Demographic Characteristics and Social Anxiety among Tertiary Institution Students in Osun State, Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Author MAO designed the study, analysed the data collected and read the first draft of the manuscript. Author SAO wrote the introduction and discussion of findings of the manuscript. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Aims: This study aimed to determine the level of social anxiety across demographic characteristics of tertiary students in Osun State, Nigeria.
Design: The study employed a survey design method.
Place and Duration of Study: The study was carried out in the Department of Educational Foundations and Counselling, Faculty of Education, Obafemi Awolowo University, Ile-Ife, Nigeria, between August 2019 and February 2020.
Methodology: A sample of 1600 tertiary institution students (690 male, 910 female; age range 15-38 years) was selected using proportionate stratified sampling technique from four (two public and two private) institutions. Data were collected with the use of Leibowitz Social Anxiety Scale.
Results: Of 1600 students sampled, 0.5% had no symptom of social anxiety while 10.3%, 76.4%, and 12.8% exhibited mild, moderate and severe levels of social anxiety. In addition, there was a significant predictive contribution of demographic factors on students' social anxiety (R = 0.186, P = 0.000).

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Conclusion: The study concluded that social anxiety among tertiary institution students was high. Hence, necessary policies to reduce its degree is required from education policy makers while counselling psychologists and mental health experts are also required to develop effective treatment programmes to mitigate its effects on students.

1. INTRODUCTION

Ever since the creation of humankind, man by his nature is a social being saddled with the obligations to socialize and be a responsible member of various social groups and society in general. However, individuals may have psychological difficulties that may lead to social impairment. A person with social related problems may be socially anxious, afraid of being criticized by others and exhibit fear or avoidance of speaking in public and intimate or sexual relationship behavioral problems. A general term used by mental health professionals and psychologists to describe this phenomenon is social anxiety. Other terms that have been used interchangeably by professionals to describe the phenomenon of social anxiety include Social Anxiety Disorder (SAD), social phobia, etc.

Social anxiety can simply be described as an individual's fear of social situations that involve interaction with other people most especially in the natural conditions. [1] describes social anxiety as the fear and anxiety of being negatively judged and evaluated by other people. Social anxiety is more than just shyness; it is an intense fear that may be potent to negatively affect an individual's everyday activities, self-efficacy, self-confidence, academic achievement. The Diagnostic and Statistical of Mental Disorders (5 edition); DSM-V-TR; American Psychiatric Association (APA), [2] describes the phenomenon of Social Anxiety Disorder as social phobia. Following the DSM-5, someone who is suffering from social anxiety may share features like fear of conversation, talking in front of other people, reading aloud, meeting with unfamiliar people, performing in front of others, humiliation and embarrassment which may lead to rejection.

In addition, someone that is suffering from social anxiety may exhibit both physical (nausea, trembling, increased heart rate, blushing, sweating) and behavioural symptoms (loneliness, avoiding social gathering, keeping quiet unnecessarily, having fear of being criticized and rejected by others). These features must be exhibited by such individuals between six to twelve months consistently, order wise, such a person cannot be considered as manifesting social anxiety disorder. In addition, available empirical evidence has shown that social anxiety was associated with family problems [3] cultural related issues [4]. In the last five years, studies have reported that social anxiety is one of the major problems confronting higher institution students [5,6]. This has been attributed to factors such as uncomfortable institution environment, low self-esteem and fear of failing one or more courses [7].

Among students of higher institutions of learning in Sub-Saharan Africa, particularly in Nigeria, social anxiety has been major concern for professional helpers, psychologists [8], mental health experts [9] due to limited information about prevalence of the phenomenon especially in the sub-Saharan Africa. Most of the studies that have been carried out in Nigeria and other part of Africa showed high prevalence of social anxiety correlated with different factors such as drug dependence [10] and depression [11] and poor academic performance [8]. In a correlational study carried out among Ethiopian undergraduates, 31.2% of students were reported to be exhibiting social anxiety associated with poor social supports, about 50% of students sampled in a study conducted in a Nigerian university reported to have demonstrated high level of social anxiety associated with low self-esteem [12].

Considering gender and age, generally, social anxiety was more prevalent in female than male [2,13]. Although there are variations in terms of age of those who manifests social anxiety, but in general, there is inverse relationship between the magnitude of severity of social anxiety and individual's age. That is, people that are suffering from social anxiety outgrown it as their age increases. In terms of age of onset of social anxiety, it has been reported in the empirical studies that age of onset is early across the world especially in the high income countries like United State of American and European countries ranges from the mid-late adolescence to the early 40s but relatively higher in African country like South Africa [14]. In Osun State of Nigeria, little is known about the levels of social

anxiety especially in relation to demographic characteristics of students if it is available at all.

