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PERSONAL AND ENVIRONMENTAL FACTORS AS PREDICTORS OF SUICIDAL IDEATION AND THE MODERATING ROLE OF PERCEIVED SOCIAL SUPPORT AMONG POSTGRADUATE STUDENTS, UNIVERSITY OF IBADAN.

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ABSTRACT

Suicide ideation is a serious psychological, social and cultural, public health problem and currently creates a lot of psychological concern to people of diverse backgrounds across the globe. Research on suicidal ideation has gain attention globally. There is however dearth of this research in Nigeria. Consequently, this study therefore examined the influence of personal factors (Personality trait and Hopelessness) and environmental factors (Family cohesion and Perceived Stress) as predictors of suicidal ideation and the moderating role of perceived social support among post graduate students in University of Ibadan. Using survey design, 238 Postgraduate Students (Mean age = 37.77) were randomly sampled in University of Ibadan in Oyo State, Nigeria. The hypotheses were tested using inferential statistics. Result revealed that personal factors jointly and independently predicted suicidal ideation. ($R=.289$; $R^2 = .083$, $F(6,231) = 3.506$, $p<.01$); Further, the influence of both personal and environmental factors was moderated by perceived social support. These results have important implications for the prevention of suicide, suggesting that suicide prevention programs, counseling centers, and psychology clinics on college campuses should include personality as well as family cohesion, hopelessness, and perceived stress in their assessment and identification of individuals who may be at risk for engaging in suicide ideation.

Keywords: Personal factors, Environmental factors, Suicidal Ideation, Postgraduate students

INTRODUCTION

Suicide ideation is a serious psychological, social and cultural, public health problem and currently creates a lot of psychological concern to people of diverse backgrounds across the globe (Brezo, Paris, & Turecki, 2006). Suicide ideation is a thought process in which an individual thinks about suicide but does not intend or plan to commit suicide. It can also be defined as the thought, intent, plan and imagination of an individual concerning suicide. Suicidal ideation is categorized into suicide attempts and complete suicide. It is a common phenomenon among all individuals irrespective of age, gender, ethnicity, race, academic attainment or even socio-economic status. Suicide ideation constitutes one aspect of suicidal behaviour and refers to the human thoughts that lives is meaningless of living, as well as current plans and thereby engage in wishes and thoughts to commit suicide (Pienaar, Rothman, & van der Vijver, 2007).

Information on suicidal behaviors in Nigeria is also limited due to certain motives such as cultural or traditional belief, that is, a state where certain rituals would be performed earlier before the individual who has committed suicide could be buried; religious belief, in which once a person commits suicide, such individual will go to hell. Also, Africans have the thought that individual who engages in the act of suicide is cast under a spell. Due to these beliefs, information regarding suicidal ideation, suicide plans and attempts is often not available in Nigeria. (Oladele & Oladele 2016).

According to Omigbodun, Dogra, Esan, and Adedokun (2016), adolescents in Nigeria are among the set of people who have the highest suicidal ideation and attempts. This, according to them,

has far reaching negative implications for adolescents who are known to be the potential nation builders and leaders of tomorrow. In addition, the Nigeria suicide research and prevention initiative services on record reported that 0.37 per cent and 12 per cent of adult populations and adolescent populations, respectively, has attempted to kill themselves. Also, Okulate and Omigbodun (2008) asserted that throughout individual lifetime, about 3.0 per cent of Nigerian adolescents have the opinion of killing themselves, 1.0 per cent use different strategies to kill themselves and just under 1.0 per cent eventually end up trying to kill themselves. It was further opined by the researchers that the number of participants who give an account to have attempted suicide on one or more times moved from 17% in 2013 to 21.4% in 2016 (Awoniyi & Madu, 2016). One of the personal factors considered in this study is Hopelessness. It is one of the major components of Beck's negative cognitive trait i.e. negative cognitions about future. Hopelessness may be understood by the presence of thoughts such as "things will never get better" and "I do not see things improving", and in most cases it may be accompanied by depression

