



ISSN 0189-3491

Volume 16, Number 1

2020

NIGERIAN JOURNAL JOURNAL OF PSYCHOLOGICAL RESEARCH

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Published by

Department of Psychology,
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www.psychology.unn.edu.ng



Suicidal ideation among undergraduate students: Academic stress and self-esteem as predictive factors

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ARTICLE INFO

Keywords:

Academic stress,
Self-esteem,
Suicidal ideation,
Undergraduate students

ABSTRACT

This study investigated academic stress and self-esteem as predictive factors in suicidal ideation among undergraduates. Participants were 482 undergraduate students with age range of 18- 47 = (M = 23.93, SD = 3.50). The participants completed the Suicidal Ideation Scale, Academic Stress Scale, and Index of Self-esteem. Results of hierarchical multiple regression analysis showed that test stress ($\beta = .12, t = 2.40, p < .05$) and study stress ($\beta = .12, t = 2.4, p < .05$) significantly predicted suicidal ideation among undergraduates while teacher stress ($\beta = .09, t = 1.74$), results stress ($\beta = -.05, t = -.87$), peer stress ($\beta = .07, t = 1.44$), time management stress ($\beta = .08, t = 1.51$), and self-inflicted stress ($\beta = .03, t = 1.55$) did not significantly predict suicidal ideation. Finding also revealed that self-esteem ($\beta = .06, t = 1.27$) did not significantly predict suicidal ideation among undergraduates. These implied that academic related stressors have a role to play in suicidal ideation engagements. One practical implication of the finding of this study is that there should be policies and programmes for reduction of academic stress and regular psychological and counselling assessment for undergraduates in order to curtail the menace of suicidal ideation.

Introduction

In today's ultra competitive educational institutions, students face more stress than ever (Behere, Yadav, & Behere, 2011). The stress is related to studies, examination, pressure from peers, teachers or parents, which may at times result to extreme negative reactions of the students to the stressors leading to suicidal ideation. Suicidal ideation is the predisposing factor to suicide, and this has been a rising predicament among students (Bilsen, 2018). Studies on suicidal ideation are of great importance in the present era and have become an important topic in academic circles. Such researches have drawn the attention of behavioural scientists just like the present study to explore the latent factors, which cause increasing tendency of suicidal ideation. Extant findings such as Akhtar and Alam (2015) indicated that students feel the effects of stress in a harsh and probably negative way. Some effects include a sudden drop in grades, depression, general fatigue, and aggression (Akhtar & Alam 2015). According to Akhtar and colleague, academic stress and anxiety during young age may even have a negative effect on health, too. Stress affects the human body physically and can also harm a person's emotional well being as well (American Psychological Association 2019). Stress level affects students academically and changes the way the person thinks and acts during school or while studying (Akhtar & Alam 2015).

Suicidal ideation is a thought process in which an individual think about suicide. It is also the thought, intent, plan, and imagination of individual concerning their wish to commit suicide (Conner, Duberstein, Conwell, Seidnitz, & Caine, 2001; Lester, 2006). Remarkably, it is seen from Banerejee's report (2001) that every year about 25,000 students in a large group of 18 to 20 years commit suicide during the examination months. Centres for Disease Control and Prevention, (2007) reported that suicidal ideation is the predisposing factor to suicide which is the second leading cause of death among 25-34 year olds and the third leading cause of death among 15- to 24 year olds, and accounts for 12.2% in most countries, making it a significant public health concern on college campuses. Suicidal ideation includes all overt suicidal behaviours and communications such as suicide threats and expressions of wish to die. Suicidal ideation is a known risk factor for suicidal attempt, which in turn increases risk for suicidal death (Aradilla-Herrero, Tomás-Sábado & Gómez-Benito, 2014; Denise, Middlebrook, Pamela, LeMaster, Janette, Douglas, & Spero, 2008; Stark, Riordan & O'Connor, 2011). For one to commit or attempt suicide one has to think about doing so, plan about the execution and even writes death threats; and these are ideations. Ideation precedes all planned suicides or suicide attempts except accidental suicides or death. No completed suicide or attempted suicide will be carried out without thinking about it, planning it, and

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sometimes writing death threats.

