



AGE AND GENDER DIFFERENCES IN SUICIDAL IDEATION IN A SAMPLE OF UNDERGRADUATES IN NIGERIA

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ABSTRACT

Previous studies reported that suicide and suicidal ideation are more prevalent among individuals in the age range of 15 and 35 years. There is a need to investigate the most vulnerable group (late adolescence, early young adulthood, middle young adulthood, and late young adulthood) within the 15 and 35 years broad age category in order to efficiently direct the focus of intervention. This study, therefore, compared the level of suicidal ideation in four age categories of adolescence and young adulthood. They were 680 (336 males; 344 females) undergraduates whose ages averaged 23.10 years (SD= 8.02) with a range of 15 to 35 years. They responded to a measure of suicidal ideation. Results of the One-way ANOVA indicated that undergraduates who were early young adults had significantly the highest level of suicidal ideation compared with those in the other age categories. Gender had a significant influence on suicidal ideation; with male undergraduates being more suicidal in their thoughts. In order to manage suicidal ideation among undergraduates, psychological intervention should focus the enhancement of cognitive resources and coping abilities, especially among the males. The psychological profiling of undergraduates should be encouraged in order to know those that are susceptible to suicidal ideation or may have low coping ability.

INTRODUCTION

Suicidal ideation and suicide, which refer to the thought and act of taking one's life, respectively are among the major health challenges prevalent in individual who are between the ages of 15 and 34 years (Zhang, Lei, Song, Lu, Duan & Prochaska, 2019). Globally, more than 800,000 persons die of suicide every year (World Health Organization – WHO, 2018). This figure may be a tip of the ice berg because Fleischmann and De Leo (2014) submitted that for each individual who dies of suicide, there may have been over twenty others attempting suicide. This implies that a lot of individuals, especially those within the age bracket of 15 and 35, are susceptible to committing suicide. Studies (e.g. Harmer, Lee, Duong & Saadabadi, 2021; Lowry, Crosby, Brenner & Kann, 2014) found that individuals who commit suicide had had suicidal ideation (the ideas or thoughts of taking one's life).

In order to efficiently prevent suicide, it may be advisable to manage suicidal ideation, which is a veritable signal and precursor to suicide. The management of suicidal ideation among adolescents and young adults may benefit from more empirical studies on the specific age bracket and gender within the adolescence and young adult categories that may be more prone to suicidal ideation. This would help the focus and method of intervention on the management of suicidal ideation and prevention of suicide among the highly susceptible age and gender groups.

Suicidal ideation is characterized by the desire to bring about his or her own death by himself or herself (Harmer et al., 2021). It is evident that suicidal ideation fluctuates in strength, expression and characterization in affected individuals (Harmer et al., 2021). A number of risk behaviour might be associated with suicidal ideation in the younger generation. According to Lowry et al. (2014), suicidal ideation has some precursors such as community- and school-related violence, poverty, substance use, sexual health, post-traumatic stress, poor academic performance, weight-related issues, and feeling of

hopelessness. In a study that involved undergraduates aged between 18 and 25 years in south-western Nigeria, Ajibola and Agunbiade (2021) reported that suicide was highly correlated with high academic challenges, substance abuse, and having parents with marital problems. It is apparent that global statistics showed that there is an increase in suicide in most developing countries such as Nigeria (WHO, 2018). However, due to cultural factors, cases of suicide in Nigeria are under-reported; even the reported cases lack proper documentation (Alabi, Alabi, Ayinde & Abdumalik, 2014).

