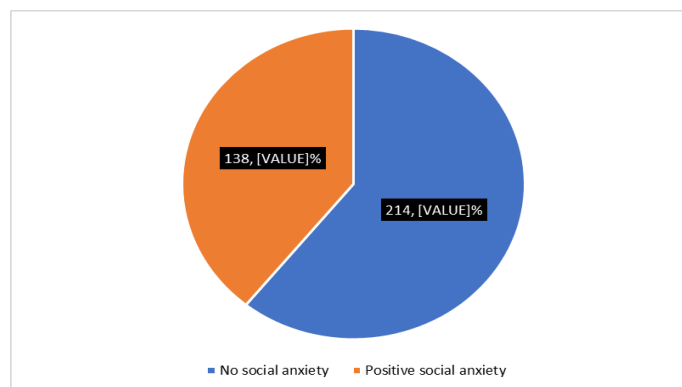


Figure 2: Distribution of participants by Social anxiety according to mini spin

### Association of Social anxiety by socio - demographic factors

(Table 1) shows the association between the selected socio-demographic factors and severity of SAD. Results show that females have a higher percentage of SAD (41.9%) than males (35.0%), association is statistically insignificant. There was a higher proportion of participants below 20 years old having positive social anxiety than those 20 and above. The least percentage of participants that have social anxiety is from the America, Europe and Western Pacific region (37.9%), P value is not significant. Higher proportion of single participants show more social anxiety than married participants. P value is not significant. There was a statistically significant difference between participants in GMU who have a higher percentage of SAD (43.2%) than those in CUCA. Higher percentages of medical students have social anxiety (42.7%) than non-medical students (32.8%). P value is not significant. 2nd year participants have shown to have higher percentage (48.2%) of social anxiety than those in the other years, the association is statistically significant.

Table 1. Association between Social Anxiety and Sociodemographic factors

Variable	Sub category	Positive SA		No SA		P
		No	%	No.	%	
Gender	Male	48	35	89	65	0.201
	Female	90	41.9	125	58.1	
Age	< 20 years	79	41.8	110	58.2	0.283
	≥ 20 years	59	36.2	104	63.8	
Four Regions	Africa	19	50	19	50	0.213
	America + Europe + Western Pacific	11	37.9	18	62.1	
	South East Asia	44	44	56	56	
	Eastern Mediterranean	64	34.6	121	65.4	
Marital Status	Single	136	40.2	202	59.8	0.051
	Married	2	14.3	12	85.7	
University Name	Gulf Medical University (GMU)	101	43.2	133	56.8	0.032
	City University College Ajman (CUCA)	37	31.4	81	68.6	
Program Group	Medical students	97	42.7	130	57.3	0.068
	Non - medical students	41	32.8	84	67.2	
Study Year	1 <sup>st</sup> Year	46	32.9	94	67.1	0.042
	2 <sup>nd</sup> Year	55	48.2	59	51.8	
	3 <sup>rd</sup> Year	37	37.8	61	62.2	

(Table 2) observed participants in GMU had 62% higher risk of SAD than those at CUCA while adjusted with other factors, result is statistically significant. Medical students were also observed to have 43% higher risk of SAD than non-medical students. Participants in both 2nd and 3rd year have an 81% and 12 % higher risk respectively than those in first year while adjusted with the other factors. Result for 2nd year student is statistically significant and they show the highest level of result compared to 1st and 3rd year students.

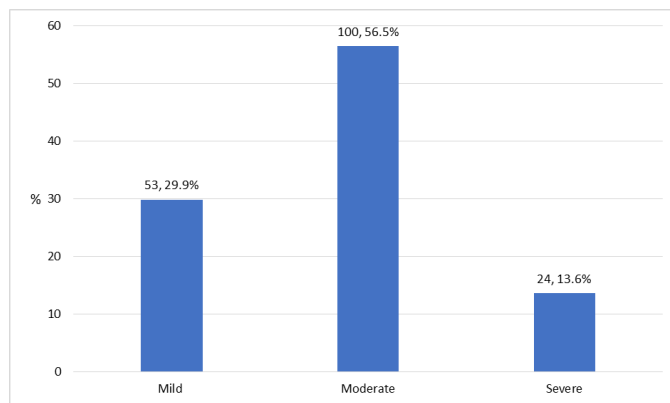
**Table 2.** Determinants of Social anxiety by binary and multiple logistic regression analysis