High level of parental prospects, academic demands, adjustment to new conditions, school and college environment, peer pressure, break-up with boy/girl friends are some of the greatest common events in the life of undergraduate that may lead to serious consequences resulting in suicidal ideation (Shaheen & Jahan, 2014; Seligman & Csikszentmihalyi, 2000). Over the years, students are equally bombarded by the stressors in the form of growing pressure, highly competitive environment, undue parental pressure and expectation, and career related worries; interpersonal problems; problems in living conditions and home environment; worries about their future; health and financial status of family members (Akhtar & Alam 2015). These stressors have brought students' life to a very miserable condition, hence, inability to cope with such demands and expectation often lead to suicidal ideation among students.

As a support, Toero, Nagy, Sawaguchi and Sotonyi (2001) argued that there is a strong link between the pressure to excel in school and suicidal behaviours among students. Their study also showed that the number of suicide cases in a year usually peaked during examination periods where students experienced a high level of stress in school. Most individuals feel that suicidal ideation constitutes a tragedy that should be avoided, but how can one prevent such a tragedy when understanding the underlying causes are still imperfect (Schlebusch, 1995; Wilcox, Arria, Caldeira, Vincent, Pinchevsk, & O'Gardy, 2010) and when the factors leading to suicidal ideation and attempted or completed suicide are diverse and touch on every part of individual's life.

Nock, Borges, and Bromet (2008) affirm that between 32% and 48% of young adults have suicidal thoughts at some point in their developmental life stages. Arria, Grady, Caldeira, Vincent, Wilcox, and Wish (2009) also reported that suicidal ideation among first-year college students in the USA indicated that 6% of them had current suicidal ideation. It is strongly believed that suicidal behaviours affect many undergraduates and adults all over the nation, Nigeria inclusive. Bauer, Chesin, and Jeglic (2014) found that 21.6% of their sample reported thoughts of suicide and, in another study; approximately 49% of college students reported a lifetime history of suicidal ideation or attempts (Centre for Disease Control, 2012). Despite its tragic nature, death by suicide is a relatively rare phenomenon, and it is much more likely that suicide reduction efforts will have an impact on the amelioration of suicidal behaviours. Suicidal behaviours comprised of behaviours that don't always result in death but are related to the process or concept of self-inflicted death (Silverman, Berman, Sanddal, O'Carroll, & Joiner, 2007).

Several cases of suicide among Nigerian students have been reported elsewhere (see Temi, 2014; Aruya, 2017; Atueyi, 2018; Chux, 2018; Dayo, 2018; Akinloye, 2018). These reported cases of suicide are just few in the public domain, as there are several cases of suicide across Nigeria that were either concealed by the affected families for fear of stigmatization or not reported to the Police or by the media. Thus, these facts make it clear that suicidal ideation and suicide exist in our society. In spite of the increasing rate of suicide among Nigerian Undergraduate students, the issue of suicidal ideation is not yet getting the necessary attention it deserves. These gave the researchers serious concerns and reason for the present study which is to examine the roles of academic stress and self-esteem

in suicidal ideation among students.

Wood, Wood and Boyd (2008) defined stress as the biological, psychological, and physiological conditions that threaten or interfere with human system and alter some form of adaptation or adjustment of such human body system. The human emotional response to stress triggers the biological, psychological, and physiological arousal of human system due to increased activity of the sympathetic nervous system (Ifeagwazi, Chukwuorji, & Kalu, 2013). The most current definition of stress now emphasizes the relationship between the individual and the environment (Taylor, 2003). This reflects the interactional or transactional model of stress, which conceptualizes stress as a process that includes stressors (events that produce threats to a person's well-being and strains (the person's physiological and psychological responses to stressors). According to Alloy, Jacobson and Acocella (1999) cognitive theorists see stress as not a stimuli or response, but as an association between the stimulus and the human's appraisal or interpretation of it, a process that determines human responses. The stress has consequences on undergraduate's physical, emotional and psychological well-being.