Apart from hopelessness, another personal factor that may play a crucial role in predicting suicidal ideation in the present study is personality. Personality has been defined in many ways by many for example Costa and McCrea's OCEAN model (Costa & McCrae, 1985) viewed personality factors into five groups which include; openness to experience, neuroticism, conscientiousness extraversion, and agreeableness. These groups are supported by personality psychologists (Larsen & Buss, 2005) that the domain of personality can be characterized by these five factors or global domains (Murphy & David 2005). Research on personality correlates of undergraduate's suicidal ideation indicates that neuroticism was associated with suicidal ideation (Ryder et al., 2005). Kerby (2003) found low conscientiousness, low extraversion and high neuroticism participants and predicted suicide ideation in both genders. Also, females and males did not differ in suicide ideation. Furthermore, Brezo, Turecki and Paris (2006) in their study revealed that neuroticism and extraversion were statistically significant related to suicide ideation among undergraduates.

In the same vein, an environmental factor in this study that is considered a risk factor in determining suicidal ideation is family cohesion. Family cohesion can be broadly defined as the degree of togetherness and emotional bonding that family members have towards one another (Vandeleur et al. 2009). It refers to the intergenerational relationship between family members whether there is warm, close and emotional support among members. Green and Werner (1996) suggested that family with high cohesion should include nurturance, warmth, time spent together, consistency and physical intimacy.

Further, another environmental factor considered in this study is perceived stress. Stress can be defined 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 (Raulin, 2003). 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).

Cobb (1976) defined social support as information leading an individual to believe that he/she belongs to one or more of three classes. These three classes include information that leads an individual to believe he/she is loved and cared for by others, has esteem, and belongs to a network of communication. Information that compels an individual to believe that one is loved and cared for by others develops through mutual trust and cultivates emotional support.

The relationship between social support and suicide has been examined historically. This relationship can first be observed in Durkheim's *Le Suicide*, one of the first theories of suicide (1897). According to Durkheim's theory, having a bond and being integrated with others serves as a buffer against suicide. However, if one does not have a bond and depends solely on oneself, thoughts that there is no reason to live may develop. Since Durkheim's classic book, more studies have examined the buffering effect of social support on suicide. There is a consensus that social support serve as a buffer for suicidal outcomes (Arria et al., 2009; Handley et al., 2012; Hirsch & Barton, 2011; Kleiman & Liu, 2013; Kleiman, Risking, Schaefer, & Weingarden, 2012; Lewinsohn,

Rohde, & Steeley, 1993; Lincoln, Taylor, Chatters, & Joe, 2012; Moody & Smith, 2013; Peltzer, 2008).

RELATED STUDIES

Prevalence of Suicidal ideation in Young Adults

Findings from Garlow et al. (2008) showed that 11% of a sample of 729 college students reported having suicidal ideations and 16.8% had a lifetime suicide attempt or self-injurious episode. Researchers have studied why the young adult population (ages 18-25) has a high number of suicides. It has been proposed new stressors begin to arise at this point in an individuals' life. Some of these new stressors include moving away from home, being away from family members and the pressures from transitioning into college, adjusting to new social environments, and increased academic demands (Arria et al., 2009; Wilcox et al., 2010). Furthermore, individuals in young adulthood are exposed to more risk factors of suicide including alcohol use, drug use, and risky behaviors (Wilcox et al. 2010). Wilcox and colleagues commented that this also the period where psychological disorders began to develop and the interaction with new stresses might strengthen the advancement of psychological disorders.

Other research has examined early predictors of suicidal ideation using longitudinal designs (Douglas et al., 2012). In a sample of 877 participants using a prospective design, Dugas and colleagues (2012) examined specific time-varying determinants of later suicidal ideation. Time-varying covariates included depressive symptoms, family stress, other stress, alcohol use, cigarette use, and team sports. Data was collected beginning when participants were in 7th grade and was collected every three months through 11th grade, and then again at one point when participants were 18 to 24 years old. Among the wide range of potential predictors investigated in this study, only depression and team sport participation were statistically significant predictors of suicidal ideation in the multivariate analyses. Specifically, team sport participation in grade 8 was protective of suicidal ideation in early adulthood, and depressive symptoms in grades 9, 10, and 11 were predictive of later suicidal ideation.

