

## **Suicidal Ideation and Depression among Undergraduates in a Tertiary Institution in North Central Nigeria**

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### **Abstract**

The high number of students who are majorly adolescents and young adults harboring suicidal ideation, as reported by various sources is becoming alarming. This descriptive cross-sectional study aims to examine the suicidal ideation and depression among undergraduate students in a tertiary institution in North central, Nigeria.

A total of 136 undergraduates from three purposively selected faculties in the institution were conveniently recruited for the study and data obtained using a self-structured questionnaire. Ethical approval was obtained; respondents were fully informed and gave a verbal consent to participate in the study. Data collection lasted for a period of four weeks as duly completed questionnaires were retrieved on the spot. The data collected was analysed by using Statistical Product Service Solution (SPSS) version 23.0. Results were summarized using descriptive statistics of simple percentage, mean, standard deviation and presented on table, pie chart and bar chart. Chi square was used to test the hypotheses at 0.05 level of significance.

The study found that majority of the respondents 81(59.6%) were females while 55(40.4%) were males as vast majority of them 89(65.4%) were between the ages of 20 and 25 years. About 59 (43.4%) were assessed to be normal, 39 (28.9%) had moderate depression, 23 (16.9%) had mild

depression, while 15 (11%) had severe depression. Regarding the coping mechanism, majority (62.5%) claimed that they sleep when they feel stressed, 30 (22.1%) pray while others cry (11.8%), use marijuana (1.5%), play games (0.7%), eat (0.7%), sleep and pray (0.7%). Over 70% of the respondents were satisfied with their relationship with family and friends. A significant association existed between respondents' level of suicidal ideation & depression and their satisfaction towards relationship with family and fellow students. There was a significant difference in the depression rating scores among the three selected faculties.

Satisfaction with family, friend and lecturer relationships play a major role in predicting suicidal ideation and depression. Therefore, intervention for encompassing good coping mechanism may contribute to a more positive outcome in the adolescents and young adults.

**Keywords:** Suicide, Suicidal ideation, Depression, Undergraduate students

## **Introduction**

Depression and suicide are the leading cause of death for adolescents with suicide being the second leading cause of death among university students (Taliaferro, Rienzo, Pigg, Miller, & Dodd, 2009). Depression and suicidal ideation are serious mental conditions that lead to different ripple effects in students (Adetoun & Isaac, 2016). One of such ripple effects is suicidal thoughts which may lead to suicide attempts or suicide. Major life transitions like undergraduate students entering universities can be detrimental to mental health, making them more likely to develop or exacerbate mental illnesses. Leaving ones formed social and support groups when entering a new environment with different, often more extreme social and academic pressures, can increase anxiety and depression in students (Roesch, 2015). In university students, suicidal ideation may present at a particularly important moment, due to leaving adolescence and entering the young adult age and/or the adversities experienced in academic life (Wilcox, Arria, Caldeira, Vincent, Pinchevsky, O'Grady, 2020). However, students that competently integrate into the workforce while maintaining satisfying and longer lasting relationships, are more productive, and have better mental and physical health (Pereira-Lima, & Loureiro, 2015).

Suicidal behavior exists along a continuum that extends from suicidal ideation or thoughts, suicide related communications, suicide attempts and finally suicide (Centre for Disease Control and Prevention, 2008; Pereira, Cardoso, 2015). A recent nationally representative study found more than 10% of college students have experience depression or anxiety that negatively affected their functioning (Klein, Ciotoli, & Chung, 2011). Although many individuals experience depressed emotions from time to time, there are different levels of depression. About 8.5 million adults' contemplated suicide in the past year, with half of this population experiencing a major depressive episode (Glasheen, Pemberton, Lipari, Copello, & Mattson, 2015). The inability to effectively persevere and adapt to social and environmental changes and pressures is a contributing factor to depression (Abdollahi, Abu Talib, Yaacob, & Ismail, 2015).

