

## Prevalence of Social Phobia and Associated Factors among Wollega University Undergraduate Students, Ethiopia, 2014. An Institutional Based Cross-Sectional Study.

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### Abstract

**Background:** Social phobia is the most prevalent, chronic, and debilitating anxiety disorder. It is associated with serious social, educational, and occupational impairment, considerable co-morbidity with other psychiatric disorders like depression, substance use problems and other anxiety disorders. University students with Social Anxiety disorder can experience considerable challenges whilst at university including speaking in groups, delivering presentations and in the general management of social situations. These have also negative impact on academic, social, physical as well as psychological aspects.

**Methods:** Institutional based Cross sectional study was conducted at Wollega University undergraduate students. Stratified Random sampling was used according to their year of study, proportional sample allocation was used to assign for each from total sample of 423. The collected data was coded, entered in to EPI-INFO software and analyzed by using SPSS version 20. The association between variables was analyzed using Crude and adjusted OR analyzed using logistic regression and the level of significance of association was determined at P- value <0.05.

**Result:** The prevalence of Social Phobia was found to be 32.1% with 95% confidence interval (28.5%, 35.1%). Multivariate analysis indicates that the likelihood of having Social Phobia was higher in Female (AOR=1.976 CI (1.238, 3.154)), among age group 18-22 (AOR=1.99 CI (1.24, 3.19)), being single (AOR=7.321 CI (2.526, 21.216)) and those who were living with single parents (Father or Mother) were more likely of having Social Phobia than those who were living with their both parents (Father and Mother) (AOR=4.732 CI (2.544, 8.802)) before joining to University. Students who came from rural area were more likely to have Social Phobia than those who came from urban area (AOR=1.68 CI (1.08, 2.61)). The likelihood of having Social Phobia among first year students was higher when compared to fourth & fifth year students (AOR=2.401 CI (1.129, 5.106)). Students who were currently drinking alcohol were three times more likely to have Social Phobia (AOR= (3.19 CI (1.57, 6.49))

**Conclusion and recommendation:** The prevalence of Social Phobia among University students was quit high which shows significant public health issues that needs great emphasis.

**Keywords:** social phobia; university students; ethiopia

### Background

Social anxiety disorder is chronic and debilitating psychiatric disorder which shows a typically early onset in adolescence and even childhood with a mean age of onset as 15 years with a 90% probability of developing before the age of 25 [1].

When exposed to phobic situations, students with social phobia typically react with anxiety symptoms such as palpitations, sweating, blushing, shaking, and looking anxious or incompetent [2]. Consequently, the distressing situations are avoided or endured under intense anxiety and considerably with the student's social activities, relationships, academic functioning, or there is apparent distress about having the social phobia [3].

The prevalence of social phobia is different from country to country depending on the cultural, sociodemographic, methodological and diagnostic tools used [4]. For example,



the lifetime prevalence of social phobia in Western countries ranges from 3% to 13% [5]. but in other European it ranges from 3.5% to 16% [6].

Socially anxious students miss out on learning opportunities by avoiding interaction. Attention to academic information may be distracted by an excessive focus on their anxieties [7], while the ability to monitor and modify communication with colleagues and instructors maybe distorted by fears of negative evaluation and when participating in a seminar, socially anxious students judge their competence poorly. In undergraduate students anxieties rise where assessment which includes performance [8]. which lead to academic underachievement, underperformance at work even after graduation are among the consequences resulting in a reduced quality of life [1].

Most of the distress was directly linked to fear of public speaking, giving oral reports, asking questions, and taking part in extracurricular activities and social events and many students reported avoiding distress by making themselves inconspicuous and sitting wherever they thought it unlikely they would be asked questions [9].

Studies showed that social phobia precedes approximately 70% of co morbid conditions, suggesting that some co morbid conditions arise in response to the Social phobia [10]. And evidences show that Social Phobia is associated with 20% of cases of adult depression [11] and is associated with 17% alcohol and drug dependence for self-medication aimed at reducing social anxiety [12]. For people suffering from persistent social anxiety, quality of life and psychosocial functioning is significantly impaired [13].

So, social phobia is a major concern to University students for two reasons. One reason is the disorder's very high rate of co morbidity with such other mental health problems as major depression and substance abuse. The second is the loss to gifts and talents that the students' possess because of fear of social and performance situations. Thereby, early detection (screening) and treatment of this condition is imperative [14].