Variable	Group	No.	Crude			Adjusted		
			OR	CI	P	OR	CI	P
University	CUCA	118	1	--	--	1	--	--
	GMU	234	1.66	1.04 - 2.65	0.033	1.62	1.01 - 2.62	0.048
Program	Non-medical	125	1	--	--	1	--	--
	Medical	227	1.53	0.97 - 2.41	0.069	1.43	0.58 - 2.02	0.091
Study year	1	140	1	--	--	1	--	--
	2	114	1.91	1.15 - 3.17	0.013	1.81	1.08 - 3.03	0.023
	3	98	1.24	0.72 - 2.13	0.435	1.12	0.65 - 1.94	0.69

**Impact of social anxiety (On daily activity and achievement)**

From our research, 81.5% of participants self-reported SAD having an effect on their daily activities and 18.5% self-reported no effect on daily activities. (Figure 3) shows that amongst these participants, 13.6% self-reported severe effect on daily activity, 56.5% reported moderate and 29.9% reported

mild effect on daily activity. In regards to effect on achievement, almost half of the participants (49.5%) self-reported SAD effect on achievement and the other 50.5% self-reported no effect on achievement.



**Figure 3.** Distribution of the participants self-reporting social anxiety by severity of effect of social anxiety on daily activities.

(Table 3) shows that the participants that self-reported SAD having an effect on daily activity and achievement have the highest percentage of social anxiety, 50.6% and 59.2% respectively. Highest percentage of participants having positive social anxiety are those with severe severity of effect on daily activities (87.5%). All results are statistically significant.

**Table 3.** Association between Social Anxiety and the effect on daily activity and achievement

Variable	Sub category	No social anxiety		Positive social anxiety		p
		No	%	No	%	
Severity of effect on daily activities Grp	Mild	33	62.3	20	37.7	<0.0001
	Moderate	53	53	47	47	
	Severe	3	12.5	21	87.5	
Effect of Social anxiety on achievement	Yes	40	40.8	58	59.2	0.001
	No	65	65	35	35	
Effect of Social anxiety on daily activities	Yes	85	49.4	87	50.6	0.025
	No	27	69.2	12	30.8	

**Treatment and coping strategies**

In the present study, out of the 207 participants who self-reported SAD, only 39.6 % (84) are getting/have received treatment while the 60.4% (128) haven't. Our results show that amongst those that got treatment, the most common treatment used by 29.3% of participants is therapy. Others treatment modalities included sports, entertainment and family/friends support which was used by 26.3% of participants. 25.7% participants use yoga as a strategy, 18.3% are part of in-person/online support groups, 17.1% attend stress management classes and the least amount of participants (12%) used medications as a form of treatment.

**Discussion**

**Awareness of SAD**

In our study, the number of participants aware of social anxiety had a percentage of 77.8% compared to those who were not aware of social anxiety at 22.2%. A study was conducted by Hakami et al in 2017 in KSA stated SAD being more known in countries such as Sweden and Indian undergraduate students with rates of 16.1% and 19.5% respectively and less known in KSA [13]. The percentage of students aware in our study in the UAE is higher than that of the 3 countries mentioned.

## Prevalence Mini Spin

According to our research, the percentage of people with positive social anxiety according to the Mini-Spin was 39.2%. A study conducted by Connor et al in the year 2001 in the United States of America measured generalized social anxiety in 263 individuals using a mini spin; his results found that the 12 month prevalence rate for social anxiety was 8.2% [17].

## Social anxiety and socio-demographic factors

In our study it was shown using Mini-SPIN that, 41.9 % of females compared to 35.0 % of males have social anxiety. This finding is consistent with studies from the US that showed higher proportion of females compared to males having social anxiety; the study was done by Xiao et al found a total prevalence of 8.35% in females and 7.62% in males [18]. This is also similar to the estimation of national comorbidity survey-replication which has a prevalence of 12.1% in females and 7.1% in males [19].

