Pharmacophore

ISSN-2229-5402

Journal home page: http://www.pharmacophorejournal.com

PREVALENCE OF SOCIAL ANXIETY DISORDER AMONG UNDERGRADUATES AND ITS IMPACT ON ACADEMIC PERFORMANCE: NATIONWIDE CROSS-SECTIONAL STUDY

Zina Alqahtani[1], Sara Alghamdi[2], Hassan Alsahafi[3], Rahaf Almutairi[4], Shaimaa Abdulghani[3], Heba Mahboob[3], Khames Alzahrani[5*]

1. ***Department of Medicine, King Khalid University, Neurology consultant, Abha, Saudi Arabia.***
2. ***Department of Medicine, King Saud bin Abdulaziz University for Health Sciences, Jeddah, Saudi Arabia.***
3. ***Department of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia.***
4. ***Department of Medicine, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia.***
5. ***Saudi Board of Endodontic SR, King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia.***

ARTICLE INFO

Received:
28 Sep 2023
Accepted:
06 Dec 2023

Keywords: Social anxiety, Social phobia, SAD, Undergraduates, Internalizing disorders

ABSTRACT

Social anxiety disorder is a condition characterized by a marked and persistent fear of being humiliated or scrutinized by others. It is a common disorder, and it influences both career and education. This study aims to estimate the prevalence of social anxiety disorder among KSA college students, and its effect on their academic performance. This cross-sectional study was carried out by using the 17-item self-administered Social Phobia Inventory Scale (SPIN) survey to measure social anxiety. The questionnaire was distributed via web link on multiple social media websites to recruit participants. The study included 390 participants, 71.3% of them were females and 28.7% were males. 52.3% of participants were aged between 21- 25 years old. 10% of participants had very severe social anxiety, 12% had severe anxiety, 18% had moderate anxiety and 19% had mild anxiety. Regarding social engagement, 8% of participants had a low engagement level, 79% had a moderate engagement level, and 13% had a high engagement level. Social anxiety disorder was not associated with any of the sociodemographic characteristics of participants. However, there was a significance between SCEQ scores and some of the sociodemographic characteristics as age, academic year, marital status, and GPA. A noticeable percentage of undergraduates enrolled in different universities across the Kingdom had social anxiety disorder, making it a common health issue. Although the majority of it was low in severity, a sizable part was moderate, severe, or very severe.

To Cite This Article: Alqahtani Z, Alghamdi S, Alsahafi H, Almutairi R, Abdulghani Sh, Mahboob H, et al. Prevalence of Social Anxiety Disorder among Undergraduates and its Impact on Academic Performance: Nationwide Cross-sectional Study. Pharmacophore. 2023; 14(S1): e-723-8776

Introduction

The hallmark of social anxiety disorder (SAD) is a persistent concern of being embarrassed or humiliated in public. People with Social Anxiety gradually stop engaging in social interactions, resulting in severe impairments in social functioning as well as emotional, cognitive, and behavioral disabilities [1]. It is a condition characterized by anxious thoughts, stress, and physical changes like elevated blood pressure [2].

After major depression and alcoholism, SAD is the third most frequent psychiatric condition. It is also the most common anxiety disorder among all types of anxiety disorders [3]. Although not all studies have found that such conditional events are the most significant factors in the onset of SAD, the majority of people with SAD report that a single event or an ongoing social experience, which frequently centers around humiliation, rejection, and criticism, played a significant role in the

Corresponding Author: Khames Alzahrani; Saudi Board of Endodontic SR, King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia. E-mail: Dr.khames.alzahrani@gmail.com.

disorder's onset [4]. Extreme worry, fear, agitation, overly sensitive reactions, and negative thinking are all symptoms of anxiety, which is a psychological condition and an emotional and behavioral problem [5].

Globally, the prevalence of social anxiety disorder was estimated to be 4% throughout one's lifetime and 1.3 % at present. Late childhood was the first time it manifested, and new social pressures, youth, female sex, lower socioeconomic level, and performing in public were all linked with the disorder [6]. Previous research from various fields and nations has shown that anxiety and the symptoms it causes have a significant impact on student's academic performance. Additionally, according to several studies, the majority of students (75%) who attended universities and colleges for their undergraduate and graduate degrees exhibited some degree of anxiety symptoms [5].

Undergraduate students have greater rates of social anxiety than the general population [7]. Recent research has shown that greater social media use is linked to increased levels of social anxiety [8]. A local study done in Jazan revealed the prevalence rate of SAD to be 25.8% among undergraduate students [9]. Another study conducted in the Abha region showed an extremely high rate of social anxiety, almost 60%, among medical students. The study also implicated that affected students with severe symptoms had overall worse academic achievement [10]. Similar studies concerning health sciences students were also done in other countries, all showing an alarmingly increased prevalence of SAD [6, 11].