Given this situation, it is therefore becomes imperative to have scientific information about the level of social anxiety in Osun State which can be useful for the development of appropriate policy framework by government and treatment programmes by counselling psychologists in ameliorating its effects on students. Furthermore, demographic information of students such as sex, age, place of residence, academic level and institution ownership which can help trained counsellor in determining the direction of their intervention for the social anxiety victims need to be updated and made available for therapeutic use. Arising from the foregoing, the question is "what is the level of social anxiety across demographic factors of tertiary institution students in Osun State"? Therefore, this study was conducted to determine the level of social anxiety with respect to students' demographic characteristics and examine the predictive contribution of demographic characteristics on students' social anxiety in Nigeria. It was hypothesised that demographic characteristics will not significantly predict the social anxiety of tertiary institution students.

2. MATERIALS AND METHODS

This adopted descriptive survey design. The population comprised all students of tertiary institution students in Osun State. A total sample of 1600 tertiary institution students (690 male, 910 female; age range 15-38 years) was chosen in stages. First, from the existing 22 tertiary institutions in Osun State, proportionate stratified sampling approach was used to select four institutions (two universities and two polytechnics) using institution's ownership as strata. Second, purposive sampling technique was used to select five Faculties/Schools common to the four institutions selected. While 300 students were selected from two private institutions (one university and one polytechnic) making 600 students selected from private institutions, 500 students were selected from two government owned institutions (one university and one polytechnic) making 1000 students selected from public institutions. Data were collected using an instrument titled "Social Anxiety.

Section A contained four items on demographic information of the respondents. This section was

designed to elicit information about gender, age, institution type, academic level, religion, place of residence in school and religion affiliation. Section B comprised 24-items on social anxiety adapted from Leibowitz. [15]. This scale has been widely used all over the world and confirmed to have very high degrees of internal consistency and test-retest reliability [16,17]. This section was sub-divided into two (fear and avoidance) sections with 24 items in each sub-division. The items in the first sub-division comprised items measuring the level of fear. It sought to ask questions such as how anxious or fearful an individual feels in the situation. Participants were asked to rate their level of fear with which they had engaged in the situations during the past six months on a 4-point Likert scale, ranging from None (0) to severe (3). The items were scored 0, 1, 2, and 3 for none for "None", "Mild" "Moderate" and "Severe" levels of fear.

Also, the items in the second sub-division comprised items measuring avoidance. It sought to ask questions such as how often an individual attempts to avoid the situation. Participants were asked to rate their level of avoidance of the situations during the past six months on a 4-point Likert scale, ranging from Never (0) to usually (3). The items were scored 0, 1, 2, and 3 for none for "Never", "Occasionally" "Often" and "Usually". The scores of participants on items in each subscale were added up to form the global score totaling anxiety and avoidance for all 24 items.

In order to determine the suitability and adequacy of the instrument, the instrument was subjected to Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's Test of Sphericity (BTS). The results showed that, all the 24 items in subsections B were retained, none of the items was deleted. The fear and avoidance subscale were found to have 0.90 and 0.91 coefficients respectively while the whole section was found to have 0.93. This was considered well enough for administration. In determining the internal consistency of the instrument, it was subjected to the measures of internal consistency, Cronbach alpha, Split-half and Spearman Brown were used to test the degree of its internal consistency. The reliability coefficients obtained from Cronbach alpha, Split-half and Spearman Brown were 0.92, 0.80 and 0.89 respectively. The individual's score on the 17 items was computed. With this procedure, the maximum obtainable score was 68 while the

minimum was zero. The higher the score, the more an individual engages in online sexual activities. The instrument was administered with the assistance of four research workers under the supervision of the principal researcher. Data collected were subjected to descriptive. Specifically, frequency count was employed to answer the research question raised in the study.

3. RESULTS

3.1 Research Question One: What is the Level of Social Anxiety across Demographic Factors of Students?

In answering the research question, all the items on the social anxiety scale were scored in such a way that when a respondent indicated "Not Fear at all", the respondent was scored 0, while those who indicated "Slightly Fearful", "Very Fearful", and "Extremely Fearful" were scored "1", "2" and "3" respectively. Following this procedure, the minimum and maximum score of respondents on social anxiety scale are zero (0) and 72 respectively. The resulting scores were added up to build a measure of social anxiety and subjected to descriptive statistics. The results also revealed the mean and standard deviation of 36.75 and 10.55 respectively. To determine the level of social anxiety among participants, scores of participants on social anxiety scale were categorised into four (None, mild, moderate and Severe) levels of social anxiety. Those who had scores between zero on the scale were categorised as exhibiting normal social anxiety, those who had scores that are with the range of one to twenty-four points were considered as manifesting mild level of social anxiety, those who had scores that are with the range of twenty-five and forty-eight points were considered as manifesting moderate level of social anxiety while those who had scores between forty-nine and seventy-two were categorised as demonstrating severe level of internet addiction. The result is presented in Table 1.