Family Cohesion and Suicidal Ideation.

Surveys of secondary and tertiary-level students have also supported the idea that there is a link between poor family cohesion and suicidal behaviour. A survey of Hong Kong Chinese students aged between 14 and 20 years, (Lee et al., 2006) found a negative correlation between family cohesion as measured by the Family Environment Scale (Moos and Moos, 1981), and suicidal ideation. Lee et al. highlight the importance of family acceptance and family support in the culture of these students, and reiterate that family dynamics must be considered when investigating the development of suicide risk. Lack of family cohesion, as measured by the Family Environment Questionnaire (Fowler, 1980), emerged as a unique contributor to high suicide probability for the students after controlling for the impact of poor academic performance and low mood. Family support for school has been suggested as a protective factor related to suicide risk (Randell et al., 2006).

Personality and Suicidal Ideation

Heisel, Beckman, Conner, Duberstein and Franus, (2006) reported that increased record of neuroticism and openness was related to suicidal ideation among older adults. In the same vein, Seyyed, Negar and Sajjad (2015) investigated the role of personality factors in the chemical suicidal ideation and found suicide tendency got significantly larger scores in neuroticism and also lower scores in openness, extroversion, conscientiousness and agreeableness compared to normal individuals. Results also revealed that there were interaction effects of group differences by gender revealed that male suicide tendency had always larger neuroticism levels openness and lower extraversion compared to the other gender difference.

Hopelessness and Suicidal Ideation

Hopelessness is another risk factor that predicts suicide ideation in young adults. Hopelessness is the experience of despair or extreme pessimism about the future (Beck, 1979). Numerous studies have found a link between feelings of hopelessness and suicide ideation, attempts, and completions (Spirito and Esposito-Smythers, 2005, Chioqueta and Stiles, 2005; Evans et al., 2004; Konick and Gutierrez, 2005). Hirsch et al. (2007) and Weber et al. (1997) have shown that there is a significant association between hopelessness and suicide ideation among college students, where high levels of hopelessness are linked to high levels of suicide ideation. For years, research has supported the notion that hopelessness is a significant predictor of suicide ideation among college students (Gibb et al., 2006; Stephenson et al., 2006).

Research has also suggested that hopelessness may serve as a mediator between depressive symptoms and suicidality (Woosley, Lichstein, Taylor, Riedel, and Bush, 2014), indicating that hopelessness may help to explain the relationship between depressive symptoms and suicidality. In a study by Horwitz et al. (2017) exploring the influence of hopelessness on suicidal behavior, the findings indicate that a lack of positive expectations for one's future, as opposed to the presence of negative expectations, is indicative of future suicidal behavior among adolescents. Indeed, Stewart et al. (2005) found hopelessness to be the strongest contributor to concurrent suicide ideation in adolescents. These findings hold true even when controlling for depression (Labelle et al., 2013;)

Perceived Stress and Suicidal Ideation

Yow, and Bowden, (2000) see stress as any 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 young adults and researchers have found that stressful life events are positively related to suicide acts and suicidal ideation (Gould, Greenberg, Velting and Shaffer 2003).

Moreover, Singh and Joshi (2008) have revealed that stress is a strong predictor of suicide ideation among college students, using multiple regression analyses. Thus, it is reasonable to maintain that stress, measured in terms of a person's perceived stress, would predict suicide ideation. Research evidences have shown that, undergraduates experiencing more stress were likely to engage in suicidal ideation (Anastasiades, Kapoor, and Wooten, 2016). Rosiek, Rosiek-Kryszewska, Leksowski and LeksowskiK, (2015) found that chronic stress has a stronger negative consequences on mental health and suicidal ideation among undergraduate students. Also, chronic stressful- life events and anxiety have a negative outcome on mental health and also confirm a relation to suicidal ideation among undergraduate students.