A minimal amount of research related to social anxiety disorder (SAD) prevalence among Saudi college students and its impact on academic performance has been done. It's important to note that the existing studies tend to be limited to medical students, particular regions, or even a single university. This study holds value in raising awareness for social anxiety disorder, seeing as it is a common disorder with clinical importance and a significant impact on the affected person's life in several domains. The main objective of this study is to estimate the prevalence of social anxiety disorder among Saudi college students.

Objectives

Our study aims to estimate the prevalence of SAD among college students and to assess the impact of SADs on academic performance in Saudi Arabia.

Materials and Methods

Study Design

This observational cross-sectional study was conducted from November 2022 to July 2023, focusing on university students in Saudi Arabia.

Study Setting: Participants, Recruitment, and Sampling Procedure

This study was conducted on undergraduate students in Saudi Arabia. A convenience sampling method was applied.

Inclusion and Exclusion Criteria

The included population would be undergraduate college students who are based in Saudi Arabia and aged between 18 and 30 years. Postgraduate college students and those who are more than 30 years of age are excluded.

Sample Size

The sample size was estimated using the Qualtrics calculator with a confidence level of 95% and a 5% margin of error; a sample size of 384.

By using the following formula:

$$n = P\,(1 - P) \times Z\alpha\ 2/\ d\ 2 \text{ confidence level of } 95\%. \quad (1)$$

$$n = (1.96)2 \times 0.50 \times 0.50/\ (0.05)\ 2 = 384 \quad (2)$$

N: sample size
Z: confidence level (1- a) = 1.96
P: estimated knowledge
Q: (1 – 0.50) = 0.50
D: maximum acceptable error = 0.05

Method for Data Collection and Instrument (Data Collection Technique and Tools)

An online survey was distributed via web link on various social media websites to recruit participants. The instrument that was used to collect data includes a series of demographic questions (age, gender, marital status), and multiple questions regarding academics such as the academic year, GPA, university, and major. To measure social phobia, a 17-item self-rating scale called the Social Phobia Inventory (SPIN) scale was applied, with each point scored on a five-degree Likert scale (0=No, 1=Low, 2=Somewhat, 3=High, 4=Very Much). A score of 21-30 indicates mild symptoms, 31-40 (moderate), 41-50 (severe), and greater than 50 (very severe). Handelsman *et al*. student course engagement questionnaire (SCEQ) was adapted to fit the context of this study [12].

"Participation/interaction engagement" and "performance engagement" are the only factors that were tested. A total of 45 points was awarded, divided into two sections in which 30 points were attributed to the interaction engagement section, and 15 points were attributed to the performance engagement section. A score over 39 was considered to have a high engagement level, between 20-39 was considered to have a moderate engagement level, and below 20 was considered to have a low engagement level.

Analysis and Entry Method

After collecting the data by using "Microsoft Office Excel Software" (2019), the Statistical Package for Social Sciences (SPSS) Version 24 was used for statistical analysis. Data management and descriptive statistics (number, percentages, mean [standard deviation] or median [interquartile range]) were performed according to the normality of the data.

Results and Discussion

The research encompassed a cohort of 390 participants, with gender distribution indicating 71.3% females and 28.7% males. Age groups were categorized as follows: 52.3% of participants fell within the 21-25 years age range, 39% were aged 18-20 years, and 8.7% were between 26-30 years old. In terms of academic progression, 26.4% of the participants were in their fifth academic year, while 19.2% and 19% were respectively in their sixth and fourth academic years. Marital status revealed that 87.9% of the studied sample were single, while 11.8% were married. Approximately one-quarter of the participants were from the Riyadh region. Furthermore, 44.1% of the participants pursued studies in health sciences. Notably, one-third of the participants achieved a GPA of 'A', and an equivalent proportion obtained the highest grade, 'A+', as detailed in **Table 1**.