Harmer et al. (2021) opined that the rates of suicide-related deaths also vary by some demographic variables such as gender, age, and race. This may be because age is an important determinant of individual's reactions to negative life experiences that are connected with suicidal ideation. Negative life experiences may manifest differently across different age groups but it may be more pronounced among adolescents and young adults. For example, if a child is exposed to traumatic experiences during childhood; later in life, the child may develop emotional instability and mental maladjustment, which are correlates of suicidal thinking and attempts. By nature, adolescents may be more vulnerable to mental health problems and may be pre-occupied with problems of strain and stresses, academic problems, binge drinking, stress from school, family problems, lack of emotional support, problem of gaining independence, youthful exuberance, anxiety, and depression, which are salient factors in suicidal ideation (Foley, Goldston, Costello & Angold, 2006). It may, therefore, not be out place to submit that undergraduates in older age categories would be less susceptible to suicidal ideation than those in younger age categories (Conejero, Olié, Courtet & Calati, 2018).

Miret, Caballero, Huerta-Ramírez, Moneta, Olaya, Haro and Ayuso-Mateos (2014) investigated the prevalence of suicidal ideation and attempts in 4583 population in Spain. They found that suicidal ideation occurred more among individuals in the between the ages of 18 and 49years. In the same vein,

Seo, Song, Yim, Kim, Lee, Kim and Jun (2015) compared the level of suicidal ideation in younger and older age groups. They reported that individuals in younger age groups were more likely than those who were in the older age groups to report suicidal ideation. However, Stoliker, Verdun-Jones and Vaughan (2020), in a research involving 18,185 prisoners within 326 prisons across the United States, found that attempted suicide was more commonly reported among younger prisoners while suicidal ideation was commonly reported among older prisoners. Among a sample of Koreans, Ahra, Minho and Heeyoung (2017) investigated the prevalence of suicidal ideation among young and middle-aged adults. Specifically, they examined the risk factors associated with suicidal ideation. They found that young adults had a higher suicidal ideation risk compared with the middle-aged adults.

Gender may also be one of the risk factor in suicidal ideation (Olaseni, 2017). According to Vijayakumar (2015) and Stephenson, Pena-Shaff and Quirk (2006), statistics of suicide revealed that, compared with men, women showed higher level of suicidal thinking, non-fatal suicidal behavior, and suicide attempts and were roughly three times more likely to attempt suicide than men. This confirmed the submission of Schrijvers, Bollen and Sabbe (2012) on gender paradox of suicidal behavior. They opined that there is an over-representation of females reporting suicidal ideation and a majority of males completing suicide.

However, it has been documented that males, whose ages range between 15 and 19 years, think about suicide and actually carry out the action twice more than their female counterparts (McLoughlin, Gould & Malone, 2015). Ibrahim, Amit, Din and Ong (2017) studied gender differences in suicidal ideation among 232 Malaysian youths aged between 15 and 25 years. They found that suicidal ideation was higher among males than females. Weisis, Muzik, Deligiannidis, Ammerman, Guille and Flynn (2016) studied gender differences in suicide risk among 422 patients with mood disorders. Results indicated that men had greater suicide risk than women.

Gender differences in suicide and suicide ideation have also been investigated in Nigeria. Adewuya, Ola, Coker, Atilola, Zachariah, Olugbile, Fasawe and Idris (2016) reported that gender was one of the major factor associated with suicidal ideation. However, in a longitudinal study, Oyetunji, Arafat, Famori, Akinboyewa, Afolami, Ajayi and Kar (2021) observed 350 suicide reports between 2010 and 2019 in Nigeria and discovered that men perpetrate suicide more than women. This indirectly point to the fact that more men, than women, might have had suicidal ideation. Among 10 and 19 year olds, Olaseni (2017) reported that significant gender differences suicidal ideation; with males having higher level of suicidal ideation.

Some psychological studies have accounted for gender roles and societal expectations as related to gender differences in suicide (Schimelpfening, 2020). When the method of committing suicide is generally considered, Callanan and Davis (2012) stated that men tended to use firearms, suffocation and hanging while women were fond of taking overdose of medications. It should be noted that even when men and women use the same method of suicide, it is glaring that attempt made by men tended to be more severe than women (Schimelpfening, 2020).

