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Depression as a Predictor of Suicidal Ideation among Enugu State University of Science Undergraduate Students

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Abstract

The study investigated depression as a predictor of suicidal ideation among Enugu State University of Science and Technology (ESUT) undergraduate students. A sample of 118 students 65 males and 53 females were sampled in the study. The age range of the participants ranged from 17 to 27 years with mean age of 19.68 and standard deviation of 2.33. Simple (balloting) and systematic sampling techniques were used in selecting the participants. Information was obtained from the participants through the administration of two instruments: Self-rating Depression Scale and Beck Scale for Suicidal Ideation. The study adopted a correlational design while simple linear regression analysis was applied on the data. The result shows that the predictor variable (depression) accounted for 6.9% (R^2 change) variance in suicidal ideation, which is significant to F change (1,116) = 8.543, sig.004; β = .218 t(118) = 2.923 sig. = 0.004. Gender as a control variable showed that female students are prone to suicidal ideation more than their male counterparts. The implications of this study were discussed in relation to literature reviewed and recommendations made. It was concluded that ESUT undergraduate students who manifest depression are may experience suicidal ideation.

Keywords: *depression, gender, suicidal ideation, undergraduate students*

Introduction

Suicide seems to be one of the leading causes of death worldwide. The scope and gravity of this public health problem has prompted substantial increases in research (Stewart, 2001). Despite this, suicide rates have not abated. Effective prevention rests on accurate prediction. Accordingly, identifying the risk factors for suicidal thoughts and behaviour has been a major focus of suicide research. Suicide is defined as a fatal self-injurious act with some evidence of intent to die (Turecki & Brent, 2016). Many more men than women die by suicide. The male-to-female ratio varies between 4 to 1 (Europe and Americas) and 1.5 to 1 (Eastern Mediterranean and Western Pacific region), and is highest in richer countries (Hawton & Van Heeringen, 2009). These suicide figures are probably still an underestimation of the real cases. Registering a suicide is a complicated process, often involving judicial authorities. Suicide deaths may not be recognized or may be misclassified as an accident or another cause of death. Sometimes suicide is not acknowledged or reported, due to its sensitive nature and the taboo that still surrounds it (De Leo, 2015).

Suicide attempts, i.e. non-fatal suicidal behaviour, are much more frequent, and are estimated to be about 10–20 times more frequent than actual suicide. The estimated global annual prevalence of self-reported suicide attempts is approximately 3 per 1,000 adults. About 2.5% of the population makes at least one suicide attempt during their lifetime (Borges et al., 2010; Nock et al., 2008). Suicide rates vary substantially between regions. About 80% of all suicides occur in low and middle income countries (WHO, 2018). Suicide mortality rates vary from 15.6 per 100,000 inhabitants in South-East Asia to 5.6 per 100,000 in the Eastern Mediterranean region. Europe has an average suicide mortality rate of 14.1 per 100,000, way above the global average of 10.7 per 100,000. There is wide variation between the European countries, from about 3.3 per 100,000 in Azerbaijan to tenfold that figure, 32.7 per 100,000, in Lithuania. In general, Eastern and Central European countries have the highest suicide mortality rate, Western and Northern European countries are situated around the European average, and the Mediterranean countries have the lowest rates (WHO, 2017).

More so, depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. Epidemiological studies suggest that although factors such as poor schooling, poverty and un- employment are important, the strongest risk factors for suicide in this group are a history of mental illness, and a family history of suicide or mental illness (Agerbo et al, 2002). In a psycho-logical autopsy study of completed suicide in young people aged between 15 and 24, Houston et al (2001) found that 19 out of 27 individuals (70%) had suffered from a mental illness and that depression was the most common diagnosis, affecting 15 (56%) of those studied. Eight individuals (30%) had had a personality disorder and nine (33%) had had a comorbid psychiatric disorder. It is notable that very few of these young people were receiving psychiatric care when they died. The Government's recently published National Suicide Prevention Strategy (Department of Health, 2002) acknowledges the importance of improved recognition and treatment of mood disorders in young adults, particularly within the young male population.