Statement of Problem

There were reported cases in the newspapers dailies in Nigeria on the increase in suicidal ideation or attempt by young adolescents, for instance, a case of a 500-level undergraduate student of Ladoke Akintola University of Technology (LAUTECH), Ogbomosho, he was said to have hung himself inside a hostel room. Also, an undergraduate adolescent, aged 19 years, of a private university in Nigeria was also reported to have committed suicide in his parents' home in Oshodi, Lagos, Nigeria (Punch Newspaper, 2017). Since suicidal ideation is of significant concern for the young adult population, this study focused on that specific age range. Early studies have revealed that young adults have a particularly high rate of suicide, 11.0 per 100,000 (McIntosh & Drapeau, 2014). Also, suicide is the second leading cause of death in college students (Suicide Prevention Resource Center, 2004).

Many studies have investigated the antecedent of suicidal ideation; however, to my knowledge little studies have examined influence of personal and environmental factors and the moderating role of social support on suicidal ideation especially in Africa, hence, a gap in literature. This present study seeks to address the foregoing gap in the literature and contribute immensely to

the body of knowledge. Recent studies have shown that Nigerian students have one of the highest rates of suicidal ideation and attempts. These rates and attempts are comparable to those of other developing countries and higher than developed countries. (Omigbodun et al 2008).

It is therefore necessary to conduct researches on suicidal ideation and factors that may trigger them, of which hopelessness has been implicated as one of such factors.

To this end it is necessary to examine the influence of variables that have been implicated to predict suicidal ideation among young adults. Therefore, this study aims to investigate the influence of personal factors (hopelessness and personality) as well as environmental factors (family cohesion and perceived stress) as predictors of suicidal ideation and the moderating role of perceived social support among post graduate students in University of Ibadan.

Objective of the Study

1. To determine if Personal factors (personality trait and Hopelessness) and Environmental factors (Family Cohesion and Perceived Stress) will jointly and independently predict suicidal ideation among Post graduate students of University of Ibadan.
2. To determine if perceived social support will significantly moderate the effect of personal and environmental factors as predictors of suicidal ideation among postgraduate students in University of Ibadan.

Hypotheses

1. Personal factors (personality trait and Hopelessness) will jointly and independently predict suicidal ideation among Post graduate students of University of Ibadan.
2. Perceived social support will significantly moderate the effect of personal and environmental factors as predictors of suicidal ideation among postgraduate students in University of Ibadan.

METHODOLOGY

Design

Cross sectional survey design was used to undertake the study. This design is suitable to enable the researcher to examine the influence of personal factors (Personality and Hopelessness) as well as Environmental Factors (Family Cohesion and Perceived Stress) and the moderating role of Perceived Social Support, on Suicidal ideation

Settings

This study was conducted among postgraduates' students in the University of Ibadan, Ibadan Oyo State. The University's mantra has always been the "The First and Best" is noted for being the oldest and prominent institutions in Africa. The University was selected because of being diverse with many tribes and ethnic group and pedagogical resourceful students

Sampling Procedure

A multistage sampling technique was adopted. There were two postgraduate hostels in the University of Ibadan (Abdulsalami and Tafawa Balewa). The third postgraduate hostel (Obafemi Awolowo hostel) was excluded in this study because it comprises of both undergraduate and post graduate students. With a total population of about 700 postgraduate students, using Yarmane (1967) sample size calculation method, the minimum sample size needed for the study is 254 participants. The selected participants' age ranged between 25 and 56 with a total mean age of 37.77years (S.D. =9.06). Their sex shows that 144 (60.5%) were males and 94 (39.5%) were females. Religion distribution revealed that 108 (45.4%) of the participants were Christianity, 127 (53.4%) of the participants were Islam, 3 (1.3%) of the participants accounted for others. For marital status 153 (64.3%) of the participants were married, 80 (33.6%) of the participants were single, 4 (1.7%) of the participants were separated, 1 (0.4%) of the participants were divorced. In

terms of their level of study 187 (78.6%) of the participants were master's degree students, 51 (21.4%) of the participants were PhD students. For occupation, 180 (75.6%) of the participants were not employed, 58 (24.4%) of the participants were employed. For Ethnic group, 129 (54.2%) of the participants were Yoruba, 84 (35.3%) of the participants were Igbo, 25 (10.5%) of the participants were Hausa