Social anxiety disorder is one of the most common anxiety disorders. Although it is predicted that 40 million Americans suffer from social anxiety, only about 5 million receive diagnosis or treatment [15,16]. Epidemiological studies from the USA show that 13% of Americans have social phobia, which makes it the most prevalent anxiety disorder and the 3rd most common psychiatric disorder after major depressive disorder and alcohol addiction [17].

Cross sectional study conducted on 380 students at Baghdad among Al- Qadissya medical students using brief social phobia scale also indicate that there was a significant gender difference in female and male students which shows (17.4%) and (7.9%) respectively and in Semnan University, Iran 8.6% male and 11.6% female [18]. Study in Egyptian Students also shows Social Phobia found to be 30.9% and more common in female than male students [19].

A comparative study between Egypt, Saudi Arabia and the United Arab Emirates of secondary school by using Social Phobia Screening Questionnaire (SPSQ) then DSM-IV prevalence of

social phobia is highest in Sohag (13%), followed by that in Abha (9.8%) and least in Abu Dhabi (7.8%) [20].

Students living in rural areas had higher rate of Social phobia (20%) in comparison to those who were living in suburban and urban areas (11.3% and 11.4%) respectively [21].

Research has found that approximately one half of people suffering from social anxiety have a co-morbid mental, drug, or alcohol problems [22,23]. and increases a patient's lifetime risk of depression approximately four-fold [24]. Up to 16% of patients who present with social phobia have alcohol abuse problems conversely many patients presenting for treatment of substance abuse problems meet the criteria for social phobia [25]. And in Malaya university students students who drink reported greater social anxiety and shyness, compared to those characterized as students who do not drink, confirming the significant positive relationship between social anxiety and problem drinking [26].

Despite its high prevalence, the social anxiety disorder is considerably underdiagnosed and undertreated.

Social performance situations are commonly encountered by students in higher education at the time of lectures, seminars, group projects because they are expected to speak in front of large groups of unfamiliar people and knowledgeable individuals.

They may find it difficult to initiate or maintain social or relationships, avoid classes that require public presentations, discontinue their education prematurely or take jobs below their ability to avoid social or performance demands and the presence of co morbidity complicates the quality of life.

Thus, early diagnosis and intervention will increase their level of enjoyment of university graduation, which consequently will help them to become productive individuals. Therefore, the present study aimed to fill the gap by assessing the prevalence of social phobia and associated factors among university students.

## Methods and materials

### Study design and setting

An institutional based cross-sectional study design was conducted at Wollega University from April 20 to May 20/2014. It is one of the public higher educational institutions established at Nekemte in 2007. It is located 331 km West of Addis Ababa at the out skirt of Nekemte town on the 150 hectares of land surrounded by evergreen forest and natural scenery of landscape. At present, the University runs 60 undergraduate and 17 postgraduate programs in three different campuses at Nekemte, Gimbi and Shambu towns. Today, Wollega University is a comprehensive University engaged in the provision of all rounded education, research and community service. Currently Wollega University Nekemte compus admits about 11,620 regular students.

### Study population

All regular undergraduate Wollega University Nekemte campus students who are studying at the time of study.

### Inclusion and exclusion criteria



In our study the inclusion criteria were all regular undergraduate students at Wollega University Nekemte campus during the study period and the exclusion criteria was included and Students who are seriously ill.

### Sample size determination

The sample size was determined by using Single population proportion formula  $n = \frac{(\frac{Z\alpha}{2})^2 p(1-p)}{d^2}$  considering the following assumptions: the prevalence of social phobia unknown in our country; hence,  $P = 50\%$  (0.5), confidence interval of 95%, and margin of error ( $d$ ) = 5%. Applying single population formula, sample size was calculated to give 384 and then adding 10% ( $384 \times 0.1 \approx 39$ ) of non-respondents the minimum sample size for this study is  $384 + 39 = 423$ .

### Sampling technique

Stratified sampling technique was used based on their year of study (Year I, II, III, IV, and V) and then the calculated sample size (423) was distributed into each of the five class years using proportional to their size (Fig 1).

### Fig 1. Schematic Presentation of sampling procedure for the assessment of social phobia among Wollega University undergraduate students, 2014.

#### Data collection instruments and measurement

Social phobia among Wollega University undergraduate students was considered as dependent variable. However, socio demographic factors, Clinical factors and Substance related factors were considered as independent variables.