Table 1. Sociodemographic characteristics of participants (n=390)

Parameter		No.	%
Age	18-20	152	39.0
	21-25	204	52.3
	26-30	34	8.7
Gender	Male	112	28.7
	Female	278	71.3
Academic year	First-year	4	1.0
	Second year	71	18.2
	Third year	63	16.2
	Fourth-year	74	19.0
	Fifth year	103	26.4
	Sixth year	75	19.2
Marital status	Married	46	11.8
	Single	343	87.9
	Divorced	1	.3
City	Abha	5	1.3
	Al Khobar	19	4.9
	Arar	1	.3
	Dammam	8	2.1
	Jazan	37	9.5
	Jeddah	67	17.2
	Mecca	8	2.1
	Medina	50	12.8
	Other	46	11.8
	Riyadh	90	23.1
	Ahsaa	11	2.8
	Baha	19	4.9
	Taif	3	.8
	Qatif	7	1.8
	Buridah	9	2.3
	Tabuk	2	.5
	Hail	5	1.3
	Khamis Mshait	2	.5

	Yanbu	1	.3
University	Al Baha University	17	4.4
	Al-Imam Mohammad Ibn Saud Islamic University	9	2.3
	Effat University	4	1.0
	Jazan University	37	9.5
	King Abdulaziz University	43	11.0
	King Fahd University of Petroleum and Minerals	15	3.8
	King Faisal University	10	2.6
	King Khalid University	6	1.5
	King Saud bin Abdulaziz University for Health Sciences - Al-Ahsa	3	.8
	King Saud bin Abdulaziz University for Health Sciences - Jeddah	13	3.3
	King Saud bin Abdulaziz University for Health Sciences - Riyadh	19	4.9
	King Saud University	35	9.0
	Other	71	18.2
	Princess Nora bint Abdulrahman University	15	3.8
	Qassim University	21	5.4
	Taibah University	47	12.1
	Taif University	2	.5
	Umm Al-Qura University	7	1.8
	University of Dammam	3	.8
	University of Ha'il	6	1.5
	University of Jeddah	5	1.3
	University of Tabuk	2	.5
Specialization	Journalism	2	.5
	Fine arts and literature	18	4.6
	Law	35	9.0
	Business management and finance	20	5.1
	Engineering and sciences	52	13.3
	Fine arts and design	7	1.8
	Health Sciences	172	44.1
	Other	84	21.5
GPA	A	118	30.3
	A+	111	28.5
	B	48	12.3
	B+	89	22.8
	C	6	1.5
	C+	18	4.6

Figure 1 illustrates the distribution of the SPIN score for social anxiety levels among the participants, revealing that 10% exhibited a condition classified as "very severe social anxiety," 12% experienced "severe anxiety," 18% displayed "moderate anxiety," and 19% demonstrated "mild anxiety."

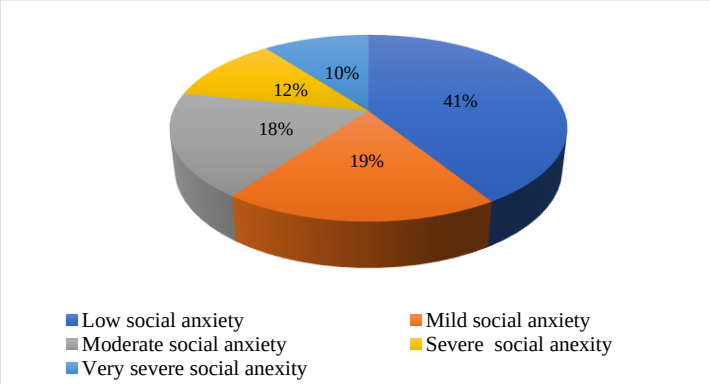

Figure 1. SPIN score for social anxiety

In **Table 2**, the data highlights various aspects of social anxiety among participants. Specifically, 4.6% of participants expressed a high level of fear towards individuals in positions of authority. Furthermore, 19.5% reported avoiding activities out of concern for potential embarrassment, while 14.4% concurred that they tend to avoid situations where they are the focal point. Additionally, 23.3% indicated an aversion to public speaking, and a significant portion, 28.2%, admitted that the fear of embarrassment or appearing foolish ranked among their worst fears.

Table 2. Determinants of anxiety disorder among study participants (n=390)