It has been documented that specific risk factors for college student's related suicide were academic pressures, use of drugs and alcohol, decreased social and familial network/support, experience of new environments, and feelings of isolation and alienation (Emory University, 2015). Mustaffa, Aziz, Mahmood and Shuib reported that the level of suicidal ideation among

male students is higher compared to female students (Mustaffa, Aziz, Mahmood, and Shuib, 2014). Students with learning disabilities and those with mathematical disabilities experienced low self-esteem and depression (Alesi, Rappo, & Pepi, 2014). Internal conflicts have been correlated to higher rates of depression and an increase in level of anxiety (Feixas, Montesano, Compañ, Salla, Dada, Pucurull, Guàrdia, 2014). Nigeria is not known to have a data bank where information on depression and suicidality among students. This lack of information may be attributed to religious, cultural and traditional beliefs. Attempting or committing suicide is regarded as taboo and these acts are discussed in hushed tones. When information is sought about an individual who has committed suicide in a family, family members will often deny that the reason for death is suicide. Cultural or traditional beliefs in some families such as the need to perform certain rituals before a person that has committed suicide is buried also hampers information on suicide. Some families keep silent about family members who have committed suicide because they may sometimes not want to partake in such rituals that expose their family member as having committed suicide. It is therefore necessary to assess the prevalence of suicidal ideation and depression as well as identify the coping mechanism and support systems available to the undergraduate students. In addition, to test the association between the respondents' level of depression & suicidal ideation and satisfaction with available support system researches on suicidality and depression in Nigeria will provide statistics that can guide mental health experts and related professionals on how to overcome these problems.

## **Methodology**

This is a descriptive cross-sectional study that employed quantitative approach to describe suicidal ideation and depression among undergraduate students. The study was carried out in three purposively selected Faculties (Clinical sciences, Law and Engineering) of the University of Ilorin, Kwara state. It is a federal government owned tertiary institution that was established in 1975 and located along University Road, Oke-Odo area of Ilorin, Kwara state. From student's record available in the administration office, a total of five thousand, five hundred and sixty one (5,561) students belong to these three faculties. To ensure a valid sample, the Fisher's exact formula for sampling size calculation ( $Z^2pq/d^2$ , confidence interval of 95%, normal deviation  $z = 1.96$ , level of precision  $d = 0.05$  and prevalence rate of 10% as reported by Klein, Ciotoli & Chung (2011) was used to obtain a sample size of 149 after it was adjusted for attrition rate. The three faculties were purposively selected based on the belief that these courses are stressful, financially demanding and time consuming, while the convenience sampling technique was used to recruit students who met the inclusion criteria. Students from all levels in these faculties who were willing and consented to participate in the study, were available and accessible during the period of data collection were recruited for the study.

A structured pretested and pre-validated questionnaire comprising of five (5) sections was designed after thorough literature search and from standardized Beck's depression inventory tool. The questionnaire consisted of socio-demographic data of the students, the level of depression using Beck's inventory, identification of the family and social support system available to the students and identification of coping mechanism used by the students. Ethical approval was obtained after a letter of introduction was sent to the ethical review committee of the hospital seeking for permission to carry out the study. The students were fully informed about the purpose of the study, their anonymity and confidentiality was maintained and verbal

consent was obtained from each respondent. Data collection lasted for a period of four weeks as duly completed questionnaires were retrieved on the spot. The data collected was analysed by using Statistical Product Service Solution (SPSS) version 23.0 for data analysis and results were summarized using descriptive statistics of simple percentage, mean, standard deviation and presented on table, pie chart and bar chart. Chi square was used to test the hypotheses at 0.05 level of significance.

## Results

**Table 1: Respondents' socio-demographic data n = 136**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Sex</b>		
Male	55	40.4
Female	81	59.6
<b>Age</b>		
16 – 20	25	18.4
20 – 25	89	65.4
26 – 30	22	16.2
<b>Level of Study</b>		
100L	4	2.9
200L	33	24.4
300L	38	27.9
400L	26	19.1
500L	29	21.3
600L	6	4.4
<b>Faculty</b>		
Engineering	76	55.8
Law	30	22.1
Clinical science	30	22.1
<b>Religion</b>		
Christianity	70	51.5
Islam	66	48.5
<b>Residence</b>		
School hostel	39	28.7
Off campus	81	59.5
Family house	16	11.8

