

Impact of verbal abuse on social anxiety among female college students: A cross-sectional study

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Abstract. *Background and aim:* Social anxiety is defined as the feeling of intense discomfort when interacting with others. Verbal abuse is an unjust behaviour where people are exposed verbally to words that assault them and eventually affect their psychological health. This study investigates the prevalence of both social anxiety and verbal abuse among female college students. It also studies the association between verbal abuse and social anxiety. *Methods:* A cross-sectional study on 220 female college students. Liebowitz Social Anxiety Scale, and verbal abuse questionnaire were distributed to the participants. *Results:* Among the 220 participants, 26.4% had social anxiety and 61.4% showed evidence of verbal abuse. Forty percent of the verbally abused participants suffered from one form or another of social anxiety. Also, verbal abuse was found to be a significant predisposing factor for social anxiety ($P < 0.001$). *Conclusion:* There is a relatively high percentage of verbal abuse and social anxiety among female college students. Also, verbal abuse may lead to social anxiety on the long-term. Raising awareness among regarding the long-term effects of verbal abuse is a very important issue to prevent its consequences not only on the verbally abused themselves, but also on their societies.

Key words: verbal abuse, social anxiety, females, college students

Introduction

Anxiety is defined as the anticipation of future threat with feeling of muscle tension. Both history taking and clinical examination are required to establish the concrete diagnosis of all types of anxiety. However, some self-administered scales such as the Liebowitz Social Anxiety Scale (LSAS) showed good discriminant validity and sensitivity to treatment in social anxiety disorder (SAD) patients (1). SAD is a type of mental illness and behavioural disturbance that is defined as the feeling of intense discomfort when interacting with others (2). Individuals with SAD often overestimate the negative consequences of social situations and highlight social threats; therefore, they avoid

social meetings and habitual activities such as telephone calls and outdoor walks. As consequences, their interpersonal relationships, academic achievements, and occupational progress is negatively affected (3). There are many types of SAD such as performance type, generalized and generalized plus avoidant personality disorders (3). The most impairing type of SAD is the performance type which affects people in their professional lives and impairs their regular roles such as public speaking. People with the performance type of social anxiety usually do not avoid nonprofessional situations (2). The diagnostic criteria of social anxiety consists of 10 items some of which are as follows: Expressing one or more marked fear of possible exposure to scrutiny by others. Being fearful that

he/she will be negatively evaluated and judged as anxious, weak, boring, intimidating, or unlikable. Showing signs and symptoms of out-of-proportion anxiety in almost every social situation, hence the term social anxiety comes from. Expressing persistent fear and avoidance at least for the last 6 months with the absence of medical conditions or substance abuse that may attribute to the fear and avoidance. The developmental age of SAD in the United States of America ranges between 8 to 15 years with a median age of 13 (2). The onset of the disorder may be provoked by a stressful situation or after the exposure to a life changing event. SAD is expressed by younger adults more than by older adults and its detection in older people is difficult because of the presence of several factors affecting the adults' lives such as medical illnesses. Genetic and environmental factors both have a role in the pathophysiology of social anxiety. Sometimes SAD is considered a familial psychotic disorder, as there is approximately 2 to 6 times greater chance to be diagnosed with social anxiety if a first degree relative is diagnosed. Environmentally, childhood maltreatment and distress are risk factors for SAD. Also, some predisposing traits, such as behavioural inhibition, are strongly related to both genetic and environmental factors (2). Epidemiologically, the prevalence of SAD is high worldwide. It is the most common type of anxiety disorders, and the third most common type of mental disorders after both major depression disorder and alcohol dependence in the United Kingdom (UK). The lifetime prevalence of SAD in the UK is between 7% to 13% (5). In Canada, the lifetime prevalence and the 12-months prevalence of SAD are estimated to be 8.1% and 3.2% respectively (6). In addition, a recent Australian study found that the lifetime prevalence of SAD is 8.4% and its 12-months prevalence is 4.2% (7), indicating the growing number of cases of SAD worldwide and the importance of spreading awareness in that regard. Abuse, of all forms, is an unethical, inappropriate disruptive behaviour that is conducted towards others. Verbal abuse, a form of abuse, is a worldwide problem that is observed in health care settings (8). It has many different forms such as bullying, aggression, insulting, blaming, swearing, threatening, and yelling on others. Verbal abuse is recognized as an unfair and an unjust behaviour that leads to deterioration of the general