Parameter	No	Low	Somewhat	High	Very Much
I am afraid of people in authority	148 37.9%	99 25.4%	91 23.3%	34 8.7%	18 4.6%
I am bothered by blushing in front of people	114 29.2%	83 21.3%	84 21.5%	48 12.3%	61 15.6%
Parties and social events scare me	149 38.2%	92 23.6%	78 20.0%	49 12.6%	22 5.6%
I avoid talking to people I don't know	98 25.1%	93 23.8%	90 23.1%	67 17.2%	42 10.8%
Being criticized scares me a lot	89 22.8%	93 23.8%	87 22.3%	67 17.2%	54 13.8%
Fear of embarrassment causes me to avoid doing things or speaking	68 17.4%	82 21.0%	89 22.8%	75 19.2%	76 19.5%
Sweating in front of people causes me distress	128 32.8%	63 16.2%	77 19.7%	52 13.3%	70 17.9%
I avoid going to parties	145 37.2%	87 22.3%	85 21.8%	42 10.8%	31 7.9%
I avoid activities in which I am the center of attention	128 32.8%	78 20.0%	87 22.3%	41 10.5%	56 14.4%
Talking to strangers scares me	161 41.3%	100 25.6%	62 15.9%	45 11.5%	22 5.6%
I avoid having to give speeches	96 24.6%	77 19.7%	67 17.2%	59 15.1%	91 23.3%
I would do anything to avoid being criticized	110 28.2%	84 21.5%	94 24.1%	55 14.1%	47 12.1%
Heart palpitations bother me when I am around people	134 34.4%	84 21.5%	75 19.2%	46 11.8%	51 13.1%
I am afraid of doing things when people might be watching	94 24.1%	78 20.0%	99 25.4%	60 15.4%	59 15.1%
Being embarrassed or looking stupid is among my worst fears	63 16.2%	66 16.9%	90 23.1%	61 15.6%	110 28.2%
I avoid speaking to anyone in authority	168 43.1%	102 26.2%	73 18.7%	29 7.4%	18 4.6%
Trembling or shaking in front of others is distressing to me	115 29.5%	71 18.2%	78 20.0%	57 14.6%	69 17.7%

Regarding the social engagement level depicted in **Table 3**, the data reveals that 24.1% of participants actively engage in small group discussions or contribute to discussion boards. A substantial portion, 47.2%, consistently attend classes or regularly access class webpages. A smaller percentage, 15.6%, reported finding enjoyment in the classroom setting. Additionally, 39% of participants expressed their willingness to assist their fellow students.

Table 3. Determinants of anxiety disorder among study participants (n=390)

Parameter	No	Low	Somewhat	High	Very Much
Raising my hand or answering questions in class	56 14.4%	73 18.7%	102 26.2%	74 19.0%	85 21.8%5
Participating actively in small group or discussion board discussions	41 10.5%	50 12.8%	117 30.0%	88 22.6%	94 24.1%
Asking questions when I don't understand the instructor	75 19.2%	84 21.5%	97 24.9%	70 17.9%	64 16.4%
Coming to class every day or logging on to the class webpage regularly	28 7.2%	41 10.5%	58 14.9%	79 20.3%	184 47.2%
Going to the professor's office hours or contacting him/her to review assignments or tests, or to ask questions	132 33.8%	79 20.3%	85 21.8%	53 13.6%	41 10.5%

Getting a good grade	19 4.9%	34 8.7%	94 24.1%	111 28.5%	132 33.8%
Doing well on the tests	24 6.2%	34 8.7%	113 29.0%	103 26.4%	116 29.7%
Having fun in class	68 17.4%	65 16.7%	116 29.7%	80 20.5%	61 15.6%
Helping fellow students	17 4.4%	29 7.4%	86 22.1%	106 27.2%	152 39.0%

Figure 2 provides an overview of the social engagement levels among participants. It indicates that 8% of participants exhibited a low level of engagement, while a significant majority, 79%, demonstrated a moderate level of engagement. Furthermore, 13% of participants displayed a high level of engagement in social activities.

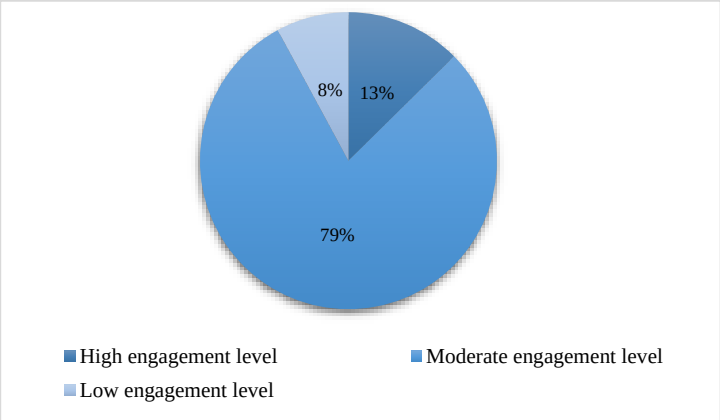

Figure 2. SCEQ score for social engagement.

As illustrated in **Table 4**, social anxiety disorder was not associated with any of the sociodemographic characteristics of participants.