The major gap in the previous studies on age and gender differences in suicidal ideation, especially among adolescents and young adults, is that such studies did not categorize these groups of vulnerable individuals into sub-age categories. Though, previous studies have shown that these two groups are more susceptible to suicidal ideation than other age categories, there is a need to know which sub-group is more prone to suicidal ideation, particularly among the undergraduates. For the purpose of this study, the undergraduates were categorize into four age categories: late adolescence (15 to 20 years), early young adulthood (21 to 25 years), middle young adulthood (26 to 30 years) and late young adulthood (31 to 35 years).

Hypotheses

Based on the results of previous studies, the following hypotheses were tested.

1. There will be significant age differences in suicidal ideation among undergraduates such that those in their late adolescence will have the highest level of suicidal ideation than those in other age categories.
2. There will be significant gender differences in suicidal ideation among undergraduates; with males reporting higher level of suicidal ideation than females.

METHODS

Design and participants

This study adopted a cross-sectional survey design to study 680 (336 males; 344 females) selected from a public university in the south-western Nigeria. The ages of the undergraduates ranged between 15 and 35 years ($M_{age}=23.10$; $SD=12.02$). Four hundred and eight of the total participants (60.0%) fell into the age range of 15-20 years (late adolescence); 164 (24.1%) were between ages of 21-25 years (early young adulthood); 78 (11.5%) were between 26-30 years (middle young adulthood); and 30 (4.4%) of them were in the age range of 31-35 years (late young adulthood).

In terms of their religious affiliation, 408 (60.0%) were Christians, 242 (35.6%) were Muslims and 30 (4.4%) were affiliated with other religions. In the case of ethnicity, 493 (72.5%) were Yoruba, 82 (12.1%) were Ibo, 27 (3.9%) were Hausa, and 78 (11.5%) of them belonged to other ethnic groups. Based on family type, 590 (86.8%) of the participants were from a monogamous family while 90 (13.2%) were from polygamous family. The participants also reported their academic level. Their responses showed that 158 (23.2%) of them were in 100 level, 386 (56.8%) were in 200 level, 68 (10.0%) were in 300 level, 42 (6.2%) were in 400 level, and 26 (3.8%) were in 500 level.

Instrument

Apart from items on socio-demographic variables (age, gender, academic level, religious affiliation, ethnicity, and family type), the participants responded to the Columbia-Suicide Severity Rating Scale (Posner, Brown, Stanley, Brent,

Yershova, Oguendo, Currier, Melvin, Greenhill, Shen & Mann, 2007). The instrument had four subscales: suicide ideation, suicide intensity, suicidal behavior, and suicidal behavior lethality. Only the suicide ideation subscale was used in this study because the study was designed to test the level of suicidal ideation. The suicidal ideation subscale had 5 items that assess how the participants felt about life, life situations and how often they thought of ending their life. The items were rated on a 5-point scale of 1 (not at all) to 5 (many times a day). Sample items include: "How many times have you wished you were dead or wished you could go to sleep and not wake up?" and "How many times have you heard any thoughts of killing yourself?" Posner et al. (2007) reported that all the subscales of the instrument were highly reliable and valid. With the present sample, the suicide ideation subscale had a Cronbach's alpha of 0.89. Scores that were up to or higher than the mean indicated higher thought of ending one's life while score that were lower than the mean indicated low suicidal ideation.

Procedure

As it is with all studies that involve human subjects, the instrument and procedure of this study were scrutinized and approved by the Ethical Committee of the University. This was aimed at ascertaining that the participants would be treated with dignity and would not suffer any form of physical and psychological harm due to their participation in the study.

The study was conducted during lectures. The researchers explained the purpose of the study to each Lecturer and sought his or her permission to conduct the research. After that, the purpose of the research was explained to all potential participants in the lecture room. They were told that the research would take about five minutes because the items on the questionnaire, apart from the socio-demographic variables, were five. They were assured of the confidentiality of their responses and that participating in the research would not expose them to any form of physical or psychological hazard. The potential participants were also informed that they

reserved the right to either participate in the research or not and that they could withdrawal their participation at any point whenever they felt so. In all,

694 questionnaires were distributed but 680 were duly completed found usable and for further analysis. This represented a response rate of 98%.

