

A measure of Aggression and Anxiety as factors of Suicide among undergraduates in a Nigeria University

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I. INTRODUCTION

Suicide is a complex behavioural phenomenon that involves taking one's life by oneself. It is fundamentally a general social and public health problem worldwide (Izadinia, Amiri, Jahromi & Hamidi, 2010) and also a problem that is both very serious and preventable (Amare, Woldeyhannes, Haile, & Yebeabat, 2018). The social, economic and psychological effects of suicide are unbearable in most societies of the world. Families, organisations and the general society are often thrown into mourning when there is an incidence of suicide. Such depressive mood often impact productivity, create fear and anxiety, reduce value for human existence and cause social unrest; among others.

Suicide account for 1.5% of cause of death and the onset of suicide ideation increases during adolescence in almost every country (Nock, Borges, Bromet, Cha, Kessler & Lee, 2008, Centres for Disease Control and Prevention, 2007). Connor and Nock (2014) opined that the causes of suicidal behaviour are not clearly understood and many researchers have identified various risk factors which do not, most of the time, account for why individuals decide to end their lives. Suicide ideation, planning, attempts and gestures are all suicidal behaviours (Esfahani, Yasaman & Alavi, 2015). Ducher and Daléry (2004) posit that two major risk factors for suicide attempts are suicide thoughts and ideation since most individuals who have attempted suicide have expressed such thoughts during the months before. Suicide ideation is defined as thoughts of harming or killing oneself (Institute of Medicine, 2002; Esfahani, Yasaman & Alavi, 2015). Suicide attempt on the other hand is a situation when an individual tried to kill himself/herself but failed. It is sometimes called failed suicide (Wasserman, 2016; O'Connor & Pirkis, 2016).

Different accounts have been given on the statistics of people that commit suicide. For instance, World Health Organization's (WHO) (2016), reported that over 800,000 people commit suicide per year in the world while World Health Organization Suicide Prevention (SUPRE) Program, gave the statistics to be around one million people annually.

Nigeria news media are often awash with reported cases of suicide among Nigerian undergraduates. For example, the Punch Newspaper of July 10, 2018 reported that a 30year old Nigeria Abuja Law school student committed suicide in Taraba State (Ohai, 2018). In a similar development, 300 level physics/astronomy undergraduate of the University of Nigeria Nsukka's lifeless body was reportedly found dangling on a suspended rope from a height to confirm that he committed suicide. In February 2018 too, an undergraduate in Abia State University was said to have committed suicide, because he failed to graduate after two academic sessions in a row. Similar cases of suicide had been reported at the University of Benin in Edo State, Niger Delta University, Wilberforce Island in Bayelsa State, Obafemi Awolowo University, Ile-Ife in Osun State; all in Nigeria and even in far away Bristol University, United Kingdom by a Nigerian Female undergraduate (Ohai, 2018).

According to The Guardian Newspaper of 12th June, 2018, Nigeria lost about 80 persons; mostly undergraduates, to suicide in a year. These cases are cause of lamentations and worries among Nigerians. And the increasing rates of suicide cases continue to pose a big socio-psychological problem to the Nigerian government as well as the international bodies (Nwachukwu, 2018). Cases of suicide however are not limited to the adolescent undergraduates. For example, towards the end of the year 2018, a Nigerian Disco Jockey also reportedly committed suicide owing to disappointment suffered from his woman friend. This case is aside from those of a banker and another female trader who reportedly jumped into the Lagos Lagoon from the Third

Mainland Bridge at the Ebute-Metta/Oworonsoki axis in Lagos, Nigeria. These various cases suggest aggression and consequent destruction directed towards self.

Understanding the reasons for aggression and destruction directed towards the self is a major challenge for psychology, medicine and psychiatry. A number of psychological autopsy studies of suicide victims have shown that the majority were suffering from mood disorders, especially depression; with comorbidity of various other mental illnesses (in particular, anxiety disorder) Rihmer, Belso & Kiss, 2002; Rihmer, 2007).

Aggression studies have also implied that the level of emotional arousal is a crucial factor in expressing aggression whether towards the self or towards others. For example, Brown, Godwin, and Ballenger (1979) posited that behavioural inhibitions are regulated by non-adrenalin and dopamine, which play a role in the regulation of serotonin release. When serotonin level is low, it has been said to cause depression. The chemical and neuro-transmitter is believed to help regulate mood, social behaviour, sexual desire, digestion, sleep and memory (Coccaro, Siever and Klar, 1989).