Data was collected by using self-administered questionnaire that include screening tool that was used to evaluate the prevalence of social phobia is the Social Phobia Inventory (SPIN). The SPIN is a 17-item self-rating scale for social anxiety disorder (social phobia). The scale is rated over the past week and includes items assessing each of the symptom domains of social anxiety disorder (fear, avoidance, and physiologic arousal) (Jonathan Davidson, 2013). It is rated 0 (not at all) to 4 (extremely), scale ranges 0-68.

### Operational Definitions

- **Social phobia** (social anxiety) according to this study was defined as when the Social Phobia Inventory screening tool rated over the past week scored as cut off point greater than 20 considered as social Phobia.
- **Substance Use** in this study defined as ever use or current use of substance.
- \* **Ever use** defined as use of specified substance (alcohol, khat, cigattete smoking) at least once in their life.
- \* **Current use** defined as use of specified substance (alcohol, khat, cigattete smoking) within the past three months.
- **History of Psychiatric disorders** defined as any diagnosed mental disorders before the study period.
- **History of Medical illness** defined as any diagnosed medical illness before the study period.

### Data processing and analysis

Information on socio-demographic, substance use & clinical factors were collected through self-administered questionnaire. The data was checked for completeness and consistency. Then it was coded and entered in the computer using EPInfo7 software. Then, data was analyzed by using SPSS version 20. Frequency tables, graphs and descriptive summaries were used to describe the study variables. Bivariate and multivariate logistic regression analysis was used to control the effect of confounding variables and identify associated factors with social phobia. The strength of the association was presented by odds ratio with 95% confidence interval. P-value less than 0.05 were considered as statistically significant.

### Ethical clearance

Ethical clearance was obtained from the ethical review board of the Amanuel Mental Specialized Hospital. Information sheet was attached to the questionnaire and verbal consent was obtained from students (respondents) who selected to participate in the study.

The data collection facilitators were clearly explained the aims of the study for study participant. Confidentiality was maintained by omitting their name and personal identification and participants did not compel to the study but with their voluntariness after understanding the purpose of the study. The right was given to the study participants to refuse or discontinue participation at any time they want and the chance to ask any thing about the study.

## Results

### Socio- demographic characteristics of respondents

Of the total 418 students participated in the study, 245(58.6%) were Male and the remaining were Female. The mean age of the study participants were  $22.1(\pm 2.68)$ .

Majority of the students were in age between 18-22(61.2%). Among the total study subjects 198 (47.4 %) were orthodox Christian, 129(30.9%) Muslims, while 91 (21.8 %), were protestants followers. Thirty eight (9.1%) of the respondents were married, 380 (90.9%) were never married.

Regarding Ethnicity, 147(35.2%) were Oromo, 109(26.1%) were Amhara and 85(20.3%), 58(13.9%), 19(4.5%) were Tigrie, Gurage and others (Gambella, B/Gumuz, Somali) respectively. (Table 1)



Variables	Frequency	Percentage (%)
<b>Sex</b>		
Male	245	58.6
Female	173	41.4
<b>Age</b>		
18-22	256	61.2
≥23	162	38.8
<b>Marital status</b>		
Married	38	9.1
Single	380	90.9
<b>Ethnicity</b>		
Amhara	109	26.1
Oromo	147	35.2
Tigrie	85	20.3
Gurage	58	13.9
Others	19	4.5
<b>Religion</b>		
Orthodox	198	47.4
Muslim	129	30.9
Protestant	91	21.8
<b>Residence</b>		
Urban	177	42.3
Rural	241	57.7
<b>Year of study</b>		
I	125	29.9
II	123	29.4
III	113	27.0
IV&V	57	13.6
<b>Living with</b>		
Both parents	323	77.3
Single parents/relatives	95	22.7

Variables	Frequency	Percentage (%)
<b>Substance ever use</b>		
<b>Alcohol</b>		
Yes	156	37.3
No	262	62.7
<b>Khat</b>		
Yes	100	23.9
No	318	76.1
<b>Tobacco</b>		
Yes	32	7.7
No	386	92.3
<b>Current use</b>		
<b>Alcohol</b>		
Yes	74	17.7
No	344	82.3
<b>Khat</b>		
Yes	92	22.0
No	326	78.0
<b>Tobacco</b>		
Yes	24	5.7
No	394	94.3
<b>Mental illness</b>		
Yes	3	0.72
No	415	99.3
<b>Medical illness</b>		
Yes	2	0.48
No	416	99.5

**N=418**

Table 2: Substance use and clinical conditions of respondents in Wollega University students, 2014

**Prevalence of Social phobia**

The distribution of SPIN-17 among respondents showed a mean score of 18.6 and Standard deviation of ±4.6 .Two hundred eighty four (67.9%) of the respondents had scored less than twenty, 102(24.4%) had scored between 20 and 25, 28(6.7%) had scored between 26 and 30 and 4(1%) of the respondents had scored 31 or more of the SPIN-17 item. When we consider twenty as a cut-off point, about 134 (32.1%) of the respondents with 95% confidence interval (29.5%, 35.1%) had Social phobia, 37.6% in female and 28.2% in male, in the last week.