According to Ifeagwazi (2016), stress is not necessarily bad as some researchers assume, but there are always differences between stresses that are positive/beneficial (eustress) and stress that are harmful/damaging (distress). From an adaptive point of view, moderate level of stress facilitates and motivates adaption. Humphrey, Yow, and Bowden, (2000) see stress as factors or variables acting internally or externally, which make adaptation of humans to environment difficult and which induce increased effort on the part of the person(s) to maintain a state of equilibrium between himself and herself and the external environment. Stress is one of the psychological factors that induce suicidal ideation among undergraduate students and researchers have found that stressful life events are positively related to suicide acts and suicidal ideation (Gould, Greenberg, Velting & Shaffer 2003).

Ifeagwazi (2016) defined academic stress as pervasive clinical phenomenon that has been linked to health and illness of persons. In the universities, sustained and remitting academic workload or pressures can tear and wear a student down over time and result in psychological burnout which is an extreme reaction to a continuing stressful situation (Ifeagwazi, 2006). Although there are many risk factors for suicidal behaviours, including psychopathology, a well-established and common contributor to suicidal behaviour is the experience of stress (Davis, Witte, & Weathers, 2014; Krysinska & Lester, 2010; Lane, Hourani, Bray, & Williams, 2012; Mitchell, Crane, & Kim, 2008). Relatively previous study observed that studying in the university is inherently stressful and that Nigerian undergraduate students encounter a host of stressful events or experiences while undergoing academic training (Ifeagwazi, 2006).

The association between school or academic stressors and suicide ideation among young people has been well documented in several research studies (Tyssen, Vaglum, & Grønvold, 2001; Rosiek, Rosiek-Kryszewska, & Leksowski, 2015). In school, undergraduates often see themselves as being evaluated in terms of their academic performance and the pressure to excel is an important measure of their success in school. It is therefore not surprising that

students who attempted suicide often had problems in school (Hacker, Suglia, Fried, Rappor, & Cabral 2006). Academic achievement is highly valued by Nigerians today because it is perceived as one of the few avenues for upward mobility and expanded options, thus the significance that individuals and families attribute to academic success is intensified (Gloria, & Ho 2003). An undergraduate not meeting his/her own expectations and the expectations of significant others is a serious matter which could potentially result in loss of face which in turn leads to loss of confidence and support from one's family (Yeh & Huang 1996).

A study by Juon, Nam, and Ensminger (1994) found that students who reported feeling a high level of stress regarding academic performance were more likely to have serious thoughts about suicide than those students who did not experience academic stress. Also, academic difficulties were also found to be one of the predictors of suicidal behaviours among a population of young suicide attempters besides other factors (Ho, Hong, & Kua, 1999). School problems accounted for 11% of adolescents who attempted suicide (Faubert, Forehand, Long, Burke, & Faust, 1987). In addition to students putting immense pressure on themselves to excel in school, they were also cognizant of the need to fulfil familial obligations and live up to the expectations of parents and teachers. Taken together, empirical evidence points toward academic stress and in particular, academic expectations, as a factor contributing to suicidal ideation in adolescents especially in Nigeria.

Self-esteem deficits appear to play an important role in understanding suicidal behaviour among undergraduates. Suicidal ideation may be related to persistent negative views of the self. A negative view of the self may involve seeing the self as worthless and the future as hopeless (Manani & Sharma, 2013). An undergraduate with low self-esteem may see life as not worth living and may perceive everyday stressors as overwhelming. Therefore, low self-esteem has been found to be important in the prediction of suicidal ideation among undergraduates (Dukes & Lorch, 1989). The presence and severity of suicidal ideation in undergraduates has been related to low self-esteem (Brent et al., 1986); and low self-esteem is also implicated in suicide attempts made by adolescents (Kienhorst et al., 1990). Furthermore, negative self-evaluations were associated with increased suicidal tendencies, number of suicidal gestures, seriousness of suicidal intent, and medical lethality of the attempt in a study by Robbins and Alessi (1985). Low-self-esteem is seen as the cause for a wide range of personal and social ills, from crime and drug addiction, educational under-achievement, suicidal acts and a feeling of general wellbeing (Baumeister, Campbell, Krueger, & Vohs, 2003).