This study conducted shows the highest prevalence in regards to regions is the African region with 50%. American, Europe, Western Pacific had a low prevalence rate at 37.9% this is low compared to the other three regions. A study conducted in Ethiopia stated that the level of social anxiety is higher in low income countries compared to high income countries with a magnitude of 3.5% to 21%. A study conducted in Ethiopia with a number of 386 students found a prevalence of 27.5%. This high prevalence is also similar with other low income country studies such as Nigeria with a prevalence of 9.4%, Sweden 21% Iran 21% and Delhi 10.3% [20].

40.2 % of single participants showed positive social anxiety and married showed just 14.3 %. It is also reported that unmarried individuals experience more social anxiety, although we had a very less amount of married participants, this is supported by a study done by Wong et al in 2012 that showed higher levels of social anxiety in people who have never been married before. 55.7% of the participants were single, 35.3% of the participants were married and 9% were divorced or widowed [21].

In present study, Medical students had a higher level of social anxiety at 42.7% while non-medical students had 32.8%. Social anxiety has the ability to negatively affect the development and performance of medical students. A study conducted by Quak in the year 2019 studied the global prevalence of social anxiety amongst medical students. They analyzed a number of sixty-nine studies comprising 40,348 medical students. They found a total prevalence of 33.8% amongst medical students world-wide [22].

Using the Mini-SPIN in our study, binary and multiple regression analysis showed 43% more risk for medical students than non-medical students, although the result is statistically insignificant, a recent study done in 2016 in India states that medical students have an increased risk compared to non-medical students as they have an increasing tendency to get afraid of situations in medical field [23].

In our study using Mini-SPIN, binary and multiple logistic regression analysis showed second year students having 81% (1.81 times) more risk than first year students. This result is not supported by a recent study done in India in 2016 and a study done in Ethiopia in 2019 which both show the highest risk of social anxiety in 2nd year students than in 1st year students [23, 24]. In the study in Ethiopia it was shown that risk in 1st year students is 5.5 times more than risk in students in the 2nd, 3rd, 4th and 5th year [24].

## Impact of social anxiety on daily activity and on achievement

In our study, students were asked about how social anxiety affects their daily activities in which 81.5% answered yes while 18.5% answered no. They were also asked about how social anxiety affects their achievement in life, 49.5% answered yes while 50.5% answered no. A study done by Russell in 2008 and a similar study done by Topham in 2009 showed that self-selecting participants reported frequent anxiety in learning situations that involved interacting with students and staff [3,25].

They described intense anxiety and embarrassment, physical symptoms (e.g. sweating, blushing), self-consciousness, fear of criticism, cognitive and behavioural impairment (e.g. forgetting, stuttering) and a tendency to dwell on past performance. Students habitually avoided public situations such as lectures, seminars and project groups by being absent or through non-

participation [23, 25]. In the study done by Alkhatami et al in 2014 found that those with SAD showed a significant reduction in all areas of quality of life, including physical and psychological health, social relationships, and environment [26].

## Treatment and coping strategies

It was observed that more than half (60.4%) of the participants suffering from SAD have not undergone any treatment. Similar findings have been seen in a study conducted in Canada in 2018 and a conducted in US in 2005 where both the studies show that the treatment adequacy is reduced in patients due to low detection rates of SAD [27, 28].

This study found that therapy was the most used coping mechanism in combating social anxiety amongst persons who go through it which is a form of cognitive behavioral therapy. Similar results were seen in a study conducted in Sweden in 2017 which found that cognitive therapy is better than medications [29].

## Conclusion

This study confirms the high prevalence of SAD among university students and its substantial impact on them, it provides a connection between prior studies and our study. It can also serve as a model for similar investigations in various geographic or demographic groups.

## Recommendations

We recommend a national study to look at this problem in a larger and more representative sample size for university students. Provision of counselling services and special support groups for students affected by social anxiety. Recommend awareness sessions both in universities and schools to give correct information to students suffering from social anxiety to guide them for scientific possible therapies. Lastly, Orientation of healthcare providers about this commonly missed problem.

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