Although most epidemiological studies estimate that around 5% of the adult population suffers from depression, there are relatively few studies focusing on populations of adolescents and young adults. Although depressive symptoms appear to be common – a recent Finnish study of young adults identified a 1-month prevalence for major depression of 10% – only a small proportion of this group are likely to present to mental health services (Aalto- Setala et al, 2001)

Adolescents with sub-diagnostic levels of depressive symptoms show higher rates of early- adulthood depression, substance misuse and adverse psychological and social functioning (Aalto- Setala et al, 2002). When symptom severity reaches the threshold for diagnosis, there is a likelihood that depression will continue into early adult life (Harrington et al, 1990; Lewinsohn et al, 1999).

The Maudsley long-term follow-up study of child and adolescent depression (Fombonne et al, 2001a), which followed 149 participants over 20 years, found that 62% experienced a recurrence of major depression. Similarly, rates of suicidal behaviour were high, with 44% attempting suicide at least once (Fombonne et al, 2001b). Levels of social dysfunction and service utilisation were much higher than in the general adult population (Knapp et al, 2002).

More so, affective illnesses may present at any age, but it is becoming clear that patients who suffer from recurrent and severe forms of mood disorder often experience their first episode of illness early in life (Pies, 2002). The clinical presentation of depression at this stage of life can be atypical and is often complicated by personality difficulties and substance misuse. A significant proportion of young people presenting with recurrent depression will go on to develop a bipolar disorder, with important implications for future pharmacological treatment choices (Bostwick, et al. 2005).

Consistent with theories and practice recommendations, many prospective studies have found that depression and hopelessness do confer substantial risk for later suicide ideation, attempts and death, with some studies even reporting 20- to 30-fold increases in risk (for example Beck et al, 2012, &Juon et al, 2009). Yet, many other studies report substantially weaker or even non-significant effects. These inconsistencies raise questions about whether depression indeed confers risk for future suicidal thoughts and behaviours, and, if so, to what degree.

Thus, the research question:
Will depression predict suicidal ideation among ESUT undergraduates?

Purpose of the Study
To investigate whether depression will predict suicidal ideation in undergraduate students of ESUT.

Theoretical Background
Psychodynamic Theory
Freud's psychoanalytic theory is an example of the psychodynamic approach. Freud (1917) prosed that many cases of depression were due to biological factors. However, Freud (1917) also argued that some cases of depression could be linked to loss or rejection by a parent. Depression is like grief, in that it often occurs as a reaction to the loss of an important relationship.

However, there is an important difference, because depressed people regard themselves as worthless. What happens is that the individual identifies with the lost person, so that repressed anger towards the lost person is directed inwards towards the self. The inner directed anger reduces the individual's self-esteem, and makes him/her vulnerable to experiencing depression in the future. Freud (1917) distinguished between actual losses (e.g. death of a loved one) and symbolic losses (e.g. loss of a job). Both kinds of losses can produce depression by causing the individual to re-experience childhood episodes when they experienced loss of affection from some significant person (e.g. a parent).

In order to avoid loss turning into depression, the individual needs to engage in a period of mourning work, during which s/he recalls memories of the lost one. This allows the individual to separate him/herself from the lost person, and so reduce the inner-directed anger. However, individuals very dependent on others for their sense of self-esteem may be unable to do this, and so remain extremely depressed.

Psychoanalytic theories of depression have had a profound impact on contemporary theories of depressions. For example, Beck's (1983) model of depression was influenced by psychoanalytic ideas such as the loss of self-esteem (re: Beck's negative view of self), object loss (re: the importance of loss events), external narcissistic deprivation (re: hypersensitivity to loss of social resources) and oral personality (re: sociotropic personality).