Procedure for Data Collection

The researcher first and foremost obtained ethical approval for the study by submitting research proposal to the Social Science and Humanities Ethics Committee (SSHEC). The researcher obtained an introduction letter from the Head of Department of Psychology, University of Ibadan in order to seek approval from the hall wardens of the two selected halls to carry out the study. Informed consent was obtained from each of the respondents after explaining to them the purpose of the study and their liberty to choose to participate or not in the research work. Confidentiality of each participant was maximally maintained during and after the collection of data. Cross-sectional survey was used for this study.

Instruments

Section A: Demographic Factors

This consisted of Socio-demographic characteristics of respondents which included age, religion, marital status, level of study, gender, occupation and ethnic group

Section B: Social Support:

The multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support. The MSPSS (Zimet et al., 1988) was developed as a brief self-report measure of subjectively assessed social support, in which 12 items were given on a 7-point Likert scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree; Zimet et al., 1988). The 12-item MSPSS was designed to measure the perceived adequacy of support from the following three subscales: family, friends, and significant other. Each subscale has 4 questions. Family support is measured on items 3, 4, 8 and 11. For example, Item 8 states: "I can talk about my problems with family." Support from friends is measured on items 6, 7, 9, and 12. An example of an item looking at peer support is, "I can count on my friends when things go wrong" (Item 7). Finally, significant other support is measured on items 1, 2, 5, and 10. An example measuring significant other support is Item 10: "There is a special person in my life who cares about my feelings." Higher scores on each of the subscales indicate higher levels of perceived support. A sum of the three scales yields a global satisfaction with the perceived support score. While this inventory was created in 1988 and is over 20 years old, this researcher used this inventory as a means to measure the three domains of family support, 60 significant other support, and peer support. The researcher was specifically interested in looking at whether there were differences in types of support among different groups of students (e.g., race/ethnicity, gender, sexual orientation, and graduate versus undergraduate student). The coefficient alpha obtained for the MSPSS in this study is .810, suggesting a high level of internal consistency

Section C: Family Cohesion:

The family adaptability and cohesion evaluation scale fourth edition were used to measure family cohesion. FACES IV Consist of 20-items family cohesion. The 20-items scale was rated on a 5-point Likert response format ranging from 1-Almost never disagree to 5-Almost always. Cronbach alpha reliability for the scale is 0.78. In the first part, it was aimed to measure the level of family cohesion. Respondents were asked about the interactions between family members in the recent year. Statements were provided and participants were required to rate those statements. Some of the statements were modified from the Family Adaptability and Cohesion Evaluation Scales Fourth Edition (FACES IV). The measure had twelve statements. Statements

such as “My family members share their personal things” and “My family members ignore each other at home” were asked in the questionnaire. Score above the mean implies that the individual perceived higher family cohesion and vice versa. The coefficient alpha obtained for the FACES in this study is .768, suggesting a high level of internal consistency.

Section D: Personality:

NEO-PI-R, by Costa and McCrae (2007), was used to measure personality. NEO-PI-R, the 44-item scale comprised of 10 items of agreeableness ($\alpha = 0.61$), conscientiousness ($\alpha = 0.63$), extraversion ($\alpha = 0.67$), neuroticism ($\alpha = 0.60$) and nine items of openness to experience ($\alpha = 0.65$). Response options ranged from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha obtained for the NEO-PI-R in this study is .738, suggesting a high level of internal consistency.