health of the victim of that abuse and increased stressful events. The victims of verbal abuse are at high risk of developing psychological and physical symptoms such as depression, anxiety, stress, headache, sleep disturbance, and many other illnesses (9). Verbal abuse also leads to both occupational consequences such as absenteeism and turnover, and performance consequences such as poor quality of care and medical errors among healthcare professionals. Hospitals, for example, are sites of challenging and stressful situations leading to interpersonal conflicts between medical staff that affects their productivity, job satisfaction, and increases their possibility of making mistakes (8). In general, workplace violence is a common widespread issue where employees who are exposed to many people tend to face greater violence compared to others with minimal contact (10). In our region, and up to our knowledge, no studies were done to investigate the relationship between verbal abuse and social anxiety among female medical students. Therefore, this study aims to assess the effect of verbal abuse, if any, on social anxiety on the long run. It also aims to estimate the prevalence of both verbal abuse and social anxiety among female medical students in Dammam, Saudi Arabia.

Methods

Design and setting

This is a cross-sectional study conducted at Imam Abdulrahman bin Faisal University (IAU), Dammam, Saudi Arabia during the years 2019-2020. The study is ethically approved by IAU institutional research board (IRB). IRB approval number IRB-UGS-2019-01-167.

Sample

The targeted population are all female medical students studying at Imam Abdulrahman bin Faisal University during the study period. The total population equal 645 including all female students who are currently studying at IAU from all years. The optimal sample size equals 241 and it was calculated by applying the formula of qualitative variables using Epi-info

assuming social anxiety prevalence of 50% among the participants, with a confidence level of 95% and a margin of error of 5%. Data were collected manually by distributing the questionnaire papers randomly among the targeted population. All participants signed an informed consent prior to answering the questionnaire.

Procedure and questionnaire

The questionnaire was translated into Arabic by a native speaker who has good knowledge of both Arabic and English languages, and then it was translated back to English by a similarly knowledgeable bilingual investigator. The validity and reliability of the questionnaire were confirmed (see below). It consisted of three parts including the biographical data and two valid scales that were designed to assess the presence and severity of both social anxiety and verbal abuse.

Liebowitz Social Anxiety Scale

The Liebowitz Social Anxiety Scale (LSAS) is a well valid and most common used instrument to screen and determine the presence of social anxiety disorder. It was developed by a psychiatrist named Liebowitz in 1987. The scale can be used in two ways; clinically as clinician-administered and as a self-reported version. Both versions showed an excellent validity, and they have been translated into Brazilian, French, Hebrew, Portuguese, Spanish, Turkish, and German. In this study the self-reported version has been translated into Arabic. The LSAS consists of 24 items used to measure the extent of fear and avoidance experienced in social situations and performance life (e.g., public speaking) (2). The investigators excluded 12 items from the questionnaire due to cultural and religious factors. Each item is scored from 0 to 3 whereas 0= Never, 1= Mild, 2= Moderate, 3= Severe. The LSAS final scoring of each participant was modified according to the modified version of this questionnaire. Each participant will be classified according to her final scoring to unlikely to have social anxiety if she scores <27, moderate social anxiety if = 27-32, marked social anxiety if = 33-40, severe social anxiety = 41-47 and very severe social anxiety for those who score >47. A pilot study used the above questionnaire and concluded that it has a good

level of validity and reliability (Cronbach's alpha= 0.85, and split half =0.68) (17).

Verbal abuse questionnaire

The verbal abuse questionnaire (VAQ) is a useful instrument in detecting the presence of verbal abuse and determining the extent of severity. The application of this scale is considered wide due to the adequate internal consistency for both parental and peer verbal abuse. It consists of 15 items that used to assess several types of verbal abuse. For each question the scoring ranges from 0 which means not at all to 8 which means every day. The participants are classifying according to their answers into highly abused, moderately abused, low abuse, and minimally verbally abused. The scoring is as follows: highly abused for those who scores >39, moderately abused for those who scores 20-39, low abuse for those who scores 7-19, and minimally verbally abused when the achieved scores are less than 7. According to previous research that used this questionnaire in their study tools, this questionnaire has been found to be valid and reliable; Cronbach's alpha correlation coefficient is 0.9 (21, 22).