However, although being highly influential, psychoanalytic theories are difficult to test scientifically. For example, many of its central features cannot be operationally defined with sufficient precision to allow empirical investigation. Mendelson (1990) concluded his review of psychoanalytic theories of depression by stating: 'A striking feature of the impressionistic pictures of depression painted by many writers is that they have the flavor of art rather than of science and may well represent profound personal intuitions as much as they depict they raw clinical data. Another criticism concerns the psychanalytic emphasis on unconscious, intrapsychic processes and early childhood experience as being limiting in that they cause clinicians to overlook additional aspects of depression. For example, conscious negative self-verbalisation (Beck, 1967), or ongoing distressing life events (Brown & Harris, 1978).

Empirical Studies

Kim and Lee (2022) study on the effectiveness of predicting suicidal ideation through depressive symptoms and social isolation using machine learning techniques, which involved a total of 7994 data collected from community residence, found out that depression, hopelessness, and impulsivity were among the predictors of suicidal ideations.

Also, Olaosebikan (2020) study on "Why Do Youths Commit Suicide?, the study showed that Suicide occurs more often in older than in younger people, but is still one of the leading causes of death in late adolescence and early adulthood worldwide.

More so, Smith and Blackwood (2004) study on "Depression in Young Adults", revealed that depression, as a heterogeneous collection of disorders, is likely to include subgroups that are more genetic in origin.
A significant number of scholars reported in their studies that depression could result in suicidal ideation in students without learning disabilities (Norhayati&Suen, 2014); Cheung and Dewa (2006); Shaffer &Waslick (2002); Garlow, et al. (2007); Galaif, et al. (2007); Arria et al. (2009); Wild et al. (2004); Cannetto (2008); King et al. (2001); Dunlay et al. (2015).

A systematic review of literature Hawton and Rodham (2004) also linked depression as one of the factors causing suicidality in students. Depression and suicidality in the work of Cheung and Dewa (2006) were found to be higher in female students when compared to their male participants. Shaffer and Waslick (2002) also reported that adolescent females are at higher risk for developing depression and suicidality compared to their male counterparts. Researches and theoretical postulations have posited many factors responsible for depression which leads to suicidal ideation in students. Poor self concept and low self esteem as observed by Shaghatoleslami (2005) have a link to depression and suicidal ideation in students with learning disabilities. Omigbodun et al. (2008) according to Palmier (2011) were the first set of researchers to investigate the relationship between suicidal ideation and suicide attempt and associated psycho-social factors in youths aged 10 – 17 in South-west Nigeria. Information on links between mental health problems, suicidality or suicidal behaviours is limited in Nigeria due to certain reasons.

Hypothesis
Depression will predict Suicidal Ideation among ESUT undergraduates.

Method
Participants
One hundred and eighteen (118) participants comprising of 65 male and 53 female ESUT undergraduate students sampled from four Faculties took part in the study. They were drawn using (simple random sampling technique and systematic sampling technique of every 4th case). Thirty-eight (35) were from Faculty of Social Sciences and Humanities, 30 students were from Faculty of Law, 30 students from Faculty of Education and the remaining 23from Faculty of Agricultural sciences. The age range of the participants was 17 to 27 years with mean age of 19.68 and standard deviation of 2.33. Gender of the participants served as a control variable.

Instruments
Two instruments were used to include Self-Rating Depression Scale (SDS) Zung (1965) and Beck Scale for Suicide Ideation by (Beck, Steer &Ranieri, 1988).