Section E: Hopelessness:

Beck Hopelessness Scale (BHS) by Weissman, Lester, & Trexler (1974) was used to measure Hopelessness. The BHS is a 20-item scale designed by Beck, to measure negative attitudes about the future as perceived by adults. For this inventory, people will be asked to answer the questionnaire based on their attitudes during the preceding week. The BHS is comprised of true-false statements that assess the extent of negative expectations about the future, the general hopelessness construct. Items would be scored with a true or false response, where nine are keyed false and 11 are keyed true to indicate endorsement of pessimism about the future; total scores will range from 0 to 20, with higher scores indicating a greater degree of hopelessness. The BHS has shown good reliability with high internal consistency across seven clinical samples: suicide ideators, suicide attempters, alcoholics, heroin addicts, single-episode Major Depression Disorders, recurrent-episode Major Depression Disorders, and Dysthymic Disorders. The Kuder-Richardson reliabilities are .92, .93, .91, .82, .92, .92, and .87, respectively (Beck & Steer, 1988). It has obtained a Cronbach's alpha of .78 in a sample ($n=1,475$) of undergraduate college students and .81 in another sample ($n=302$) of undergraduate college students (Troister & Holden, 2010; Wilson & Deane, 2010). The coefficient alpha obtained for the BHS in this study is .802, suggesting a high level of internal consistency. Regardless, the BHS demonstrates good psychometric properties, and there is evidence that it is a valid measure of negative attitudes about the future (pessimism) held by adults (Beck & Steers, 1988).

Section F: Perceived Stress (PSS):

Perceived Stress Scale PSS developed by Cohen, Kamarck and Mermelstein (1983) was used to measure Perceived Stress. The PSS consist of 12-items 14-items scale was rated on a 7point Likert response format ranging from 0-Never to 4-very often. Cronbach alpha reliability for the scale is 0.85. Score above the mean implies that the individual perceived higher stress and vice versa. The coefficient alpha obtained for the PSS in this study is .78, suggesting a high level of internal consistency.

Section G: Suicide Ideation:

Adult Suicide Ideation Questionnaire (ASIQ) designed by Reynolds (1991) was used to measure suicidal ideation. The ASIQ is a 25-item self-report measure of suicide ideation and behavior in adults designed by Reynolds (1991). Participants would be asked to rate the frequency of suicidal thoughts or behavior during the past month, using a 7-point scale for each item (0 = Never had this thought; 1 = I had this thought before, but not in the last month; 2 = About once a month; 3 = Couple of times a month; 4 = About once a week; 5 = Couple of times a week; 6 = Almost every day). The ASIQ yields a total score, ranging from 0 to 150 with higher scores indicating greater suicide ideation. The ASIQ exhibits good reliability and validity (Reynolds, 1991). The ASIQ has high internal consistency reliabilities for the adult community sample, college student sample, and psychiatric sample with Cronbach's alpha coefficients of .96, .96, and .97, respectively (Reynolds,

1991). The ASIQ is significantly correlated with measures of depression ($r = .60$) and hopelessness ($r = .53$) in a sample of college students (Reynolds, 1991). The coefficient alpha obtained for the ASIQ in this study is .781, suggesting a high level of internal consistency

RESULTS

Hypothesis One Personal factors (personality trait and Hopelessness) will jointly and independently predict suicidal ideation among Post graduate students of University of Ibadan.

Table II The result revealed that neuroticism and hopelessness jointly predicted suicidal ideation ($R=.289$; $R^2 = .083$, $F(6,231) = 3.506$, $p<.01$); this implies that neuroticism and hopelessness accounted for 8.3% explanation of the variability of the dependent variable. The remaining 91.7% variance was accounted for by other variables not considered in this study. Further, the result also revealed that neuroticism ($\beta = .225$, $t=3.566$; $p<.01$) independently accounted for about 22.5% explanation of the variability of the dependent variable. The remaining 77.5% variance was accounted for by other variables not considered in this study. While hopelessness had a contribution of 15% ($\beta = .150$, $t=2.063$; $p<.05$) explanation of the variability of the dependent variable. The remaining 85% variance was accounted for by other variables not considered in this study.

Hypothesis Two stated Perceived social support will significantly moderate the effect of personal and environmental factors on suicidal ideation among postgraduate students in University of Ibadan.