**Factors associated with Social Phobia**  
**Socio-demographic factors**

Bivariate and multivariate analysis showed that there was statistically significant association between Social Phobia and Age, sex, marital status, Year of study, residence and living arrangement (table 3). After adjusting other variables, the likelihood of having Social Phobia among age group 18-22 was more likely when compared to age group 23 or more (AOR=(1.99

**N=418**

**Table1:** Socio demographic characteristics of respondents in Wollega University undergraduate students, 2014

**Substance and Clinical condition of respondents**

Out of the total of 418 study subjects, 190(45.5%) were used substances in the last three months before the time of study was conducted and 288(68.9%) had practiced using of substance at least once during their life time. (Table 2)



CI (1.24, 3.19)). Multivariate analysis indicates that the likelihood of having Social Phobia was nearly 2times higher in Female (AOR=1.98CI (1.24, 3.20)).

The likelihood of having Social Phobia among individual who were single was higher (AOR=7.32 CI (2.53, 21.22) when compared to individuals who were married .Students who came from rural area were more likely to have Social Phobia than those who came from urban area (AOR=1.68 CI (1.08, 2.61)). There was statistically significant association between Social phobia and year of study. The likelihood of having Social Phobia among first year students was nearly 2.4times higher when compared to fourth& fifth year students (AOR=2.40 CI ((1.13, 5.11)). And those who were living with single parents (Father or Mother) were more likely of having Social Phobia than those who were living with their both parents (Father and Mother) (AOR=4.73 CI (2.54, 8.80)) before joining to University.

In this study both Bivariate and multivariate analysis showed that there was no statistically significant association between Social Phobia and Ethnicity, Religion and forth & fifth year of study. (Table 3)

Variables	Social Phobia		COR(95% CI) AOR(95% CI)	
	Yes	No		
<b>Age</b>				
18-22	94	162	1.77 (1.14, 2.74)	1.99 (1.24, 3.19)*
≥23	40	122	1.00	1.00
<b>Sex</b>				
Male	61	184	1.00	1.00
Female	73	100	2.20(1.45, 3.35)	1.98(1.24, 3.15)*
<b>Religion</b>				
Orthodox	74	124	1.58(.92, 2.71)	
Muslim	35	94	.98(.54, 1.80)	
Protestant	25	66	1.00	
<b>Marital status</b>				
Married	5	33	1.00	1.00
Single	129	251	3.39(1.29, 8.90)	7.32(2.53, 21.22)**
<b>Ethnicity</b>				
Amhara	35	74	1.00	
Oromo	42	105	.85(.49, 1.45)	
Tigrie	29	56	1.10(.60, 2.00)	
Gurage	22	36	1.29(.66,2.51)	
Others	6	13	.98(.34, 2.78)	
<b>Year of study</b>				
Year I	43	82	2.19(1.03, 4.66)	2.40(1.13, 5.11)*
Year II	45	78		
Year III	35	78	2.41(1.14, 5.12)	2.19(1.03, 4.66)*
Year IV&V	11	46	1.88(.87, 4.05)	1.00
<b>Residence</b>				
Urban	57	159	1.00	1.00
Rural	77	125	1.72(1.14, 2.60)	1.68(1.08, 2.61) *
<b>Living with</b>				
Both parents	95	228	1.00	1.00
Single parents	39	56	1.67(1.04, 2.68)	4.73(2.54, 8.80)**

**Note:** \*= $p < 0.05$ , \*\*= $p < 0.001$ , 1.00=Reference. **COR** Crude odds ratio at 95 % confident interval. **AOR** Adjusted odds ratio at 95 % confident interval

**Table 3:** Bivariate and multivariate analysis to show association between Socio-demographic characteristics with Social Phobia among Wollega University Undergraduate students,2014.