Out of the one hundred and forty nine (149) questionnaires distributed, only 136 were duly completed giving a response rate of ninety one percent (91%). Of the 136 respondents, majority 81(59.6%) were females while 55(40.4%) were males as vast majority of them 89(65.4%) were between the ages of 20 and 25 years. The least number of respondents (2.9%) were in their first

year in the university while the highest number 38(27.9%) were in their third year. Seventy six (55.8%) were from the Engineering faculty, while thirty (22.1%) represented Law and Clinical sciences faculties respectively. Most of the respondents (59.5%) lived in rented apartments off campus, 39 (28.7%) respondents resided in hostels provided by the school and a few of them (11.8%) lived in their family houses. Seventy participants (51.5%) were Christians while sixty six (48.5%) practiced Islam.

### **Suicidal Ideation and Attempt among Respondents**

Findings on table 2 below showed that many of the respondents (61%) do not feel being punished when things go bad, 45 (33.1%) feel they may be punished, 3 (2.2%) expect to be punished while 5 (3.7%) feel they are being punished when things go bad. One hundred and eight (79.4%) do not feel disappointed in themselves while 21 (15.5%) feel disappointed in themselves. Three (2.2%) feel disgust while four (2.9%) hated themselves. Ninety four respondents (69.1%) do not feel they were any worse than anybody else, 37 (27.2%) blame themselves sometimes for their mistakes and weaknesses and 4 (2.9%) blame themselves all the time for everything wrong that happens. In addition, 101 (74.3%) do not have any thoughts of killing themselves. Thirty (22.1%) have suicidal thoughts but would not carry them out. Four of them (2.9%) admitted to wanting to kill themselves and one (0.7%) confirmed that they would kill themselves if they had the chance to do so. Many of them (75%) do not cry any more than usual, 21 (15.5%) reported to crying now more than usual and 6 (4.4%) admitted to crying all the time I cry more now. Seven (5.1%) however, reported the inability to be able to cry even if they wanted to. Ninety seven (71.3%) reported to be no more irritable than usual while 26 (19.1%) reported slight increase in irritability. Eight (5.9%) get irritated a good deal of the time and 5 (3.7%) feel irritated all the time.

**Table 2: Suicidal Ideation and Attempt among Participants n = 136**

<b>Items</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Do you feel punished when things go bad?</b>		
I don't feel I am being punished	83	61
I feel I may be punished	45	33.1
I expect to be punished	3	2.2
I feel I am being punished	5	3.7
<b>Do you feel disappointed in yourself?</b>		
I don't feel disappointed in myself	108	79.4
I am disappointed in myself	21	15.4
I am disgusted with myself	3	2.2
I hate myself	4	2.9
<b>Do you feel that you are worse than anybody?</b>		
I don't feel I am any worse than anybody else	94	69.1
I am critical of myself for my weaknesses or mistakes	37	27.2
I blame myself all the time for my faults	4	2.9
I blame myself for everything bad that happens	1	0.7

**Have you any thought of killing yourself before?**

I don't have any thoughts of killing myself	101	74.3
I have thoughts of killing myself, but I will not carry them out	30	22.1
I would like to kill myself	4	2.9
I would kill myself if I had the chance	1	0.7