Table 4. Association between Social anxiety with sociodemographic characters of participants (n=390)

		SPIN scores						
		Very severe social anxiety	**Severe social anxiety**	**Moderate social anxiety**	**Mild social anxiety**	**Low social anxiety**	**Total (N=390)**	**P value**
Gender	Male	5	11	25	21	50	112	**0.111**
		1.3%	2.8%	6.4%	5.4%	12.8%	28.7%	
	Female	35	34	46	53	110	278	
		9.0%	8.7%	11.8%	13.6%	28.2%	71.3%	
University academic year	First-year	2	0	0	1	1	4	**0.228**
		0.5%	0.0%	0.0%	0.3%	0.3%	1.0%	
	Second year	9	8	15	14	25	71	
		2.3%	2.1%	3.8%	3.6%	6.4%	18.2%	
	Third year	6	10	9	6	32	63	
		1.5%	2.6%	2.3%	1.5%	8.2%	16.2%	
	Fourth-year	5	10	13	16	30	74	
		1.3%	2.6%	3.3%	4.1%	7.7%	19.0%	
	Fifth year	8	9	15	25	46	103	
		2.1%	2.3%	3.8%	6.4%	11.8%	26.4%	
	Sixth year	10	8	19	12	26	75	
		2.6%	2.1%	4.9%	3.1%	6.7%	19.2%	
Age	18- 20	19	18	23	32	60	152	**0.314**
		4.9%	4.6%	5.9%	8.2%	15.4%	39.0%	
	21- 25	20	22	39	40	83	204	
		5.1%	5.6%	10.0%	10.3%	21.3%	52.3%	

	26- 30	1	5	9	2	17	34	
		0.3%	1.3%	2.3%	0.5%	4.4%	8.7%	
Marital status	Married	1	4	10	10	21	46	
		0.3%	1.0%	2.6%	2.6%	5.4%	11.8%	
	Single	38	41	61	64	139	343	**0.109**
		9.7%	10.5%	15.6%	16.4%	35.6%	87.9%	
	Divorce	1	0	0	0	0	1	
		0.3%	0.0%	0.0%	0.0%	0.0%	0.3%	
Specialization	Communication and journalism	0	0	0	2	0	2	
		0.0%	0.0%	0.0%	0.5%	0.0%	0.5%	
	Arts, humanities, and social sciences	1	3	3	2	9	18	
		0.3%	0.8%	0.8%	0.5%	2.3%	4.6%	
	Law	1	7	8	5	14	35	
		0.3%	1.8%	2.1%	1.3%	3.6%	9.0%	
	Business management and finance	4	0	4	4	8	20	
		1.0%	0.0%	1.0%	1.0%	2.1%	5.1%	
	Engineering and sciences	5	3	9	10	25	52	**0.676**
		1.3%	0.8%	2.3%	2.6%	6.4%	13.3%	
	Fine arts and design	1	1	1	2	2	7	
		0.3%	0.3%	0.3%	0.5%	0.5%	1.8%	
	Health Sciences	21	19	31	32	69	172	
		5.4%	4.9%	7.9%	8.2%	17.7%	44.1%	
	Other	7	12	15	17	33	84	
		1.8%	3.1%	3.8%	4.4%	8.5%	21.5%	
GBA	A	12	10	18	23	55	118	
		3.1%	2.6%	4.6%	5.9%	14.1%	30.3%	
	A+	11	14	20	19	47	111	
		2.8%	3.6%	5.1%	4.9%	12.1%	28.5%	
	B	3	7	13	9	16	48	
		0.8%	1.8%	3.3%	2.3%	4.1%	12.3%	
	B+	11	8	14	21	35	89	**0.637**
		2.8%	2.1%	3.6%	5.4%	9.0%	22.8%	
	C	1	2	1	1	1	6	
		0.3%	0.5%	0.3%	0.3%	0.3%	1.5%	
	C+	2	4	5	1	6	18	
		0.5%	1.0%	1.3%	0.3%	1.5%	4.6%	

The analysis conducted in **Table 5** revealed statistically significant relationships between SCEQ (Social Engagement Questionnaire) scores and several sociodemographic characteristics. Specifically, age (p-value=0.022), academic year (p-value=0.018), marital status (p-value=0.001), and GPA (p-value=0.001) were found to have significant associations with SCEQ scores, indicating that these factors played a discernible role in influencing social engagement levels among the participants.

Table 5. Association between Social engagement level with sociodemographic characters of participants (n=390).

		SCEQ Scores			**Total (N=390)**	**P value**
		High engagement level	**Moderate engagement level**	**Low engagement level**		
Gender	Male	15	92	5	112	
		3.8%	23.6%	1.3%	28.7%	**0.269**
	Female	34	218	26	278	
		8.7%	55.9%	6.7%	71.3%	
U n	First-year	0	4	0	4	**0.018**