The results are presented in the Table III to V (See List of Tables). The stepwise regression revealed that neuroticism independently accounted for 21.9% variance in suicidal ideation ($\beta=.219$, $t=3.441$, $p<.01$); when hopelessness was introduced, there was a significant increase in the effect of neuroticism (22.3%) on the variance observed in suicidal ideation at the second model ($\beta=.223$, $t=3.518$, $p<.05$) while hopelessness independently accounted for 12.8% variance in suicidal ideation among postgraduate students ($\beta=.128$, $t=2.026$, $p<.01$). The result implies that at the second model analysis, the presence of hopelessness variable strengthened the effect of neuroticism on suicidal ideation. However, at the third model; with the introduction of Perceived Social support, results showed that neuroticism at ($\beta=.159$, $t=2.409$, $p<.05$) predicted suicidal ideation by 16%, hopelessness was no longer significant independently predicting suicidal ideation at ($\beta=.115$, $t=1.847$, $p>.05$) while perceived social support independently, significantly accounted for 20% variance in suicidal ideation.

Therefore, the presence of perceived social support in the model as a moderating variable was confirmed through the analysis. Also, it implies that the effect of hopelessness was displaced by the moderating factor (adequate social support), notwithstanding; the inclusion of perceived social support as a moderator significantly minimized the contributions of neuroticism from in the model as predicting suicidal ideation. Further analysis revealed that in the fourth model; neuroticism independent effect was further reduced significantly when family cohesion was introduced into the model from 16% down to 12.8% ($\beta=.128$, $t=2.054$, $p<.05$), hopelessness independent influence was not significant also in the model 4, due to the inclusion of family cohesion. Meanwhile, family cohesion independently accounted for 33.4% variance in suicidal ideation ($\beta=.334$, $t=5.629$, $p<.01$), thus perceived social support independently predicted 22% variance in suicidal ideation ($\beta=.220$, $t=3.538$, $p<.01$).

In the fifth Model; only neuroticism ($\beta=.099$, $t=1.585$, $p<.05$), perceived social support ($\beta=.209$, $t=3.385$, $p<.01$) and family cohesion ($\beta=.317$, $t=5.372$, $p<.01$) independently predicted suicidal ideation among post graduate students however, perceived stress independent effect was displaced. This implies that with the presence of perceived social support as a moderator, perceived stress independent effect was no longer significant.

Table I: Summary of frequency analysis of Socio-demographic variables

Variables	Freq.	Percent. (%)	Variables	Freq.	Percent. (%)
Age			Level of study		
25yrs Below	25	10.5	MSc	187	78.6
26-35yrs	76	31.9	PHD	51	21.4
36-45yrs	82	34.5	Religion		
46-55yrs	49	20.6	Christianity	178	57.4
56yrs above	6	2.5	Islam	132	42.6
Total	238	100.0	Total	310	100.0
Gender			Ethnic Group		
Male	144	60.5	Yoruba	205	66.1
Female	96	39.5	Igbo	92	29.7
Total	238	100.0	Hausa	13	4.2
Marital Status			Total	310	100.0
Married	153	64.3			
Single	80	33.6			
Separated	4	1.7			
Divorced	1	.4			
Total	238	100.0			

Table II: Summary of Multiple Regression Analysis Showing the Influence of personality trait and hopelessness on suicidal ideation

Predictors	B	T	P	R	R ²	F	P
Conscientiousness	.019	.235	>.05				
Agreeableness	-.075	-1.048	>.05				
Neuroticism	.225	3.566	<.01	.289	.083	3.506	< .01
Openness	-.145	-1.275	>.05				
Extraversion	.083	.683	>.05				
Hopelessness	.150	2.063	<.05				

DV: Suicidal Ideation

Table III: Summary Table of Stepwise Regression Showing Personal and Environmental Predictors of Suicidal Ideation and the moderating role of Perceived Social Support Among Post-Graduate Students