Low self-esteem has been found to be important in the prediction of suicidal ideation among high school students (Dukes & Lorch, 1989). The presence and severity of suicidal ideation in adolescents with affective disorders has been related to low self-esteem (Brent, Kalas, Edelbrock, Costello, Dulcan, & Conover 1986). Low self-esteem is also implicated in suicide attempts made by adolescents (Kienhorst, 1990). Furthermore, negative self-evaluations were associated with increased suicidal tendencies, number of suicidal gestures, seriousness of suicidal intent, and medical lethality of the attempt in

a study of 64 adolescent psychiatric inpatients (Dukes & Lorch, 1989). Wilburn and Smith (2005) conducted a study on stress, self-esteem, and suicidal ideation in late adolescents/adulthood. Results revealed that both stress and self-esteem were significantly related to suicidal ideation and low self-esteem and stressful life events significantly predict suicidal ideation. Self-esteem, the evaluations individuals make about the self (Harter et al., 1992), is shaped by individuals' appraisals of how they are perceived by significant others (Sullivan, 1953). Therefore, the quality of feedback received from the environment significantly affects one's functioning. As such, negative feedback about the self is detrimental to the self-esteem (Sullivan, 1953). Thus, it would be logical to assume that self-esteem is a powerful resource for combating the effects of stress and suicidal ideation.

Theoretical framework of the study

The present study was archd on the hopelessness theory of suicidality (Beck et al 1985/1990). This theory was based on the assumptions that overwhelming thought and feelings of hopelessness were what leads an individual to develop suicidal ideation and eventually die by suicide. Suicidal ideation is a function of the hopeless cognition about an individual's unchangeable negativity about one's situation, so that no matter what one does, the negative situation will never change. The theory also has it that a suicidal individual may think things like "No matter what I do, I will still be a failure" and these thoughts may contribute to suicidal ideation. The theory equally posits that when things are difficult in one's life, suicidal individual is likely to feel powerless and hopeless. Research shows that self-esteem is strongly related to hopelessness and depression (Harter, 1999). Low self-esteem, negative expectations about the future and loneliness have been all involved in the explanation of suicidal behaviour. Linking these to the present study an undergraduate student who is overwhelmed with academic stress and at the same time have low self-esteem is likely to engage in suicidal ideation which could eventually lead to attempted or completed suicide.

Hypotheses

- (1) Academic stress dimensions (teacher stress, results stress, test stress, studying in group stress, peer stress, time management stress and self-inflicted stress) will significantly predictive suicidal ideation among undergraduates.
- (2) Self-esteem will be a significant predictive factor in suicidal ideation among undergraduates.

Method

Participants

Participants for the study were 482 undergraduates selected from Ebonyi State University, (EBSU), Abakaliki, Nigeria. The gender spreads of the participants were made up of 262 males and 220 females respectively. Sample age range were between 18 years to 47 ($M = 23.93$; $SD = 3.50$). The total samples of undergraduates were drawn from 400, 500, and 600 levels in different Faculties of the university, namely, Basic Medical Science ($n = 145$), Faculty of Health Science and Technology ($n = 181$), and Faculty of Law ($n = 156$) through

purposive sampling techniques. The main reason for choosing the above disciplines and levels is basically because they are adjudged to experience more academic stress than students in other disciplines and levels (Behere, Yadav, & Behere, 2011). For instance, these students are expected to write degree and professional examinations before graduation and those who fail such qualifying examinations are withdrawn from such courses. Also, their years in the university are longer, unlike the students in other disciplines who write only degree examination within four years of admission. Two hundred and forty-seven students were in 400 levels, while 185 students were in 500 levels and 50 students were in 600 level. One hundred and twenty-four students stay on campus, while 358 students stay off campus.

Instruments

Suicidal Ideation Scale (Rudd, 1989)

The 10-item Suicidal Ideation Scale (SIS) is a screening and assessment tool that provides information about the presence or absence of suicidal thinking, the intensity of those thoughts and presence or absence of prior suicidal attempts. The SIS is scored on a 5-point likert type scale ranging from (1= Never, 2= infrequently, 3= Sometimes, 4= frequently and 5= Always). The total score ranges from 10-50, and score of 15 or greater is considered to be serious suicidal ideation (Rudd, 1989). The SIS has high internal consistency (Cronbach's alpha = .86) and adequate item- total correlations ($r_s = .45$ -.74) (Rudd, 1989). The item sample on the scale includes: "I have been thinking of ways to kill myself". For the present study, the SIS yielded a reliability of .90.