		0.0%	1.0%	0.0%	1.0%	
	Second year	9	61	1	71	
		2.3%	15.6%	0.3%	18.2%	
	Third year	3	57	3	63	
		0.8%	14.6%	0.8%	16.2%	
	Fourth-year	13	52	9	74	
		3.3%	13.3%	2.3%	19.0%	
	Fifth year	14	83	6	103	
		3.6%	21.3%	1.5%	26.4%	
	Sixth year	10	53	12	75	
		2.6%	13.6%	3.1%	19.2%	
Age	18- 20	16	132	4	152	**0.022**
		4.1%	33.8%	1.0%	39.0%	
	21- 25	28	153	23	204	
		7.2%	39.2%	5.9%	52.3%	
	26- 30	5	25	4	34	
		1.3%	6.4%	1.0%	8.7%	
Marital status	Married	9	30	7	46	**0.001**
		2.3%	7.7%	1.8%	11.8%	
	Single	40	280	23	343	
		10.3%	71.8%	5.9%	87.9%	
	Divorced	0	0	1	1	
		0.0%	0.0%	0.3%	0.3%	
Specialization	Communication and journalism	1	0	1	2	**0.237**
		0.3%	0.0%	0.3%	0.5%	
	Arts, humanities, and social sciences	1	13	4	18	
		0.3%	3.3%	1.0%	4.6%	
	Law	4	30	1	35	
		1.0%	7.7%	0.3%	9.0%	
	Business management and finance	2	17	1	20	
		0.5%	4.4%	0.3%	5.1%	
	Engineering and sciences	7	42	3	52	
		1.8%	10.8%	0.8%	13.3%	
	Fine arts and design	0	6	1	7	
		0.0%	1.5%	0.3%	1.8%	
	Health Sciences	22	136	14	172	
		5.6%	34.9%	3.6%	44.1%	
	Other	12	66	6	84	
		3.1%	16.9%	1.5%	21.5%	
GBA	A	19	93	6	118	**0.001**
		4.9%	23.8%	1.5%	30.3%	
	A+	17	89	5	111	
		4.4%	22.8%	1.3%	28.5%	
	B	3	43	2	48	
		0.8%	11.0%	0.5%	12.3%	
	B+	10	70	9	89	
		2.6%	17.9%	2.3%	22.8%	
	C	0	4	2	6	
		0.0%	1.0%	0.5%	1.5%	
	C+	0	11	7	18	
		0.0%	2.8%	1.8%	4.6%	

The start of social anxiety disorder, a frequent psychiatric condition, occurs around adolescence. Research has reported a variety of prevalence rates for SAD. This diversity can be related to the many evaluation techniques employed, the various diagnostic thresholds established, the overlap of symptoms with other diseases, the challenges in distinguishing shyness or poor social skills from other disorders, and the various study populations [13, 14].

Because this is regarded as a sensitive time in a person's life, the mental health of undergraduate university students is a topic of attention around the world. This is crucial for the development of systems and therapies that can lessen or avoid mental health problems. An increasing corpus of research indicates that social anxiety disorder is very common among adolescents [15]. However, most studies that were done were in Western nations. This study aims to estimate the prevalence of SAD among college students in Saudi Arabia and to assess the impact of SADs on academic performance.

Based on the diagnostic criteria, estimates of the frequency of SAD in the general population ranged from 1.9% to 20.4% in numerous research from various cultures and nations [16]. In our study, the SAD prevalence was (10.0%) very severe SAD, (12.0%) severe social anxiety, and (18%) moderate SAD. Inconsistent with a study conducted in Jazan which showed a high rate of SAD among participants as high as (25.8%), where the rate among university students was up of (47.2%) who had mild symptoms, (42.3%) who had moderate to noticeable symptoms, and (10.5%) who had severe to extremely severe SAD symptoms [9], another study in Saudi Arabia showed that overall prevalence of SAD is (29.8%) [17]. Similarly, a study among medical students at Taibah University in Medina city showed that (18.8%) of the students had mild social anxiety disorder, (19.6%) had moderate social anxiety disorder, (13.5%) had severe to very severe social anxiety disorder [18], another Saudi Arabian study discovered that 19.1% of medical students had extremely severe SAD and 19.8% had severe SAD [19]. A study conducted in Ethiopia revealed that the prevalence of SAD is (32.8%) [20], similar to another study conducted at the Ethiopian University of Gondar which showed a high SAD rate of (31.2%) [6], another study in India showed a rate of (30.5%) [21] and a study in Australia with a rate of (30.0%) [22].