Self-Rating Depression Scale(SDS) by Zung (1965)
The Zung Self-Rating Depression Scale (SDS) is a 20-item measure, with each item rated on a 4-point scale. It requires approximately 5–10 minutes to complete. Ranges for mild to moderate depression, moderate to severe depression, It is concerned to measure depression as a clinical disorder by (Zung, 1965). Scoring: Add together the values of the numbers shaded in all the 20 items to obtain the client score. Scores of 50 – 59 = mild depression, 60 – 69 = moderate depression while 70 – 80 = severe depression.
Zung (1965) provided the original psychometric properties for American samples while Obiora (1995) provided the psychometric properties for Nigeria samples.
For the Nigerian samples the norms or mean scores obtained by Obiora (1995) with a population of secondary school students are:
M(n=100)   =   48.77   F(n=100)   =   47.87
Validity: A coefficient of concurrent validity of .79 was obtained by Zung (1965) between SDS and Hamilton Rating Scale (HRS) by Hamilton (1960); between SDS and the depression scale of MMPI the coefficient is. 70.
Reliability: A three-day interval test-retest coefficient of reliability of .93 was obtained by Obiora (1995).
Interpretation: The Nigerian norms are the basis for interpreting the scores of clients. Scores higher than the norms indicate that the clients manifest clinical depression disorder while scores lower than the norms indicate the absence of clinical depression.

The Beck, Steer and Ranieri (1988) Beck Scale for Suicide Ideation
The Beck et al. (1988) Beck Scale for Suicide Ideation is a 21-items scale assesses various aspects of suicidal ideation. Each statement group consists of three sentences that describe different intensities of suicidal ideation, representing a three-point scale (0 to 2). The total BSS score can range from 0 to 38, with higher values indicating a greater risk of suicide. Beck and Steer (Beck & Steer, 1993) do not distinguish different degrees of suicidal risk. Nor do they report a cut-off criterion as even very low total scores can be associated with elevated risks of suicide (Brown et al., 2000). The first five items of the BSS serve as a screening device for suicidal ideation during the last week (including the day of assessment) and are summed up to the BSS-Screen score. Two filter questions (the statement groups four and five) assess the presence of active or passive suicidal thoughts. If participants endorse one of them (i.e., chose a sentence rated 1 or 2), they are to complete the subsequent 14 statement groups which allow for an assessment of the severity of existing suicidal ideation. If participants choose the response option rated "0" for both item 4 and item 5 they skip items 6 to 19 and precede to the last two statement groups. These last two items address the frequency and intensity of former suicide attempts and are again to be answered by all participants. The BSS has proven to be a reliable measure across many different settings and samples, showing good internal consistencies e.g. $\alpha = .87$ in an outpatient sample (Barnhofer et al., 2009), $\alpha = .89$ in a risk sample (Crane et al., 2014), and $\alpha = .88$ in a non-clinical student sample (Hirsch & Conner 2006). One-week retest reliabilities of $r_{tt} = .54$ (Beck & Steer, 1993) and $r_{tt} = .88$ (Pinninti et al., 2002) have been found.

Procedure
The researchers wrote the names of all the faculties and ask a neutral person to pick 4(four) faculties .The researchers distributed the instruments to the students in the four selected faculties with the help of the various courses representatives met at various lecture halls. First, the researchers used simple random sampling (balloting) technique to select four faculties out of the ten faculties in ESUT Agbani. Second, the researchers used systematic sampling technique of every 4th case to sample the students met at various faculty auditorium at the time of visit.   The choice of the systematic sampling of 4th case is to give everyone in the faculty auditorium a chance to be part of the study since there are usually many students in the auditoriums. The researchers introduced themselves to the lecturers met at the faculty auditoriums and pleaded to distribute their research questionnaires immediately after their lectures. The researchers equally created rapports with the

students before embarking on the research. One hundred and thirty (130) copies of the questionnaires were distributed, (125) were collected, (5) were not collected from the participants because they left with them; seven (7) were discarded for improper filling, and thus, the remaining one-hundred and eighteen (118) copies of the questionnaires properly filled were analyzed.

Design and Statistics

The research adopted a correlational design and simple linear regression analysis as a statistical tool to analyze the scores that were obtained from the participants. The choice of the design is because an association is sort between two variables while the choice of the statistics was based on one predictor variable (depression) and one criterion variable (suicidal ideation). The analysis was done with the aid of Statistical Package for the Social Sciences (SPSS) version 25.