**Are you emotional to the extent of crying?**

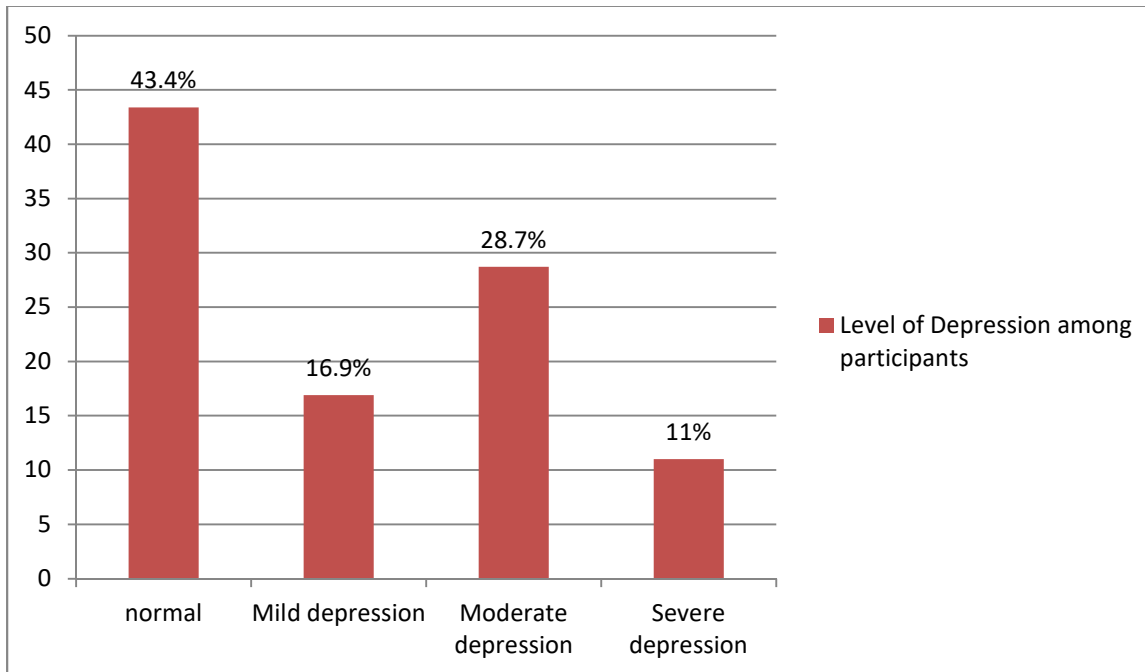
I don't cry any more than usual	102	75
I cry more now than I used to	21	15.4
I cry all the time now	6	4.4
I used to be able to cry, but now I can't cry even though I want to	7	5.1

**How often do you feel irritated?**

I am no more irritated by things than I ever was	97	71.3
I am slightly more irritated now than usual	26	19.1
I am quite annoyed or irritated a good deal of the time	8	5.9
I feel irritated all the time	5	3.7

**Respondents' Level of Depression**

From figure 1, 59 (43.4%) of the respondents were assessed to be normal, 39 (28.9%) had moderate depression, 23 (16.9%) had mild depression while 15 (11%) had severe depression.



**Figure 1: Level of Depression among Respondents**

### **Coping Mechanisms used by Respondents during Stress**

From table 3, majority of the respondents (62.5%) sleep when they feel stressed, thirty (22.1%) pray while others cry (11.8%), use marijuana (1.5%), play games (0.7%), eat (0.7%), sleep and pray (0.7%). Seventy-two of them (52.9%) use social media averagely well, forty-six (33.8%) use it very well while others (13.2%) use it not too well. Sixty-six participants (48.5%) feel social media helps them relieve stress while seventy (51.5%) of them feel it does not.

**Table 3: Coping Mechanisms Used by Respondent during Stress**

<b>Items</b>	<b>Frequency</b>	<b>Percentage</b>
<b>What do you do when you feel stressed?</b>		
Sleep	85	62.5
Cry	16	11.8
Pray	30	22.1
Eat	1	0.7
Play Games	1	0.7
Use Marijuana	2	1.5
Sleep & Pray	1	0.7
<b>How well do you use social media?</b>		
Very well	46	33.8
Averagely	72	52.9
Not too well	18	13.2
<b>Do you feel social media helps you to relieve stress?</b>		
Yes	66	48.5
No	70	51.5

### **Respondents Reported Satisfaction with Available Support Systems**

As presented in table 4, a good number of the respondents (76.5%) were satisfied with their family system while thirty-two of them (23.5%) were not satisfied with their family system. Fifty of them (36.8%) rated their family support to be adequate, thirty-three (24.3%) rated theirs to be moderately enough for them, twenty-nine (21.3%) rated it to be fair while about 17.6% were of the opinion that the support given to them by their families was not enough. Majority of the participants (70.6%) were satisfied with their relationship with other students while forty of them (29.4%) were not. About half of them (55.9%) were also satisfied with their relationship with the lecturers while sixty (44.1%) of them were not.