Statistical analysis

The data were obtained from the participants then transferred to an excel sheet and analysed using SPSS version 24 with a statistical significance set at $p < 0.05$. The data were displayed as numbers, frequencies, mean, standard deviation, minimum and maximum. Tests of significance were measured using independent t test and chi-square test to assess the presence of an association between different variables being studied in this study as well as correlation coefficient to assess the direction of the relationship if it is present.

Results

Sample characteristics

A total of 220 students participated in this study. The age of the participants ranged between 18 and 25 years with a mean of 20.97 years. Most of the

Table 1. Socio-demographic characteristics (n=220).

Medical Level	Number
2 nd	64
3 rd	39
4 th	60
5 th	12
6 th	37
Intern	8
Marital Status	Number
Single	190
Married	28
Divorced	2
Health Status	Number
Healthy	205
Chronic disease	14
Special needs	1
Family Monthly Income (SAR)	Number
<5000	44
5000-10000	31
>10000	145

participants were single, healthy and in their 2nd and 4th years of their studies with a good economic status. The detailed biographical characteristics are shown in Table 1.

Social anxiety

Out of the 220 students who participated in this study, 58 participants (26.4%) showed evidence of anxiety. Out of those 58 who showed an evidence of anxiety, 36 participants (16.4%) showed an evidence of moderate anxiety, 14 participants showed evidence of marked anxiety (6.4%), and 8 participants (3.6%) showed evidence of severe or very severe anxiety as described in Table 2, suggesting that social anxiety is highly prevalent among female medical students. No significant difference was found in the presence of social anxiety between the participants of different economic levels ($P=0.17$), different health status ($p=0.2$), different marital status ($P=0.15$), and different levels of medical studies ($p=0.2$).

Table 2. Frequency and levels of social anxiety according to the Liebowitz social anxiety scale. (n=220).

Social Anxiety	Number	Percentage (%)
Absent	162	73.6
Moderate	36	16.4
Marked	14	6.4
Severe	7	3.2
Very Severe	1	0.4

Table 3. Frequency and levels of verbal abuse according to the verbal abuse questionnaire (n=220).

Verbal Abuse	Number	Percentage (%)
Not abused	85	38.6
Mildly abused	43	19.5
Moderately abused	32	14.5
Highly abused	60	27.4

Verbal abuse

Out of the 220 participants, 135 (61.4%) were verbally abused by either one or more of the following: A first-degree relative (father, mother, brother, or sister), the husband and/or a person of authority. Out of those 135 who showed evidence of verbal abuse, 19.5% have low level of abuse, 14.5% have moderate abuse, and 27.3% have a high level of abuse (Table 3). No significant difference was found in the presence or severity of verbal abuse among the participants of different health status ($p=0.52$) and different marital status ($P=0.5$). However, a significant difference in the presence of verbal abuse was found among the participants of different economic levels ($P=0.006$) and different levels of medical studies ($p=0.02$).

The verbally abusive subjects and their role in social anxiety

There was no significant relationship between social anxiety and the abusive subjects (Fisher's exact test). However, among the 14 participants who were verbally abused by their fathers, 8.6% expressed one form or another of social anxiety. Among the

Table 4. Verbally abusive subjects.

Abusive Subject	Number of Victims of Abuse
Father	14
Mother	1
Brother	13
Sister	2
A person of authority	4
Husband	25

13 participants who were verbally abused by their brothers, 8% expressed one form or another of social anxiety. Also, husbands were the source of abuse for 15.4% of the participants with social anxiety. From the 28 married participants, 25 were verbally abused by their husbands (11.3%). Among the first-degree relatives, fathers were the most common source of verbal abuse as shown in Table 4.

The relationship between verbal abuse and social anxiety

Verbal abuse was found to be a highly significant risk factor for social anxiety ($P < 0.001$) (Fisher's exact test). Forty percent of the verbally abused participants suffered from one form or another of social anxiety, and most of them experienced the moderate and marked form of anxiety (25.9%) and 5.9% experienced severe and very severe anxiety levels.