Beyond the sphere of mood disorders, mental illnesses, and emotional arousal, several social scientific researchers have also pointed out the roles of perceived social support in suicide ideation and attempt. The loss of perceived social support, for example, has been found to be a risk factor for suicide (Awata, Seki, Koizumi, Sato, Hozawa, Omori, ... Tsuyi, 2005, Endo, Tachikawa, Fuknoka, Aiba, Nemoto, Shiratori, Matsui, Doi, & Asasa (2014) . Expositions from theoretical perspectives implicated destructive drives (e.g, Freud's Psychoanalytic theory, 1923), motivation to restore or re-assert integrity of the self (e.g. self-affirmation theory, Baumeister, 1990, Leary & Baumeister, 2000), and frustration and aggression (e.g. Dollard, Miller, Doob, Mourer & Sears, 1939) as significant factors of suicide. Explanation from these theoretical perspectives suggests that suicidal ideations and attempts cannot be explained away from anxiety disorders. However, according to Sareen, Houlahan, Cox and Asmundson (2005), it still remains unclear whether the association between specific anxiety disorders and suicide represent a direct relationship or an indirect association due to comorbidity with depression or other disorders known to be associated with suicide.

In the Epidemiologic Catchment Area (ECA) study by Weissman, Klerman, Markowitz and Ouellete (1989), for example, respondents with a lifetime diagnosis of Panic disorder (PD) were found to be at markedly increased risk for suicide, with 20% reporting a life time suicide attempt. Numerous clinical studies with treatment seeking patients with primary panic disorder diagnosis also support increased risk for suicide ideation and lifetime suicide attempts in panic disorders with some studies indicating as high as 31% of the treatment-seeking patients with PD reporting suicidal ideation and 18% reporting a lifetime suicide attempt (e.g. Cox, Direnfeld, Swinson & Norton, 1994)

Despite these seeming and bugging revelations however, subsequent re-analysis of the ECA data controlling for all psychiatric disorders as an aggregate found PD not to be any longer associated with increased risk for suicide attempts. Also, when the putative association between PD and suicidal behaviours was re-examined in the National Co-morbidity study, Vickers and McNally (2004) found no association between PD and history of suicide attempts.

Against this backdrop of conflicting revelations and the alarming incidences of suicide among undergraduates in Nigeria Universities therefore, this study is poised to find out whether aggression and anxiety actually account for suicide ideation and attempts among the undergraduate students. Thus, it was hypothesized that:

- Aggression and anxiety will individually and interactively significantly account for suicide ideation and attempt among University undergraduates in Nigeria
- There will be a significant sex difference in suicide ideation and attempt among the undergraduates in Nigeria.

II. METHODS

Research Design:

The study was a survey research that adopted the ex-post facto research design. The design was adopted because the research participants were not subjected to any direct manipulation by the researchers. The independent variables had their influences prior to the commencement of the study.

Participants:

The population for the study consisted of undergraduates of Ekiti State University, Ado-Ekiti. Of the population, a sample of one hundred and fifty participants, comprising of 100 males and 50 females were randomly selected. 29 of the participants were in 100 level, 46 were in 200 level, 31 were in 300 level, while 44 were in 400 level (their final year). The age range of these participants is from 18 to 30 years and their mean age is 24.77 years.

Measures:

A questionnaire comprising of three sections was used for the study. Single item variables of sex and age were contained in **Section ‘A’** of the questionnaire. **Section ‘B’** of the questionnaire consisted the Aggression Questionnaire by Ekpins (1994). The inventory is a 30-items aggression measure designed to ascertain levels of aggression. It is a five-point Likert- typed scale with response categories ranging from 1 (Does not apply to me at all) to 5 (Applies exactly to me). The author reported an internal consistency of .82 and test retest reliability of 0.86 in two weeks interval. Criterion validity of 0.76 was reported after the author correlated the inventory with Wilshire Aggression Questionnaire. For this study however, a Cronbach alpha reliability coefficient of 0.67 was recorded with a mean of 119.17 used to dichotomize aggression into high and low levels.