**Table 4: Respondents' Satisfaction with Available Support Systems**

<b>Items</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Family Support System</b>		
<b>Satisfaction with Family</b>		
Yes, I am Satisfied	104	76.5
No, I am not satisfied	32	23.5
<b>Nature of Support from Family/Guardians</b>		
Adequately enough	50	36.8
Moderately enough	33	24.3
Fairly enough	29	21.3
Not enough	24	17.6
<b>University Support System</b>		
<b>Relationship Satisfaction with Fellow Students</b>		
Yes, I am Satisfied	96	70.6
No, I am not satisfied	40	29.4
<b>Relationship Satisfaction with Lecturers</b>		
Yes, I am Satisfied	76	55.9
No, I am not satisfied	60	44.1

To test the association between independent variables (satisfaction with available support systems) and level of suicidal ideation & depression at 5% level of significance, chi-square was used after categorization of the selected independent variables.



**Hypothesis 1:** There is no significant association between the respondents' level of depression & suicidal ideation and satisfaction with available support system.

**Table 5: Respondents' level of suicidal ideation & depression versus satisfaction with available support systems n = 136**

Variables	Level satisfaction		Statistics	Remark
	Satisfied (n %)	Not satisfied (n %)		
<b>Level of suicidal ideation &amp; depression</b>				
<b>Satisfaction with relationship with family</b>				
Normal	52 (88.1)	7 (11.9)	$X^2 = 10.141$ p-value= 0.017 df = 3	Significant
Mild	17 (73.9)	6 (26.1)		
Moderate	27 (69.2)	12 (30.8)		
Severe	8 (53.3)	7 (46.7)		
<b>Satisfaction with relationship with fellow students</b>				
Normal	49 (83.1)	10 (16.9)	$X^2 = 10.098$ p-value= 0.018 df = 3	Significant
Mild	16 (69.6)	7 (30.4)		
Moderate	24 (61.5)	15 (38.5)		
Severe	7 (46.7)	8 (53.3)		
<b>Satisfaction with relationship with lecturers/supervisors</b>				
Normal	40 (67.8)	19 (32.2)	$X^2 = 7.236$ p-value = 0.062 df = 3	Not Significant
Mild	10 (43.5)	13(56.5)		
Moderate	17 (43.6)	22 (56.4)		
Severe	9 (60.0)	6 (40.0)		

$X^2$  = chi-square df = degree of freedom n = observed count % = percent

From the result presented in table 5 above, the null hypothesis of no significant association is rejected for all variables except satisfaction with lecturers/supervisors. This is because the  $X^2$  calculated (10.141, 10.098) yielded a p-value of 0.017 & 0.018 respectively which is less than 0.05. This shows that a significant association exists between respondents' level of suicidal ideation & depression and their satisfaction towards relationship with family and fellow students. Finally, there was no significant association between respondents' level of suicidal ideation & depression and their satisfaction with relationship with lecturers/supervisors.

**Hypothesis 2:** There is no significant difference in the depression rating scores among the three selected faculties.

**Table 6: Difference in depression rating scores among faculties**

Faculties	n	Mean	Std. Dev.	F-test	df	p	Remark
Engineering	76	5.8	6.2	5.116	2	0.007	S
Law	30	9.8	8.9				
Clinical sciences	30	10.9	12				