Table 1. Descriptive statistics of students' level of social anxiety

Social Anxiety Level	N	%
None	10	0.5
Mild	164	10.3
Moderate	1222	76.4
Severe	204	12.8
Total	1600	100.0

As shown in Table 1, a total of 1,600 participants were tested for social anxiety level. It was observed that 0.5% and 10.3 of the sampled participants demonstrated normal and mild levels of social anxiety respectively. However, about three-quarters (76.4) of them exhibited moderate levels of social anxiety while 12.8% of them exhibited severe levels of it. Moreover, the results on level of social anxiety among participants were cross-tabulated with respect to participants' demographic characteristics (sex, age, place of residence, level and religion) and were subjected to descriptive statistics. The results are presented in Table 2.

From Table 2, it was observed that 5.2% of male participants and 7.8% of female participants were found to have a severe level of social anxiety. About one-third of the participants (33.2%) that manifested moderate levels of social anxiety were male even though the majority of participants (43.1%) that exhibited moderate levels of social anxiety were female. However, 4.2% and 5.0% of male and female participants had mild levels of social anxiety respectively while only 0.6% of male and none of female participants exhibited normal social anxiety level. With these figures, it is concluded that the majority of sampled participants reported moderate levels of social anxiety.

It was also observed that 0.1%, 0.2%, 1.1% and 0.1% of participants who manifested a normal level of social anxiety were within the age range of 15-19, 20-24, 25-29 and 30 years and above respectively. While 5.2%, 4.2%, 0.5% and 0.2% of participants that manifested mild levels of social anxiety were found within the age bracket of 15-19, 20-24, 25-29 and 30 years and above respectively. The results further shows that 29.2%, 40.1% 7.0% and 0.1% of participants that exhibited moderate levels of social anxiety were those within the age bracket of 15-19, 20-24, 25-29 and 30 years respectively. In terms of severity of social anxiety, it was observed that 3.6%, 7.2%, 1.8% and 0.1% of sampled participants who manifested severe levels of social anxiety were within the age bracket of 15-19, 20-24, 25-29 and 30 years and above respectively. The summary of these figures is that social anxiety was moderately prevalent among the participants that were within 20-24 years of age. Relatedly, the magnitude of severity of social anxiety was relatively higher among those that were already within the same age bracket (20-24 years) than other age groups.

Table 2. Descriptive statistics of students' level of social anxiety across demographic characteristics

Characteristics	Social anxiety level				
Sex	None	Mild	Moderate	Severe	Total
Male	0.5	4.2	33.2	5.2	43.1
Female	0.0	6.0	43.1	7.8	56.9
Age bracket					
15-19	0.1	5.2	29.2	3.6	38.2
20-24	0.2	4.2	40.1	7.2	51.9
25-29	0.1	0.5	7.0	1.8	9.4
>29	0.1	0.2	0.1	0.1	0.5
Institution ownership type					
Private	0.6	5.9	25.1	5.9	37.5
Public	0.0	4.4	51.2	6.9	62.5
Academic level					
Part I	0.1	4.1	23.5	4.4	32.1
Part II	0.0	2.4	22.6	2.6	27.6
Part III	0.2	0.7	10.3	1.1	12.3
Part IV	0.2	3.1	19.4	4.5	27.2
Part V	0.0	0.0	0.6	0.1	0.8
Place of residence					
School Hostel	0.4	4.8	17.5	4.0	26.6
Off Campus	0.2	5.5	58.9	8.8	73.4
Religious affiliation					
Christianity	0.6	9.0	54.5	9.4	73.5
Islamic	0.0	1.1	20.0	2.8	23.9
Traditional	0.0	0.1	1.9	0.6	2.6