Academic Stress Inventory (Ying & Farn, 2009)

This is a 34-item inventory designed to measure academic stress of undergraduate students. Items are scored on a 5-point likert scale as follows: 1= Agree, 2= completely Agree 3=Undecided, 4= Disagree and 5= completely disagree. Item of the inventory are categorized into 7 factors: Factor 1: Teacher stress (e.g., I feel that I do not understand a lot about some teachers teaching content), Factor 2: Results stress (e.g., I have conflicts with my parents due to my academic results), Factor 3: Test stress (e.g., I stay up late before all the big and small school test Factor 4: Studying in group stress (e.g., When I give a speech or presentation I worry that my classmates will laugh at my inability to perform well), Factor 5: Peer stress (e.g., I am very worried that my academic results are not as good as those of my classmates are) Factor 6: Time management stress (e.g., I feel that the social activities and student association affect my academic work) and Factor 7: Self inflicted stress (e.g., I feel that after I entered university, my performance was not as good as I had expected). The higher the point for each factor, the higher is the degree of stress produced by these factors. Cronbach's α for the scales are .90 (Teacher stress), .89 (Results stress), .92 (Test stress), .87 (Studying in group stress), .85 (Peer stress), .87 (Time management stress) and .86 (Self inflicted stress). The α value of the overall academic stress inventory was .90. Reliability (Cronbach's α) of the Academic Stress Inventory for the present study was .79 for the full test involving 34 items. The dimensions of academic stress yielded the following Cronbach's α coefficients: Teachers stress = .60, results stress = .50,

tests stress = .60, studying in group stress = .56, peers stress = .50, time management stress = .37, and self inflicted stress = .43.

Index of Self-Esteem Scale (Hudson, 1982)

The ISE is a 25-item inventory designed to measure how poor a client's self-esteem is. The inventory is developed for individuals above 12 years of age. Hudson (1982) provided the original psychometric properties for American samples while Onighaiye (1996) provided the properties for Nigerian samples. The instrument is scored on a 5-point Likert-type scale with response choices of 1= Rarely or none of the time, 2= A little of the time, 3= Sometime, 4= A good part of the time, 5= Most or all of the time. Sample of item on the scale includes: "I feel that others get along better than I do." The instrument had a Cronbach's α .83 and a two- hour-test-retest coefficient of .82 (Hudson, 1982). A Cronbach's α of .90 was obtained by Onighaiye (1996). For the present study, the Cronbach's α was .87.

Procedure

The researchers provided an informed consent form which the participants read and signed before participating in the study. The study was specifically planned to be conducted during examination periods with the students of 400 level, 500 level and 600 level, given that researches showed that students are subjected to more stress during examinations (Ezeilo, 1982; Ifeagwazi, 2008;). Purposive sampling was used to select the participants from each level. The participants were informed that this study was purely for academic purpose and were assured of the confidentiality of their responses as their names are not needed. The questionnaire forms containing the three scales (Suicidal Ideation Scale, Academic Stress Scale and Index of Self- Esteem Scale) and the demographic questions were administered to the students who voluntarily accepted to participate in the study. This goal was achieved through the help of five trained research assistants from psychology department. The questionnaire forms were administered to the participants immediately (15 minutes) before their examinations commenced. Completed questionnaire forms were collected from the participants, and cross checked for omission or improper filling. Out of five hundred (500) copies of questionnaire forms distributed, only four hundred and ninety-two (492) copies of questionnaire forms were returned. Four hundred and eighty-two (482) copies of questionnaire forms were properly filled and were used for data analysis.

Design/Statistics

The study adopted a cross-sectional survey research design. This is because the data were collected from the participants across sections all at once and then the data were analysed. Multiple regression was employed for the data analyses because it allowed simultaneously use of several independent (predictors) variables. By using more than one independent variables, one should do a better job of explaining the variation in the criterion and be able to make more accurate predictions (Mendenhall, Beaver, & Beaver, 2009). Specifically, hierarchical regression analysis using enter method, were conducted with the aid of SPSS version 20 software.