The Zung Self-Rating Anxiety Scale (SAS) was contained in **Section ‘C’** to measure anxiety. The 20-item measure was developed by Zung (1971) and it is scored on a scale of 1 (None of the times), through 2 (Some of the times), to 4 (Most of the times). Ramirez and Lukenbill (2008) did an analysis of the psychometric properties of Lindsay and Mickie (1988) adaptation of Zung’s Scale for adults with intellectual disabilities (SAS-ID) and reported an internal consistency coefficient of .80. They correlated SAS-ID with PIMRA Anxiety Subscale, Fear Survey for Adult with Mental Retardation and Taylor Manifest Anxiety Scale, and reported a correlation rating of 0.44, 0.40 and 0.30 respectively. For the purpose of the present study, a Cronbach reliability coefficient of .71 was recorded with a mean of 42.16 to dichotomize scores into high and low levels of anxiety in this study.

The dependent variable of the study was measured with the Suicide Intent Scale (SIS) in **Section ‘D’** of our questionnaire. The Suicide Intent Scale (SIS) developed by Beck, Schyer & Herman (1974), is a 12- items semi-structured interview rating scale which is used to evaluate the severity of suicidal intent for a previous suicide attempt, usually an attempt immediately preceding the interview. Although this scale was developed for adults, the scale has been recommended as appropriate for research with adolescents (Beck & Steer, 1988). SIS is found to be internally consistent with alpha value of .85 (Spirito, Sterling, Donaldson & Arrigan, 1996). Nasser and Overholser (1999) also reported internal consistency alpha of .74 for entire SIS in a sample of adolescents.

Procedure for Data Collection:

Copies of the questionnaire were personally administered to sampled research participants after due consultations and the expression of research participant’s willingness to participate in the study. In all, a total of two hundred and fifty- six copies (256) of the questionnaire were administered. Only 168 copies were returned (65.63%) and of the 168, only 150 copies were properly responded to and thus analysed.

Method of Data Analysis:

Data collected were analysed using the 2 by 2 Analysis of Variance to test aggression and anxiety as individual and joint factors of suicide ideation/attempt. Also, Independent t-test was used to ascertain sex differences in suicide ideation/attempt.

III. RESULTS

The results of the analysed data are presented below.

Table 1: Descriptive statistics Table showing the Mean and Standard Deviation according to distribution in Categories

Dependent Variable: Suicide Intention

Dichotomised Aggression	Dichotomised Anxiety	Mean	SD	N
Low Aggression	Low Anxiety	11.51	3.69	35
	High Anxiety	11.77	3.32	39
	Total	11.65	3.48	74
High Aggression	Low Anxiety	10.09	2.92	33
	High Anxiety	10.33	3.28	43
	Total	10.22	3.11	76
Total	Low Anxiety	10.82	3.39	68
	High Anxiety	11.01	3.36	82
	Total	10.93	3.36	150

Table 2: Summary of 2 by 2 Analysis of Variance Table showing the main and interaction effects of Aggression and Anxiety on Suicide Ideation/Attempt among Undergraduates in a Nigeria University

Source	Sum of Squares	Mean Square	df	F	p
Aggression	76.27	76.27	1	6.93	<.01
Anxiety	2.22	2.22	1	0.20	>.05
Aggression ^x Anxiety	3.81	3.81	1	0.00	>.05
Error	1605.84	11.00	146		
Total	1684.19		149		

Table 2 above revealed that aggression has an independent influence on suicide ideation [$F(1, 146) = 6.93, p < .01$] and it was also revealed from the table that anxiety does not have an independent influence on suicide ideation [$F(1, 146) = 0.20, p > .05$]. Furthermore, the table revealed that there is no interaction effect of aggression and depression on suicide ideation [$F(1, 146) = 0.00, p > .05$].

Table 3: Independent t-test summary table showing sex differences in suicide ideation/attempt among Nigeria University undergraduates

Variable	N	Mean	Standard Deviation	df	t	p
Male	100	10.21	2.99	148	3.86	<.01
Female	50	12.36	3.62			

Table 3 above revealed that there is a significant sex difference in suicide ideation/attempt among Nigeria university undergraduates [$t(148) = 3.86, p < .01$]. The result also shows that males ($M = 10.21, SD = 2.99$) had significant lower scores on suicide ideation than females ($M = 12.36, SD = 3.62$).

IV. DISCUSSION OF RESULTS

A major objective of this study is to determine whether aggression and anxiety truly account for suicidal ideation and attempts among the undergraduate students. Two hypotheses were tested using appropriate statistical methods. The first hypothesis tested the individual and joint influence of aggression and anxiety on suicidal ideation and attempt among university undergraduates in Nigeria. This hypothesis was tested because various researches have implicated emotion to be a factor in suicidal ideation, attempt and complete suicide. Two by two analysis of variance revealed that aggression had a significant influence on suicidal ideation/attempt. Anxiety had no significant influence on suicidal ideation/attempt. Also there was no joint influence of aggression and anxiety on suicidal ideation/attempt.