In terms of institution ownership, the prevalence of social anxiety was higher among students of public institutions than counterparts in private institutions. Specifically, while 0.6%, 5.9%, 25.1% and 5.9% of the participants exhibited normal, mild, moderate and severe levels of social anxiety respectively were students of private institution, 0.0%, 4.4%, 51.2% and 6.9% of the participants that exhibited normal, mild, moderate and severe levels of social anxiety respectively were students of public institutions. Those that were in the first (23.5%), second (22.6%) and fourth (19.4%) year of their study reported moderate levels of social anxiety. Each of these categories of participants was about one-quarter of the entire study sample. The severity of social anxiety was skewed towards those in the fourth year (4.5%) of their study. In addition, 0.4%, 4.8%, 17.5% and 4.0% of the participants who manifested normal, mild, moderate and severe levels of social anxiety respectively were campus residents while 0.2%, 5.5%, 58.9% and 8.8% of those who manifested normal, mild, moderate and severe levels of social anxiety respectively were campus living outside the campus. It was also observed that 9.4%, 2.8% and 0.6% of the participants that are practicing Christianity,

Islamic and Traditional religion respectively were found to demonstrate severe level of social anxiety, while 54.5%, 20.0% and 1.9% of those who are practicing Christianity, Islamic and Traditional religion respectively manifested moderate level of social anxiety respectively. However, while 9.0%, 1.1% and 0.1% of participants who practice Christianity, Islamic and Traditional religion respectively were found to exhibit mild level of social anxiety respectively, only 0.6% of participants manifested normal level of social anxiety are practicing Christianity, none of those that are practicing Islamic and traditional religion were found to exhibit normal level of social anxiety.

3.2 Hypothesis One

Demographic characteristics will not significantly predict the social anxiety of students.

To test this hypothesis, regression analysis was employed. The result of the regression analysis on the predictive contribution of the combination of the six explanatory variables (sex, age, level, religion, place of residence and institution type)

and social anxiety are summarised and presented in Table 3.

Table 3 shows that using the six demographic characteristics as explanatory variables of social anxiety, it yielded a coefficient of multiple regression (R) of 0.186. The value was statistically significant at 0.05 level. This implies that the combination of all the demographic characteristics (sex, age, level, religion, place of residence and institution type) are adequately predictive of students' level of social anxiety. Further to this, the predictive contributions of each of the demographic characteristics to social anxiety of students are presented in Table 4.

As shown in Table 4, out of the six demographic variables of students, only religion (B = 2.11; t = 3.931; p <0.05) and place of residence (B = 3.184; t = 3.192; p <0.05) were found to be significant while sex (B = 0.475; t = 0.889; p >0.05), age (B = 0.134; t = 1.150; p >0.05), institution type (B = -0.401; t = -0.461; p >0.05) and level (B =0.000; t = 0.105; p >0.05). In addition, while religion and place of residence positively predict social anxiety, institution type inversely predicts it. For every unit of sex, age,

institution type, level religion and place of residence, there is a corresponding contribution of 0.475, 0.134, -0.401, 0.000, 2.111 and 3.184 to the social anxiety of students, and place of residence appears to be the highest predictor of social anxiety in this model. It can be summarized that all the demographic variables can account for 3.45 of the variability in social anxiety. Therefore, the degree of non-accountability is 96.4% which implies weak relationships.

4. DISCUSSION

The objective of this study was to determine the level of social anxiety with respect to students' demographic characteristics and examine the predictive contribution of demographic characteristics on students' social anxiety in Osun State, Nigeria. Studies have established some differences in prevalence of social anxiety across various age groups in Nigeria and rest of the world [10,9]. Empirical information about social anxiety with special attention to online sexual behavior of tertiary institution students, which appears to be relatively scanty in the previous studies especially counselling psychology literature, is the focus of this study.

Table 3. Summary of multiple regression analysis on the predictive Contribution of explanatory variables on social anxiety

Model	R	R Square	Adjusted R Square	Std. Error	P
Sex Age Level Religion Residence Institution Type	0.186[a]	0.034	0.031	10.39413	0.000

Table 4. Influence of demographic characteristics on students' social anxiety

	Coefficients				
Model	**Unstandardized coefficients**		**Standardized coefficients**	**T**	**Sig.**
	B	**Std. error**	**Beta**		
(Constant)	25.596	2.307		11.097	0.000
Sex	0.475	0.534	0.022	0.889	0.374
Age	0.134	0.117	0.036	1.150	0.250
tertiary institution	-0.401	0.871	-0.018	-0.461	0.645
Level	0.000	0.003	0.003	0.105	0.916
Religion	2.111	0.537	0.102	3.931	0.000
place of residence	3.184	0.998	0.133	3.192	0.001

a. Dependent Variable: Social Anxiety R Square =0.034, Adjusted R Square = 0.031

Following the stated objectives and analysis of this study, it was observed that the majority of the sampled participants; precisely three-quarter of them exhibited moderate levels of social anxiety. Only one out of every eight students exhibited a severe level of social anxiety. The findings tend to corroborate with the submission of National Institute of Mental Health [9] which found that 12.1% of adults have experienced severe levels of social anxiety, and suffer from it in their lives. This has been tagged "lifetime prevalence of social anxiety" [18] in which most of the time underreported especially in low income countries like Nigeria.