Results

The correlations among the study variables and the demographic (control) variables are shown in Table 1. Thereafter, to test the hypotheses, hierarchical multiple regression was conducted in which Suicidal ideation was the dependent variable.

Table 1: Means, Standard Deviations, and Correlations for Demographic Variables, Academic Stress, Teacher Stress, Results Stress, Test Stress, Studying in Group Stress, Peer Stress, Time Management Stress, Self Inflicted Stress and Self- Esteem on Suicidal Ideation

S/N Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	SD
1 Suicidal_Ideation		-.10**	-.03	-.08*	.06	.31***	.10**	.23***	.13**	.23***	.25***	.21***	.19***	.18***	74.59	14.06
2 Age			-.15***	.16***	.02	-.05	-.01	-.07	.01	-.03	-.11**	-.03	-.02	.05	23.93	3.50
3 Gender				-.12**	.06	-.06	.02***	-.01**	.14***	.01	-.001*	-.01**	-.06**	-.06*	1.46	.50
4 Level_of_study					-.01	-.12**	.23***	-.11**	-.04	.01	-.09*	-.13**	-.12**	-.09*	1.49	.50
5 Residence						.11**	-.03	.05	.09*	.08*	.05	.04	.15***	.05	1.74	.44
6 Academic_stress							-.13**	.73***	.66***	.64***	.64***	.63***	.51***	.64***	99.30	18.62
7 Self-esteem								.06	.13**	.02	.16***	.01	.08*	.14***	15.65	8.52
8 Teacher stress									.34***	.39***	.34***	.34***	.24***	.30***	27.15	6.26
9 Results stress										.38***	.29***	.29***	.21***	.40***	13.49	4.51
10 Tests stress											.30***	.28***	.21***	.31***	12.35	3.88
11 Study stress												.39***	.22***	.29***	14.15	4.28
12 Peer stress													.32***	.36***	12.32	3.43
13 Time management stress														.43***	8.37	2.78
14 Self-inflicted stress															11.48	3.46

Note. N = 451, *p < .05 (two-tailed), **p < .01 (two-tailed), ***p < .001 (two-tailed). Gender was coded 1 = male, 2 = female; Age was coded in years.

Result of correlation Table 1 showed that suicidal ideation was significantly related to age, level of study, academic stress, self-esteem, teacher stress, result stress, test stress, study stress, peer stress, time management stress and self inflicted stress, but not significantly related to gender, and residence. Thus, the more the academic stress the more likely a student will be disposed to suicidal ideation. Age was significantly related to gender, level of study, and study stress. Gender was significantly related to level of study, self-esteem, teacher stress, result stress, study stress, peer stress, time management stress, and self-inflicted stress. Level of study was significantly related to academic stress, self-esteem, teacher stress, study stress, peer stress, time management stress, and self-inflicted stress. Residence was significantly related to academic stress, result stress, test stress,

and time management stress. Academic stress was significantly related to self-esteem, teacher stress, result stress, test stress, study stress, peer stress, time management stress, self inflicted stress. Self-esteem was significantly related to result stress, study stress, time management stress, self inflicted. Teacher stress was significantly related to result stress, test stress, study stress, peer stress, time stress, self inflicted. Result stress was significantly related to test stress, study stress, peer stress, time management stress, self-inflicted. Test stress was significantly related to study stress, peer stress, time stress, self-inflicted stress. Study stress was significantly related to peer stress, time management stress, self inflicted stress. Peer stress was significantly related to time management stress, self inflicted. Time management stress was significantly related to self inflicted.