Discussion

Among 220 female medical students, we found that 26.4% of them have experienced some form of anxiety. Also, 61.4% of the participants answered that they have experienced verbal abuse by a first degree relative, intimate partner and/or a person of authority. In addition, among those who have been verbally abused, almost one third of them experienced some form of social anxiety. In those who have been experiencing social anxiety, 15.4% of them were verbally abused by their husband. Also, 25 out of 28 married females are victims of intimate partner violence, namely verbal abuse. Social anxiety disorder is the third most common mental disorder worldwide (11). This study

showed that almost 1/4th of the participants has experienced some form of anxiety. This is similar to a study that was conducted in Al Ahsa'a region in the Eastern Province that showed that in 511 female participants, social anxiety disorder was prevalent in 30.3% of them (12). Another study in Al Madinah region reported that within 376 secondary school female students, 64.6% has symptoms of social anxiety. Such difference in the percentages can be attributed to the age difference across the study samples, where younger participants were more anxious. This study also showed no evidence of significant correlation between economic status, health issues, marital status nor levels of medical studies and the development of anxiety. However, a study conducted in the United Kingdom showed that young females with low socioeconomic statuses are at higher risks for getting SAD (5). Although the risk factors for developing social anxiety disorder is not well known, some studies conclude that one of the main risk factors is being a female (12). In addition, medical students have a higher risk of SAD according to a study that was done in Turkey in 2018. The study also showed that there is a positive relationship between social anxiety and other factors like depression, internet addiction, and impulsivity in medical students (13). A study conducted in Saudi Arabia in 2019 showed that one in every three women is a victim of domestic violence (14). In our research 61.4% of the participants answered that they have experienced verbal abuse by either a first degree relative, intimate partner and/or a person of authority. Our results are not contrasting those reported from other countries with the husband being the most frequent perpetrator (15). One in every three women is at risk of being a victim of physical or sexual intimate partner violence (16). Many conditions have been reported because of violence including injuries, death, sexual, reproductive, mental and physical health problems (15). In our study, marital and health statuses were not significantly associated with being verbally abused in contrast to other regional studies that showed that lower education level, marriage at a younger age, shorter duration of the marriage, fewer children, being a housewife, and husband's unemployment has a significant impact on the presence of domestic violence (17). However, both studies agree that verbal abuse is more evident in families of

low economic statuses. Verbal abuse is also prominent among women of healthcare professions. For example, a study conducted in New York city in 2019 on nurses showed that 23.8% of them experienced verbal abuse by their colleagues (9). Moreover, a study conducted at King Fahad University Hospital in Alkhobar, Saudi Arabia, in 2017 concluded that about 30.7% of nurses were verbally abused (18). Two more recent studies conducted in Saudi Arabia in 2020 and 2022 reported that more than 65% of nursing students and interns and 39.4% of nursing interns had experienced workplace violence, remarkably, verbal abuse, respectively (8, 19). These studies are indicative of the presence of abuse among females of health professions and agree with our findings. This study focuses particularly on the relationship between verbal violence and the occurrence of Social Anxiety Disorder (SAD). Better knowledge of the risk factors associated with the development of SAD would hopefully facilitate the provision of psychological support for those in great need. About the relation between verbal abuse and the occurrence of social anxiety, our results showed that both are significantly related. Among those who have been verbally abused, almost one third of them experienced some form of social anxiety. A study conducted in Florida state in 2006 showed that children who were verbally abused had 1.6 times as many symptoms of depression and anxiety as those who had not been verbally abused (20). In addition, a recent study conducted in Korea in 2019 on 5,616 college students showed that severe verbal abuse affects psychomotor changes and leads to irritability among these students (21). Other studies revealed similar results to ours (16). This suggests that verbal abuse could be an important risk factor for the development of SAD.

Conclusion and Recommendations

This study concludes that there is a relatively high percentage of abuse and SAD among highly educated females. It also shows that verbal abuse is a risk factor for social anxiety. Raising awareness regarding the long-term side effects of verbal abuse is a very important issue to prevent its consequences not only on the victim themselves, but also on the society.

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Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

Authors Contribution: JAAM conceived and designed the study, conducted research, provided research materials, and organized data. FA conceived the idea, conducted research, organized data, and wrote initial draft of the manuscript. NA conducted research, analysed, and interpreted data. MR A conducted research article and analysed data. MAS conducted research and revised the initial draft of the manuscript. MSA conducted research, supervised it, and provided logistic support. KSAG wrote the final draft of the manuscript and provided logistic support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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