There were differential patterns in the manifestation of Social anxiety by demographic characteristics of students such as sex, age bracket, institution ownership, academic level, religious affiliation and place of residence. For instance, manifestation of severe levels of social anxiety was higher among females than male. Although studies are not in complete consensus on this direction, most of the studies largely indicates both in general anxiety [19] and in various types of state anxieties, women score higher than men [20,21,22]. Therefore, since the exhibition of social anxiety in this study skewed towards females, this study affirms the findings of previous research findings that indicated social anxiety was more prevalent among females than male.

In terms of age, the severity (7.2%) of social anxiety was found among those within the age bracket of 20 to 24-years old with an overall 51.9%, which is more than half of the total sample. This simply implies that social anxiety is prevalent among students within the age bracket of 20-24 years. Although there is slight correlation between this and some studies conducted elsewhere [9,23] that exhibition of social anxiety disorder usually reduces with age. The variations observed might be due to sample size differences, variation in study setting scales for assessing symptoms, and sociocultural distinctions. However, there was a significant association between social anxiety and level of academics in this study. This finding corroborates the results of [24]. Precious empirical studies regarding the students' year of study and social and anxiety is very scarce. However, this finding of this study has shown that social anxiety is relatively more prevalent among fresh and year four students. This may be attributed to either because of issues related to adjustment to a new academic environment, which is different from

where they were coming from or fear of graduating with a low class of degree or having extra years after the normal duration. This study has provided information on areas that counselling psychologists need to pay attention to especially the adjustment and self-esteem training for students in reducing the magnitude of social anxiety.

The results of the study also revealed that three-quarter of sampled students were residing outside the school campuses out of which majority of them manifested moderate severe levels of social anxiety with just 8.8 of them exhibiting severe levels of it. This is an indication social anxiety is relatively more prevalent among students residing off-campus. With this finding, if adequate measures and intervention programmes are not put in place to reduce the moderate level reported, it may aggravate and lead to unbearable conditions that may not only affect the academic life [25] of students but every other aspect of their life. It is expected that students residing outside the campus would exhibit severe levels of social anxiety probably due to different traditional and religious beliefs and language background between the host community and aliens (foreign students) because of cultural differences leading to culture shock and fear on the part of students. The implication of this is that an individual's social concerns must be examined in the context of the student's cultural, religious, racial, and ethnic background in order to adequately assess the degree and expression of social anxiety. This finding of this study therefore admits the suggestion of [4] that prevalence and expression of social anxiety disorder is a function of a particular culture.

As indicated by the result of hypothesis tested in this study, combination of all the demographic characteristics (sex, age, level, religion, place of residence and institution type) are predictive factors of students social anxiety. In other words, the implication of this is that demographic factors of students are potent enough for the prediction and explanation of social anxiety. This finding is in line with the submission of [26]. However, in terms of relative predictive contribution of each of the demographic variables, place of residence appears to be the highest predictor of social anxiety while the institution type is the least predictor of it. The implication of this that institution locations and host communities are very important and must be taken into consideration when establishing an institution. Some of the factors that need to be considered

among others may include the security of life and properties of students from armed robbers, cultists, ritualists, and ease of transportation. In addition, community people living where the institution is located must be friendly. With all these put in place, the magnitude of social anxiety may reduce significantly among students of tertiary institutions in Nigeria.

5. CONCLUSION AND RECOMMENDA-TIONS

Arising from the findings of this study, it can be concluded that social anxiety among tertiary institution students was high and were potent enough to predict social anxiety among tertiary institution students, even though place of residence appears to have the highest predictive contribution on social anxiety of students. Since this study was limited to tertiary institution students, future researches need to explore the prevalence of social anxiety among students of secondary schools with special focus on school location that's rural and urban. In addition, more intervention studies need to be conducted for amelioration of social anxiety among students.

The study recommended that the government at all levels should make necessary policies that can be implemented to reduce the degree of social anxiety among students, taking into consideration students' places of residence and school locations. In addition, counselling psychologists and mental health practitioners are required to develop effective treatment programmes to mitigate social anxiety effects on students. Lastly, the host communities of various institutions of learning must be well informed and sensitized to embrace peace and be friendly with tertiary institution students living around them.

CONSENT

As per international standard or university standard, participant's written consent has been collected and preserved by the author(s).

ACKNOWLEDGEMENTS

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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