**Substance and Clinical factors**

Bivariate analysis showed that there was statistically significant association between Social Phobia with alcohol drinking and smoking for both who had used these substances at least once in their life and for who were using in the past three months. But after adjusting other variables the multivariate analysis showed there was statistically significant association between Social Phobia and current alcohol drinkers. The likelihood of becoming Social Phobic among currently drinking alcohol was nearly 3.2 times higher (AOR=3.19(1.57, 6.49)) when compared to non-drinkers. (Table 4)

**Ever use**

Substance use	Social phobia		COR(95% CI) AOR(95% CI)	
	Yes	No		
<b>Alcohol</b>				
Yes	47	109	1.66(1.09, 2.53)	.92(.52, 1.60)
No	87	175	1.00	1.00
<b>Khat</b>				
Yes	26	74	.99(.62, 1.61)	
No	108	210	1.00	
<b>Tobacco</b>				
Yes	14	18	2.27(1.10, 4.69)	.91(.20, 4.18)
No	118	268	1.00	1.00
<b>Current use</b>				
<b>Alcohol</b>				
Yes	40	34	3.13(1.87, 5.24)	3.19(1.57, 6.49)**
No	94	250	1.00	1.00
<b>Khat</b>				
Yes	32	68	1.0(.62, 1.61)	
No	102	216	1.00	
<b>Tobacco</b>				
Yes	13	11	2.67(1.16, 6.12)	1.33(.24, 7.33)
No	121	273	1.00	1.00
<b>Mental illness</b>	Yes	2	1	4.29(.39, 47.71)
	No	132	283	1.00
<b>Medical illness</b>	Yes	1	1	2.13(.13, 34.28)
	No	133	283	1.00

**Note:** \*\*= $p < 0.001$ , 1.00=Reference, **COR**= Crude odds Ratio at 95% Confidence Interval, **AOR**= Adjusted Odds Ratio at 95% Confidence Interval

**Table 4:** Bivariate and multivariate analysis to show association between clinical conditions and substance use with Social Phobia among Wollega University Undergraduate students, 2014.

**Discussion**

In this study, the prevalence of Social Phobia (32.1%) was relatively consistent with prevalence study done using the same instrument and cut off point in Brazil University students which was 31.6 % [9]. However, Prevalence study using the social phobia subscale conducted in Egyptian students which was 30.9 % [27]. and the prevalence study using social phobia subscale among another sample of Egyptian college students Prevalence of Social Phobia was found to be 40 % [28]. In Nigerian, the life time





prevalence of social phobia using Composite International Diagnostic Interview (CIDI) tool was 9.4 % [19]. The relation difference between the present study & other studies might be due to different instrument used, in Egyptian study they used Social phobia subscale and in Nigeria, used the CIDI diagnostic tools. And in Brazil they used Social Phobia Inventory which was similar with the present study. There was also difference in sample size used, in Nigeria study 500 students were included in Egyptian 1000 university students were included. In terms of Methodological aspect cross-sectional study design were used Nigerian, Egyptian and Brazil studies and there was also cultural differences in between the present and other studies plays great roll in the development of Social Phobia. The time difference at which the present study and other studies has taken place also may be different, social phobia symptoms may be expected to be higher during examination time which is associated with practical and presentations since it can induce or exacerbate the anxiety symptoms.

In the present study, Social Phobia was significantly associated with age group ranged between 18 -22 years which is nearly consistent with the study conducted on Egyptian Al azhar University students 19-23 year [28]. This can be explained by it is the time for most students of transition to university from secondary school. Students may face a wide range of stressors and challenges in adjusting themselves to new direction in their lives. Educational relocation from secondary schools, complete environmental variations and variations in traditions and attitude also another problem for students. Studies in France also show that due to the nature of early onset of social anxiety symptoms developing in sufferers before the age of 25 [4]. Social phobia is being highly prevalent in younger people than in older people [8]. This study demonstrated that there was statistically significant association between Social Phobia and female students. This finding agrees with the findings in Amsterdam University, UK, Plymouth [8]. Seman of Iran [18]. Al Qadissya Medical students [22]. Nigeria University. It is indicated that gender is a significant predictor of students' social phobia and female students found to be more affected with social phobia when compared to male students [19]. It can be explained by most of the female students of the sample were originally from rural areas where the culture plays an important role in the appearance and presentation of symptoms. The parent behaviour and family environment act as modelling of avoidant responses and restricted exposure to social situations, and they are likely to have an effect on the development of Social anxiety symptoms. In some society's cultural expectations, females with behaviourally inhibited and those who are introverted than extroverted are preferable which can lead female students to be more socially anxious when encountered social performances.