This result is consistent with the study of Swogger, Van Orden and Conner (2014) that showed that aggression was related to planned suicide attempt. Their result and this present finding support Joiner (2005) interpersonal theory of suicide that assumes an indirect role of aggressive behaviours in suicide capability. This indirect role makes an individual overcome the fear and pain involved in suicidal behaviour. Swogger, et al., (2014) concluded that aggressive behaviour may be a sign of risk for more serious suicidal attempts.

Clinicians have identified anxiety as a major factor for suicidal risk, just as previous studies have revealed significant link between anxiety and suicide attempts (Collins, 2016). Ibrahim, Amit, and Suen (2014) study on psychological factors that predict suicidal ideation among adolescents in Malaysia revealed a non significant influence of anxiety on suicidal ideation giving credence to this present study. Despite the fact that studies has been able to establish a connection between suicide and anxiety (Nepon, Belik, Bolton, & Sareen, 2010). Most studies have not been able to show the influence of anxiety on complete suicide, suicide ideation and suicidal attempt. This was also reflected in the result of this present study.

The researchers are of the opinion that probably aggression and anxiety do not go hand in hand. This might be why an interaction influence was not found in this study. One can readily infer that when an individual is aggressive, anxiety tends to disappear at that particular point. Anxiety can only return when the cause of aggression has been removed and the individual is no longer aggressive.

The second hypothesis of this present study is to determine whether there will be a significant sex difference in suicidal ideation and attempt among undergraduates in Nigeria. This hypothesis was confirmed. There was a significant difference in the mean scores of both male and female undergraduates in this study. Independent t-test result revealed that male undergraduates had lower mean scores than female undergraduates. This result lends credence to previous researches on gender and suicidal ideation or attempt. For instance, Espelage and Holt's (2013) study of suicidal ideation and school bullying experiences after controlling for depression and delinquency revealed a gender difference in suicide ideation. Females had higher mean score than males. Sidhartha, & Jena, (2006) also found that female students have greater suicidal ideation than male

students in their study. Some other researchers like Adcock, Nagy, and Simpson (1991), Rich, Kirkpatrick-Smith, Bonner, and Jans, (1992), Zhang and Jin (1996) Chen, Lee, Wong and Kaur (2005), Ruangkanhanasetr, Plitponkarnpim, Hetrakul and Kongsakon (2005), Laghi, Baiocco, D'Alessio, and Gurrieri (2009), and Yao, Chang, Jim, Chen, He, and Zang (2014) also found similar results.

Literature review on suicidal ideation has also revealed a blend in gender differences. Some studies reported that males have higher prevalence in suicide ideation. For instance, the study conducted by Mackenzie, Wiegel, Mundt, Brown, Saewyc, Heiligenstein, Harahan & Fleming (2011), and Mustaffa, Aziz, Mahmood, and Shuib (2013) among college and university students revealed that suicidal ideation was higher for males than females. This is also true of an earlier research conducted by Stewart, Donaghey, Deary, Ebmeier, & Klaus (2008). Other studies (e. g. Laghi, Baiocco, D'Alessio, and Gurrieri, 2009), and Yao, et al., (2014) reported females as having higher prevalence in suicidal ideation. Yet some other researches reported similar prevalence for male and female in suicidal ideation (e.g. Garrison, Jackson, Addy, McKeowan, & Waller, 1991; Schweitzer, Klayich, & McLean, 1995, McAuliffe, Carcoran, Keeley, & Perry, 2003, Hossain, Paul & Islam, 2016). These realities notwithstanding, more researches have revealed that suicidal ideation is more prevalent among women than men across all countries and cultures (Amare, et al., 2018).

V. CONCLUSION AND RECOMMENDATION

Understanding the influence of aggression, anxiety and gender on suicidal ideation and attempt is a step toward predicting suicide and helping the individuals and practitioners to minimize the rate of suicide ideation, attempts and suicide completion. However, this study was not without a few limitations. One of these limitations is the use of self report instrument which offers the research no opportunity to verify the authenticity of the responses given by the participants. Another limitation is that the participants were drawn from a single university as such care should be taken in generalising the findings.

Despite these limitations however, the results of the study is quite revealing and may be handy in regulating policy formulations such that aggressiveness risk factors would be minimized to impact productivity, depressive mood, and value for human existence.

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