A few of the most typical SPIN components in our study included avoiding activities in which the participants are the center of attention, (10.5%) rated their avoidance as high and (14.4%) as very high, (8.7%) rated their fear of people in authority as high, and (4.6%), (12.3%) said that they are highly bothered by blushing in front of people and (15.6%) rated very high, (10.8%) highly avoided going to parties and (7.9%) very high, (17.2%) were highly scared of being criticized and (13.8%) were very high. Inconsistent with a study conducted among female students at Taif University which showed that among the participants, some avoided going to parties (65.9%), flushing in public (65.9%), being the center of attention (76.3%), being afraid of people in authority (71.8%), and being afraid of criticism (75.7%) [23]. Similar to our findings, a study in Iraq among university students revealed that among the common problems experienced by participants were avoiding activities where they were the focus of attention (75.7%), being bothered by flushing in front of people (74%), avoiding going to parties (63.5%) and being afraid of criticism with a rate of (79.4%) [24].

The SCEQ scores were somewhat better than SPIN scores, as (79%) showed a moderate engagement level, (13%) had a high engagement level, and only (8%) showed a low engagement level. In our study, the SPIN scores showed no significance with any of the sociodemographic characteristics of the participants. That was inconsistent with other studies which illustrated that there was a difference in SAD results between males and females, as some studies indicated that the prevalence among females was higher than males [19], and others found that SAD was higher among males [10]. A study conducted in Saudi Arabia showed that SAD was higher among younger students than older students [18]. Similarly, another study in South Africa showed that SAD was more prevalent among females [25]. Similar to our study, a study by Stewart *et al*. showed that there was no gender difference or correlation with the prevalence of SAD [26].

However, our study revealed that there was a significance between SCEQ scores and some of the sociodemographic characteristics such as age, academic year, marital status, and GPA. So according to our findings, the academic performance and GPA were not affected by SPIN (avoidance), but it was affected by SCEQ scores (engagement), as the higher the engagement the higher the GPA was seen among the students.

To the best of our knowledge, this study is the first one to be conducted in Saudi Arabia that looked into SAD and its impact on academic performance in a sizable sample of undergraduate students from across the entire kingdom. There are, however, some restrictions. First off, because the study was cross-sectional in design, it was unable to determine the timing and causality of various components. Secondly, the scarcity of similar studies limited us from comparing our results and moving on with the results. Furthermore, despite the high response rate, it was not possible to rule out the possibility of response bias. The SPIN technique used in the study is only a screening tool, and high-risk cases require a clinical interview as a second diagnostic step.

Conclusion

A noticeable percentage of undergraduates enrolled in different universities across the Kingdom had social anxiety disorder, making it a common health issue. Although the majority of it was low in severity, a sizable part was moderate, severe, or very severe.

To lessen the total burden associated with this psychiatric condition in the undergraduate population, our findings urge early detection and care, and more studies should be conducted in this specific area to embrace the true numbers of the prevalence of SAD among undergraduates.

Acknowledgments: None

Conflict of interest: None

Financial support: None

Ethics statement: Ethical approval was obtained from the Research Ethical Committee at the Faculty of Medicine at King Khalid University, Saudi Arabia (Ethical approval number: 2023-501). Participants were informed that their participation is voluntary and filling the questionnaire indicates their consent to participate.

Written consent was obtained from all individual participants included in the study.