**Key:** n = population; df = degree of freedom; p = level of significance

## Discussion

Depression and suicidal ideation are fast rising issues in today's world, which does not start in a day. It starts gradually from depressed moods to suicidal ideation, then the actual suicide. According to the World Health Organization (WHO), in 2012 it was estimated that 804, 000 people committed suicide in the world. Among young people (aged 15 to 29) years), an increase in cases has been shown, accounting for 8.5% of deaths in this age group worldwide (WHO, 2014). In this study, many of the students (83.8%) were between 16-25 years old. This is in support of the findings of the Centre for Disease Control (CDC) in a research that was conducted in 2009. Findings from that research suggest that there has been a shift in the onset of depression to a younger age, with onset occurring between the ages of 15 and 19 years old. Those who experience symptoms of mental illness are at greater risk of maladaptation later on in life, and are at greater risk for repeated and prolonged experience of symptoms (CDC, 2013). This shift could most likely be linked to the fact that there are far younger people admitted into the university nowadays than before. The admission age into the university keeps reducing all the time and younger children are exposed to certain life challenges in life rather too early. More than half of the population (55.9%) were in Engineering Faculty. Alesi, Rappo & Pepi (2014) in their study reported that students with learning disabilities and those with mathematical disabilities (which is very important in engineering) experienced low self-esteem and depression. This is quite contrary to our findings that depression score was higher among students of clinical sciences than students in Faculty of Law, while depression score was higher among students in the Faculty of Law than among students in Faculty of Engineering. This was statistically significant ( $p < 0.05$ ) implying that depression and suicidal ideation was higher among clinical sciences' students.

Also, most of these students resided outside the school on their own in the absence of family members and loved ones. This could cause anxiety for them since they are not familiar with the environment and they have to take on new roles, trying to cater for themselves with little or no support from loved ones. This is in synchrony with the findings from (Roesch, 2015) who reported that internal conflicts can develop when complex social lives, academic roles, and extracurricular activities conflict with an individual's beliefs or schedule. Another research shows the relationship between internal conflicts being correlated to higher rates of depression

and an increase in level of anxiety (Feixas, Montesano, Compañ, Salla, Dada, Pucurull, Guàrdia, 2014). This pressures and anxiety can have negative impacts on academic performance and graduation rates and can further increase risk factors for similar mental illnesses. More than half the respondents (52.9%) used the social media averagely well. It is thought that this could contribute to the onset and development of depressive disorders and suicidal ideations. A lot of times, when young people see pictures of other celebrities online, there is the likelihood of feeling worthless because those pictures usually present the celebrities and other friends as perfect individuals with little or no blemishes like pimples and very smooth skin. This makes their self-esteem drop comparing themselves to these celebrities thereby leading to feelings of worthlessness and ugliness. This could be the reason why some of the respondents (over 40%) reported to have been feeling sad and even have the thoughts of killing themselves. In the study, more than half of the respondents (56.6%) were diagnosed of having depression of varying severity (mild, moderate and severe). This supports the research by Taliaferro, Rienzo, et al. (2009) who concluded that depression and suicide are the leading cause of death for adolescents with suicide being the second leading cause of death among university students.

Ohayon and Roberts however, predicted that the prevalence of mental illness in college students is continually increasing despite efforts to implement mental health care in universities (Ohayon, & Roberts, 2014). This is despite the fact that a good number of them claimed to be healthy and not bothered about life to the extent of committing suicide. This claim could be attributed to the fact that they were not aware, or that they were denying the fact since it is almost a taboo to accept that one has any form of mental disorder. The social stigma associated with mental disorders is also a factor. Satisfaction with relationship with family, friends, lecturers and supervisors play a very vital role in the mental health of students. The result of our findings showed that respondents who were not satisfied with their relationship with the family and fellow students experienced higher level of depression than those who were satisfied, which was also found to be statistically significant ( $p < 0.05$ ). This implies that the more satisfied the respondents were with their relationship with families and fellow students, the lower the level of depression. Furthermore, respondents who were not satisfied with their relationship with their lecturers/supervisors experienced higher level of depression than those who were satisfied. However, this was not statistically significant ( $p > 0.05$ ). By better understanding how aspects of depression are defined, it becomes easier to recognize sign of depression. Students experience factors every day that can attribute to depression and suicidal ideation, such as test taking, environmental changes, poor diet, and accruing student debt. Such stresses can cause rises in anxiety, which is one known risk factors for depression (Pereira-Lima & Loureiro, 2015). The mere absence of expected symptoms does not necessarily mean that an individual is happy, which is why by better understanding the risk factors for suicidal ideation and depression, universities may more easily identify at risk students (Nierenberg, Bentley, Farabaugh, Fava, & Deckersbach, 2012). It is therefore, recommended that wide range local studies be conducted to elicit some risk factors contributing to the development of suicidal ideation and depression among universities students so as to provide evidence-based recommendations to reducing the menace of suicide among students in our societies today.

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