Results

Table 1: Descriptives and Inter-correlation of age, gender in depression as a predictor of suicidal ideation among ESUT undergraduates

		Mean	SD	BSS	SDS	AGE	GENDER
Pearson	BSS	15.08	6.20	1.000	.262*	.036	.155*
Correlation	SDS	45.48	7.44		1.000	-.302*	.301*
	AGE	19.68	2.33			1.000	-.130
	GENDER	1.85	.36				1.000

Note: N = 118, * = p<. 01; BSS = Beck Suicidal Scale, SDS, Self-rating Depression Scale, Gender = 1 male and 2 female.

Table 1 demonstrates the correlation matrix. The table revealed suicidal ideation correlated positively with Depression, indicating that participants who experience suicidal ideation also experience depression $r(118) = .262$, p=.001. Gender had a positive relationship with suicidal ideation $r(118) = ..155$, p =.000. Also, depression had positive relationship with gender $r(118) = .301$, p = .000 and a negative relationship with age $r(118) = -.302$, p = .000. This implies that suicidal ideation is more among younger undergraduates (17 years) than their older ones (27 years).

Table 2: Model Summary Analysis of depression as a predictor of suicidal ideation among ESUT undergraduate students.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.262ª	.069	.061	6.01310

a. Predictors: (Constant), SDS

The results of the regression analysis as presented in table 2 shows that the control variable (suicidal ideation) and the predictor variable (depression) accounted for 6.9% (R^2 change) variance in suicidal ideation which is significant to F change $(1,116) = 8.543$, sig.004 see table 2.

Table 3: ANOVA summary table of depression as a predictor of suicidal ideation among ESUT undergraduates.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	308.894	1	308.894	8.543	.004[b]
	Residual	4194.258	116	36.157		
	Total	4503.153	117			

a. Dependent Variable: BSS
b. Predictors: (Constant), SDS

Table 4: Coefficient table of depression as a predictor of suicidal ideation among ESUT undergraduates.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.157	3.441		1.499	.137
	SDS	.218	.075	.262	2.923	.004

a. Dependent Variable: BSS

This table shows the linear regression equation that best estimates suicidal ideation from depression thus the alternative hypothesis is hereby accepted β = .218 t(118) = 2.923 sig. = 0.004. The B coefficient for depression has "Sig" or p = 0.004. It is statistically significant.

Discussion

Based on the findings, these implications were observed. This study focused on two major variables which are depression and suicidal ideation. The implications were made to benefit further researchers, ESUT undergraduates and the society at large. Due to the outcome of the result, the hypothesis was accepted showing that there is a level of significance of depression on the suicidal ideation of ESUT undergraduates. In school, there seems to be lot of issues, from friends, course of study, school authority and relatives that are capable of bringing about depression which may eventually create room for suicidal ideation. However, it was observed that depression accounted for only 6.9% in suicidal ideation among ESUT undergraduates, hence there could be other factors responsible for suicidal ideation which were not studied in this research.

The practical implication on why depression accounted for only 6.9% variation in suicidal ideation seems to do with the perception of the construct depression especially among the Igbo ethnic group where the research is conducted. 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. From the religious point of view, it is believed in some quarters that anybody who commits suicide will go to hell. Hence, a person who wants to commit suicide may give no hint about committing suicide so as not to be dissuaded by religious authorities. In some instances in the African setting, it is strongly believed that a person who commits suicide is

under a spell or a curse. Families whose members commit suicide are also sometimes stigmatized. Children and young adults in the African setting are to be seen and not heard by adults. As such, they are, most of the time, not free to discuss their feelings or problems with adults. This lack of freedom may also hinder them from discussing their thoughts with their family or peers.

Conclusion

This study investigated whether depression predict suicidal ideation in ESUT undergraduates. Data generated from these scales were analyzed using simple linear regression analysis. The result showed that depression predicted suicidal ideation in ESUT undergraduates. Hence, undergraduates who have depression may be prone to suicidal ideation. Though, depression contributed only 6.9% in suicidal ideation among ESUT undergraduates.

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