References

1. Leigh E, Clark DM. Understanding Social Anxiety Disorder in Adolescents and Improving Treatment Outcomes: Applying the Cognitive Model of Clark and Wells (1995). Clin Child Fam Psychol Rev. 2018;21(3):388-414.
2. Al-Ruwaili MA, Al-Turki YA, Alardan A. Social anxiety and its effect on self-efficacy among family medicine residents in Riyadh. J Family Med Prim Care. 2018;7(2):389-93.
3. Vilaplana-Pérez A, Pérez-Vigil A, Sidorchuk A, Brander G, Isomura K, Hesselmark E, et al. Much more than just shyness: The impact of social anxiety disorder on educational performance across the lifespan. Psychol Med. 2021;51(5):861-9.
4. Bjornsson AS, Hardarson JP, Valdimarsdottir AG, Gudmundsdottir K, Tryggvadottir A, Thorarinsdottir K, et al. Social trauma and its association with posttraumatic stress disorder and social anxiety disorder. J Anxiety Disord. 2020;72(September 2019):102228. doi:10.1016/j.janxdis.2020.102228
5. Samreen S, Siddiqui NA, Mothana RA. Prevalence of anxiety and associated factors among pharmacy students in Saudi Arabia: A cross-sectional study. Biomed Res Int. 2020;2020.
6. Desalegn GT, Getinet W, Tadie G. The prevalence and correlates of social phobia among undergraduate health science students in Gondar, Gondar Ethiopia. BMC Res Notes. 2019;12(1):1-6. doi:10.1186/s13104-019-4482-y
7. Lau HM, Sim KS, Chew QH, Sim K. Quality of Life and Clinical Correlates in Adults with Social Phobia: A Scoping Review. Clin Pract Epidemiol Ment Health. 2021;17(1):224-34.
8. Jefferies P, Ungar M. Social anxiety in young people: A prevalence study in seven countries. PLoS One. 2020;15(9 September):1-18. doi:10.1371/journal.pone.0239133
9. Hakami RM, Mahfouz MS, Adawi AM, Mahha AJ, Athathi AJ, Daghreeri HH, et al. Social anxiety disorder and its impact on undergraduate students at Jazan University, Saudi Arabia. Ment Illn. 2018;9(2):1-15.
10. Elhadad AA, Alzaala MA, Alghamdi RS, Asiri SA, Algarni AA, Elthabet MM. Social phobia among Saudi medical students. Middle East Curr Psychiatry. 2017;24(2):68-71.
11. Suleiman HA, Elamin SA, Alobeid AA, Altaib WE. Prevalence of Social Anxiety Disorder among Medical Students from Six Medical Schools in Khartoum State. Sudan J Med Sci. 2021;16(2):223-32.
12. Handelsman MM, Briggs WL, Sullivan N, Towler A. A Measure of College Student Course Engagement. J Educ Res. 2005;98(3):184-92.
13. Beesdo K, Knappe S, Pine DS. Anxiety and Anxiety Disorders in Children and Adolescents: Developmental Issues and Implications for DSM-V. Psychiatr Clin North Am. 2009;32(3):483. Available from: /pmc/articles/PMC3018839/
14. Shah P, Kataria L. Social phobia and its impact in Indian university students. Internet J Ment Health. 2009;6(2):1-8.
15. Bayram N, Bilgel N. The prevalence and socio-demographic correlations of depression, anxiety, and stress among a group of university students. Soc Psychiatry Psychiatr Epidemiol. 2008;43(8):667-72.
16. Furmark T, Tillfors M, Everz PO, Marteinsdottir I, Gefvert O, Fredrikson M. Social phobia in the general population: prevalence and sociodemographic profile. Soc Psychiatry Psychiatr Epidemiol. 1999;34(8):416-24. Available from: https://pubmed.ncbi.nlm.nih.gov/10501711/
17. Bin Jarallah HN, Al Omari FK, Altowairiqi IF, Al Saadi KK. Magnitude of Social Anxiety Disorder, and Impact on Quality of Life among Medical Students, Taif City-KSA. J Psychol Clin Psychiatry. 2017;7(Issue 5):14-26. Available from: https://medcraveonline.com/JPCPY/JPCPY-07-00454.php
18. 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(8):4329. Available from: /pmc/articles/PMC7586509/
19. Alkhalifah AK, Alsalameh NS, Alhomaidhy MA, Alrwies NA. Prevalence of Social Phobia among Medical Students in Saudi Arabia. Egypt J Hosp Med. 2017;69(5):2412-6. Available from: https://ejhm.journals.ekb.eg/article_11958.html
20. Hajure M, Abdu Z. Social Phobia and Its Impact on Quality of Life Among Regular Undergraduate Students of Mettu University, Mettu, Ethiopia. Adolesc Health Med Ther. 2020;11:79. Available from: /pmc/articles/PMC7308132/
21. Dsouza MJ, Arun Daniel J, Muhammed Muntazeem G. Social anxiety disorder among medical students in a tertiary care hospital in Davangere, Karnataka. Int J Community Med Public Health. 2019;6(4):1434-6. Available from: https://www.ijcmph.com/index.php/ijcmph/article/view/4584

22. Wilson I. Screening for social anxiety disorder in first year university students: a pilot study. Aust Fam Physician. 2005;34(11). Available from: https://ro.uow.edu.au/medpapers/399
23. Taha AA, Aa El-Shereef E, Ismail T, Abdullah M, Ismail R, Abdullah W, et al. Social Anxiety Disorder and Its Correlates among Female Students at Taif University, Saudi Arabia. Res Psychol Behav Sci. 2017;5(2):50-6. Available from: http://pubs.sciepub.com/rpbs/5/2/3/index.html
24. Kareem MS, Al-Banna DA, Ali SK. Assessment of Social Phobia among Students of Nursing College in Hawler Medical University at Erbil City-Iraq. Kufa J Nurs Sci. 2016;6(2):200-7. Available from: https://journal.uokufa.edu.iq/index.php/kjns/article/view/2687
25. Jager P De, Suliman S, Seedat S. Role of ethnicity in social anxiety disorder: A cross-sectional survey among health science students. World J Clin Cases. 2014;2(7):265-71. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25032201
26. Stewart DW, Mandrusiak M. Social Phobia in College Students. J College Stud Psychother. 2007;22(2):65-76. Available from: https://www.tandfonline.com/doi/abs/10.1300/J035v22n02_06