ANALYSES AND RESULTS

Test of the relationships

The types of relationships that existed among the study variables were determined using Pearson's Product Moment Correlation. The results are presented in Table 1.

Table 1:
Mean, SD and Inter-variable Correlations

Variables	<i>M</i>	<i>SD</i>	1	2	4	5	6	7
1. Suicidal ideation	18.89	3.83	1					
2. Age	23.10	8.02	-.12**	1				
3. Gender	-	-	.14**	.03	1			
4. Academic level	-	-	.00	.63**	.23**	1		
5. Religious affiliation	-	-	.21**	.14**	.13**	.15**	1	
6. Ethnicity	-	-	-.01	.14**	.09*	.04	.25**	1
7. Family type	-	-	.16**	.08*	-.17**	.00	.03	.00

Note: ** $p < 0.01$, * $p < 0.05$, $N = 680$ Gender was coded female = 0; male = 1. Academic level was coded 100 = 1, 200 level = 2, 300 level = 3, 400 level = 4, 500 level = 5. Religious affiliation was coded Christianity = 1; Islam = 2; Others = 3. Ethnicity was coded Yoruba = 1; Ibo = 2; Hausa = 3; Others = 4. Family type was coded monogamy = 1; polygamy = 2.

Table 1 shows suicidal ideation significantly reduced as the ages of undergraduates increased [$r(678) = -0.12$, $p < 0.01$]. Suicidal ideation was significantly related with gender; with male undergraduates being the more affected [$r(678) = 0.14$, $p < 0.01$]. The results also showed that religious affiliation [$r(678) = 0.21$, $p < 0.01$] and family type [$r(678) = 0.16$, $p < 0.01$] were significantly related with the level of suicidal ideation in undergraduates. However, the relationships of suicidal ideation with ethnicity [$r(678) = -0.01$, $p > 0.05$] and academic level [$r(678) = 0.00$, $p > 0.05$] were not significant.

Test of hypotheses 1 and 2

In order to determine whether age differences occurred in the level of suicidal ideation among undergraduates, the participants were divided into four categories: late adolescence (15 to 20 years); early young adulthood (21 to 25 years); middle young adulthood (26 to 30 years); and late young adulthood (31 to 35 years). The mean and standard deviation scores of the four groups on the measure of suicidal ideation were compared.

The results are presented in Table 2.

Table 2:

Mean and *SD* Showing Age Differences in Suicidal Ideation

Categories	<i>N</i>	<i>M</i>	<i>SD</i>
Late Adolescence (15-20 years)	408	12.93	2.19
Early young adulthood (21 – 25 years)	164	16.04	3.29
Middle young adulthood (26 – 30 years)	78	11.08	2.06
Late young adulthood (31 – 35 years)	30	10.93	2.03

The results in Table 2 indicate that undergraduates who were early young adults had the highest level of suicidal ideation ($M = 16.04$; $SD = 3.29$). This was followed by those who were late adolescents. The late adolescents had a mean score of 12.93 ($SD = 2.19$) on the measure of suicidal ideation. Those in the middle young adulthood and late adulthood categories brought up the rare with suicidal ideation mean scores of 11.08 ($SD = 2.06$) and 10.93 ($SD = 2.03$), respectively. The results in Table 2 did not provide enough evidence in support of hypothesis 1. Therefore, a One-way ANOVA was further used to analyze the data. The results are shown in Table 3.

Table 3:

Summary of One-Way ANOVA on the Influence of Age on Suicidal Ideation

Sources	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
Between	293.70	3	79.90	14.09	< 0.001
Within	4696.49	676	6.95		
Total	4990.19	679			

The results in Table 3 indicate that age category had a significant influence on suicidal ideation in undergraduates [$F(3,676) = 14.08$, $p < .001$]. The significant F value recorded in Table 3 can be traced to the fact that the age categories had significantly different levels of suicidal ideation; with those in their early young adulthood being the most vulnerable. The results in Table 2 and 3, therefore, provided evidence in support of hypothesis 1.