In the present study, students who were single were more likely to be affected by social phobia than students who were married. The result is similar with Vienna university, Austria [29]. Egypt [28]. and most of other studies [12,17]. This is probably due to the experience in social relationship, social and psychological support from their couple; they may stay friendly and may have frequent exposure before marriage and develop experience of romantic relationship & social interaction. Most of the married students in this study were age above 25 which shows relatively low prevalence of Social Phobia among these age groups.

Regarding to the residence of origin, Social phobia was significantly higher in the rural (17.2%) in comparison to the urban students (14.8%) In Turkey, the rate of Social Phobia among students living in rural is also higher than in urban was 20% and 11.4 % respectively [21]. Baghdad among Al- Qadissya medical students living in rural areas had significantly higher rate of Social phobia in comparison to those who were living in urban areas [22]. This is probably due to educational relocation from secondary schools at rural and small villages areas to university; modernization where there is complete environmental variations and variations in traditions and attitude, therefore the conflict arising between following their tradition and culture and their efforts to adjust properly to their new modernized environmental life style, might have frustrated their adaptation skills and have provoked or increased their social anxiety symptoms.

Social Phobia was significantly associated with year of study. According to this study, the likelihood of having Social Phobia was higher among first and second year students when compared to fourth and fifth year students which similar with study in Brazil [9]. Nigeria [19]. and Egypt university students [28]. Some common sources of problems for new university students social and interpersonal problems: especially, students, who are living away from home, family and friends for the first time, these students may experience homesickness, the academic rigors completely new and different social network and environment, difficulty in managing time and study skill, loneliness, difficulty of making friends, roommate issues and general adjustment to new situations.

There was statistically significant association between Social Phobia and living with single parents (Father or Mother) when compared to students who were living with both biological parents (Father & Mother). One study in Saudi Arabia shows students living with single parent were more likely to develop social phobia than students who were living with both parents [23]. This is probably explained in terms of social interaction, socio-economic and psychological support. Study in Seman University, Iran, also show the same explanation, students who had no social & psychological support had higher than students who had social support in developing social phobia [30].

The present study shows that there was statistically significant association between Social Phobia and current alcohol use. Study conducted in Ibadan (Nigeria) included 500 university students, there was significant association between social phobia and alcohol use at the time the study was conducted [19]. One study conducted among 116 undergraduate students in Malay university students reported greater social anxiety when compared to non users significant positive relationship between social anxiety and alcohol use [25]. This is explained by alcohol serves as a form of self medication where the individuals can manage their symptoms through its anxiolytic properties [4,24] as it is believed that students with social anxiety use alcohol to manage distress [23]. associated with their concerns regarding negative evaluation and scrutiny by others.

## Conclusion

The prevalence of Social Phobia in Wollega University Undergraduate students was found to be high. Therefore, this study



has demonstrated that Social Phobia is major health problems among Wollega undergraduate students.

Social Phobia was found to be more common in Female students, among age group ranged between 18 -22 years, those who come from rural area before joining university, those who were single, year one and two students.

According to this study students who were living with both biological parents (father and mother) were less likely to have Social Phobia than students who were living with single parent (Father or mother) or relatives before joining to university.

Alcohol current use was also significantly associated with Social Phobia among Wollega University students.

## List of Abbreviations

CI - Confidence Interval

DSM-IV-TR - Diagnostic statistical Manual of fourth edition Text Revision

GAD - Generalized Anxiety Disorder

ICCMH - Integrated Clinical and Community Mental Health

IRB - Institutional Review Board

OR - Odd Ratio

PTSD - Post-traumatic stress disorder

SAD - Social Anxiety Disorder

SP - Social Phobia

SPIN - Social Phobia Inventory

SPSS - Statistical Package for Social Sciences

WU - Wollega University

## Declarations

### Ethics approval and consent to participate

Ethical clearance was obtained from the ethical review board of the Amanuel Mental Specialized Hospital. Written informed consent was obtained from the study participants. The confidentiality of information obtained from respondents was ensured.

### Consent for publication

“Not applicable”

### Availability of data and materials

The data sets analyzed for this study is available from the corresponding author on reasonable request.

### Competing interests

The authors declare that they have no conflicts of interest.

### Funding

The study was funded by University of Gondar. The university had no role in the design of the study, in the collection, analysis, and interpretation of the data; or in writing the manuscript.

### Authors' Contribution

**KB** wrote the protocol, designs the study, organized data collection process, analyzed the data and wrote the manuscript. **LB** and **DD** wrote the protocol, design the study, organized data collection process, reviewing and editing the manuscript. All authors read, critically reviewed and approved the final version of the manuscript for publication and agreed to be accountable for all aspects of the work.

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