Table 2: Hierarchical multiple regression showing the prediction of suicidal ideation from control variables, academic stress (and its dimensions) and self-esteem

	R	R ²	R ² Δ	B	Beta(β)	t
Model 1	.14*	.02*	.02*			
Age				-.39	-.10	-2.08*
Gender				-1.28	-.05	-.98
Level of Study				-1.58	-.06	-1.21
Residence				1.96	.06	1.34
Model 2						
Academic Stress	.33***	.11***	.09***	.23	.30	6.82***
Model 3						
Self esteem	.33	.11	.003	.09	.06	1.27
Model 4						
Teacher Stress	.35	.12	.02	.20	.26	1.74
Results Stress				-.34	-.11	-1.61
Tests Stress				.24	.07	1.01
Study Stress				.20	.06	.93
Peer Stress				.11	.03	.42
Time Management Stress				.18	.04	.65
Self-Inflicted Stress				-.08	-.02	-.33

Regression result in Table 2 above indicated that amongst the control variables only age significantly predicted suicidal ideation ($\beta = -.10$, $t = -2.08$, $p < .05$). But gender ($\beta = -.05$, $t = -.98$), level of study ($\beta = -.06$, $t = -1.21$), residence ($\beta = .06$, $t = 1.34$) did not significantly predict suicidal ideation. The control variables jointly accounted for 14% variance in predicting suicidal ideation among undergraduates ($R = .14$, $p < .05$). Academic stress ($\beta = .30$, $t = 6.82$, $p < .001$) entered in model two of the equation significantly predict suicidal ideation. Made 9% variance in predicting suicidal ideation among undergraduates ($R^2\Delta = .09$, $p < .001$). Thus, undergraduates with increased academic stress

reported higher levels of suicidal ideation. Self-esteem ($\beta = .06$, $t = 1.27$) entered in model three of the equation did not significantly predict suicidal ideation among undergraduates. Similarly, the dimensions of academic stress entered in model four of the equation; teacher stress ($\beta = .26$, $t = 1.74$), results stress ($\beta = -.11$, $t = -1.61$), test stress ($\beta = .07$, $t = 1.01$), studying in group stress ($\beta = .06$, $t = .93$), peer stress ($\beta = .03$, $t = .42$), time management stress ($\beta = .04$, $t = .65$), self inflicted stress ($\beta = -.02$, $t = -.33$) were not significant predictors of suicidal ideation among undergraduates.

Table 3: Hierarchical multiple regression showing the Prediction of 'Suicidal Ideation' through Factors of Academic Stress and Self- Esteem

	<i>R</i>	<i>R</i> ²	<i>R</i> ² Δ	<i>B</i>	β	<i>t</i>
Model 2(FAS)	.35	.12	.02			
Teacher stress				.20	.09	1.74
Results stress				-.14	-.05	-.87
Tests stress				.44	.12	2.40*
Study stress				.40	.12	2.40*
Peer stress				.30	.07	1.44
Time management stress				.38	.08	1.51
Self-inflicted stress				.12	.03	.55
Model 3						
Self-esteem	.35	.12	.10	.11	.07	1.43

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $N = 482$.

Table 3 above showed regression analysis excluding academic stress. Result revealed that test stress ($\beta = .12$, $t = 2.40$, $p < .05$) and study stress ($\beta = .12$, $t = 2.4$, $p < .05$) are significant predictor of suicidal ideation while teacher stress ($\beta = .09$, $t = 1.74$), Results stress ($\beta = -.05$, $t = -.87$), peer stress ($\beta = .07$, $t = 1.44$), time management stress ($\beta = .08$, $t = 1.51$), Self-inflicted stress ($\beta = .03$, $t = 1.55$), are not significant predictors of suicidal ideation among undergraduates. The table also reviewed that self-esteem ($\beta = .06$, $t = 1.27$) did not significantly predict suicidal ideation among undergraduates.

Discussion

The present study investigated academic stress and self-esteem as predictive factors in suicidal ideation among undergraduates. The first hypothesis tested was that academic stress dimensions (Teacher stress, results stress, test stress, studying in group stress, peer stress, time management stress and self-inflicted stress) will significantly predictive suicidal ideation among undergraduates. The finding of the study indicated that academic stress (specifically test and study stress) significantly played a role in suicidal ideation. The results support the findings of previous researchers who reported that undergraduates who experience higher levels of academic stress were high in suicidal ideation (Ang & Huan, 2006; Arun & Chavan 2009, Hameeda & Musaddiq, 2017, Banerjee

& Chatterjee, 2016, Oginyi et al., 2018). Previous empirical findings (Reynolds 2015., Feng, Li, & Chen 2015, Zhang, Wang, Xia, Liu, & Jung, 2012) also reported that perceived stress and suicidal behaviours were all positively correlated.