Hypothesis 2, which expected male undergraduates to have a significantly higher level of suicidal ideation than their female counterparts, was tested with a t -test for independent samples.

The results are presented in Table 4.

Table 4:

Summary of T-Test on Gender Differences in Suicidal ideation

Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>P</i>
Male	336	14.51	3.84	678	6.74	< 0.01
Female	344	11.39	3.80			

As shown in Table 4, males undergraduates ($M = 14.51$; $SD = 3.84$) had a significantly higher level of suicidal ideation compared with their female ($M = 11.39$; $SD = 3.80$) counterparts [$t(678) = 6.74$, $p < 0.01$]. These results confirmed the position of hypothesis 2.

DISCUSSION

The aim of this present study was to investigate the age and gender differences in suicidal ideation among undergraduates. It was shown that a significant age differences occurred in the level of suicidal ideation among undergraduates. Those in their early young adulthood reported the highest level of suicidal ideation (followed by those in their late adolescence) compared with those in other age categories. These results support the findings of Zhang et al. (2019) and Foley et al. (2006) that individuals who were older contemplated suicide (suicidal ideation) less than younger individuals. The results of the present study did not only support the findings of previous studies, but also showed the subgroup within the 15 to 35 years age category that was the most susceptible to suicidal ideation. The undergraduates within the 15 to 25 years age categories might have scored the higher than those in the 26 to 35 years age categories on the measure of suicidal ideation because they had not acquired enough cognitive resources to cope with general life challenges and the emotional demands as well as psychological conflicts associated with adolescence and transmutation into adulthood.

As expected in hypothesis 2, significant gender differences occurred in the level of suicidal ideation among undergraduates with males reporting higher suicidal ideation than females. These results were in consonance with the findings of previous studies (e.g. Ibrahim et al., 2017; McLoughlin et al., 2015; Oyetunji et al., 2021; Weisis et al., 2016) that males tended to report higher suicidal ideation than females. The results of the present study, however, negated the results of some previous studies (e.g. Adewuya et al., 2016; Stephenson et al., 2006; Vijayakumar, 2015) that females showed higher suicidal ideation than males. The gender stereotype in Nigeria, which expects men to appear tough, strong, and with high needs for achievement, might have added additional pressure on the fragile cognitive resources male

undergraduates, especially during adolescence and young adulthood stages. When such undergraduates perceived that they are unable to meet up with the societal expectations in relation to gender stereotype, they might have felt depressed, hopeless and had suicidal ideation.

CONCLUSION

The present study has extended the findings of the previous studies on suicidal ideation among adolescents and young adults by indicating the age brackets within the two broad categories that are more vulnerable to suicidal ideation. The results of the previous studies did not adequately highlight this. The results of the present study have implications for and the management of suicidal ideation and suicide risks. This is because it has shown the groups that should be the main focus of suicide intervention programmes. Such programmes should target the enhancement of the cognitive resources and the ability of individuals in late adolescence and early young adult age categories to cope with stressful life experiences. Apart from that, every institution should conduct a psychological profiling of its students in order to ascertain those that may come down with suicidal ideation. This would help in tracking such individuals and managing their level of suicidal ideation before it results in suicide attempts and suicide.

Despite the contributions of the present study, it has some shortcomings. The sample size and the spread may not adequately reflect the general trend in suicidal ideation in Nigeria. Apart from that, the sample spread did not cover individuals in early adolescence (10 to 14 years). The sample size did not also include undergraduates in private universities. Therefore, future studies, which should cover more areas in Nigeria, should include samples from private universities and younger adolescents who are in 10 to 14 years age category (early adolescents).

Conflicts of interest

We affirm that there is no potential conflict of interest.

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