As stated by Beck et al. (1990) in hopelessness theory of suicide, suicidal ideation is a function of the hopelessness cognition about an individual's unchangeable negativity about one's situation, so that no matter what one does, the negative situation will never change. Hence, suicidal individual may think things like "No matter what I do, I will still be a failure" and these thoughts may contribute to suicidal ideation. According to Lazarus and Folkman, (1984) in transactional model of stress, the level of stress experienced in the form of thoughts, feelings, emotions and behaviours, as a result of external stressors, depends on appraisals of the situation which involves a judgment about whether internal or external demands exceed resources and ability to cope when demands exceed resources; and that individual's cognitive appraisal evaluates and appraises each situation and determines whether that situation constitutes certain elements that are potentially threatening, harmful and damaging.

Taylor (2003) in the fight or flight model of stress reported that human bodies have a natural physiological or biological response to stress known as the fight or flight response. When it is not prolonged, this physiological response is adaptive

and energizing because it helps the body fight or flee from a threat or stressors. But when this physiological response is prolonged, it causes wear and tear on the body, potentially contributing to illnesses such as ulcers, headaches, high blood pressure, coronary heart disease and impairment of the immune system. The experience of a stressor or threat activates our physiological alarm system which in turn mobilizes our body resources in preparation for emergency response. The alarm reaction serves to mobilize the body for defence (Walter, 1929).

The second hypothesis that self-esteem will be a significant factor in suicidal ideation among undergraduate was not confirmed. The finding of the study indicated that self-esteem did not significantly play a role in suicidal ideation. The finding is inconsistent with previous empirical findings (e.g., Singh & Pathak, 2017; Becky, Nguti, Omulema, Njoroge, & Mwenda, 2016; Al-Shawashereh, 2015; Ha-Yun & Kyung, 2015; Aradilla-Herrero, Tomás-Sábado, & Gómez-Benito, 2014) indicating that varied levels of self-esteem exert differential effects on suicidal ideation among students, suggesting that the higher the level of self-esteem the lower the chances of indulging in suicidal ideation. The result of the present finding indicates that suicidal risk showed a significant negative association with students' self-esteem since it did not support the previous findings of the researchers who stipulated that self-esteem is associated with suicidal ideation.

The finding is also inconsistent with Zeigler-Hill and Myers (2009) in implicit theory of self-esteem, which suggests that an individual's perceived level of self-esteem, may have an influence on how that individual is viewed by the social environment. For example, individuals who appear to possess high self-esteem are assumed to have other desirable characteristics in the absence of contradictory information (political competence; Zeigler-Hill & Myers, 2009). Hence, the ability to convey signals about one's feelings of self-worth may be vitally important to forming and maintaining social relationships as well as establishing one's social standing. Notwithstanding the positive relationship or association between suicidal ideation and self-esteem found by previous researchers (Leary, 2004, 2005; Deci 2000).

The findings of this study have some practical implications. Academic stress (test and study) is a predictive factor in suicidal ideation among undergraduates. Therefore, students who have low coping ability or tendency perceive academic stress as big threat, inevitable, and looks for a way of escaping or avoiding it, thereby having suicidal ideation, which could eventually lead to attempted or completed suicide. Academic activities which are meant to be forms of training to undergraduates are rather perceived as factors disposing them to have suicidal thoughts. Therefore, there is need to review more causes of stress and coping strategies among undergraduates since global changes have made most of them unable to withstand distresses. More so, there should be policies and programmes for reduction of academic stress and regular psychological and counselling assessment for undergraduates in order to curtail the menace of suicidal ideation.

Conclusion

Suicidal ideation as a predisposing factor to suicide, and a rising predicament among students which must be addressed to save young people from its menace. Suicidal ideation is of great importance in the present era and have become an important topic in academic circles needing serious attention, since academic stress has been indicated a major cause increasing tendency of suicidal ideation. Students feel the effects of stress in a harsh and probably negative way, and it includes a sudden drop in grades, depression, general fatigue, and aggression.

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