Model		B	T	Sig.	R	R ²	F	Sig
1	Neuroticism	.219	3.441	<.01	.219(a)	.048	11.837	<.01
2	Neuroticism	.223	3.519	<.01	.254(b)	.065	8.050	<.01
	Hopelessness	.128	2.026	<.05				
3	Neuroticism	.159	2.409	<.05				
	Hopelessness	.115	1.847	>.05	.315(c)	.099	8.533	<.01
	PSS	.197	2.992	<.01				
4	Neuroticism	.128	2.054	<.05				
	Hopelessness	.070	1.189	>.05	.456(d)	.208	15.168	<.01
	PSS	.220	3.538	<.01				
	family cohesion	.334	5.629	<.01				
5	Neuroticism	.099	1.585	<.05				

Hopelessness	.068	1.155	>.05				
PSS	.209	3.385	<.01	.479(e)	.229	13.660	<.01
family cohesion	.317	5.372	<.01				
perceived stress	-.150	-1.500	>.05				

a Dependent Variable: **Suicidal Ideation**

DISCUSSION

The present study was conducted with the aim of investigating the influence of Personal factors (Hopelessness and Personality) and Environmental factors (Perceived Stress and Family cohesion). Furthermore, the role of social support as buffering variable was also assessed. This study expands on previous research and theory on the moderating role of social support in postgraduate students' suicidal ideation by examining the influence of personal and environmental factors and the moderating role of social support (from family, friends, and significant others), and suicidal ideation outcomes, and by testing the generalizability of these influences among post graduate students in University of Ibadan.

The findings revealed that neuroticism and hopelessness jointly predicted suicidal ideation. The present finding is according to the researcher's expectations (hypothesis 1) and consistent with earlier researches. For example study by Heisel, Beckman, Conner, Duberstein and Franus, (2006) who reported that increased record of neuroticism and openness was related to suicidal ideation among older adults. In the same vein, Seyyed, Negar and Sajjad (2015) investigated the role of personality factors in the chemical suicidal ideation and found suicide tendency got significantly larger scores in neuroticism and also lower scores in openness, extroversion, conscientiousness and agreeableness compared to normal individuals.

In addition, for years, research has supported the notion that hopelessness is a significant predictor of suicide ideation among college students (Gibb et al., 2006; Heisel, Flett, & Hewitt, 2003; Lipschitz, 1995; Stephenson et al., 2006). Research by (Rosellini & Bagge, 2014; Woosley, Lichstein, Furthermore, study by Rutter and Behrendt (2004) documented that hopelessness was found to be the strongest of cognitive variables in concurrent association with suicidal ideation. Stewart, Kennard, Lee, Maves, Hugues and Emslie (2005). Researchers also reported that hopelessness was the best predictor of suicidal ideation in students and adolescents experiencing bipolar disorder (Smith, Alloy and Abramson (2006).

Social support is a significant moderator between both personal and environmental factors and suicidal ideation. The result in this study implies that, even if post graduate students score high on neuroticism and hopelessness, their perception of social support can instill hope for the future and their neurotic tendencies can also be reduced hence they are likely not going to have suicidal ideation irrespective of the challenges they may be predisposed to. However, result in this study further indicated that neuroticism independent effect was further reduced significantly when family cohesion and perceived social support was introduced. This implies that although post graduate students may score high on neuroticism but if they are offspring of family environment where there is warm, close and emotional support among members and also their perception of social support is high, they are likely not going to engage in suicidal ideation despite the difficulties they may be facing in life. Further analysis revealed that perceived stress independent effect was displaced when social support was included in the model. This implies that irrespective of the level of stress that post graduate student may be predisposed, if their perception of social support is high, they may likely not engage in suicidal ideation.

This finding is consistent with previous findings in literature. Some researchers have also investigated vulnerability factors for hopelessness. For instance, personality features such as high Neuroticism (Chioqueta & Stiles, 2005; Velting, 1999), have been found to be associated with

high levels of hopelessness. In addition, perception of social support reported by Asian international students was found to be associated with lower levels of hopelessness in a study by Yang and Clum (1994).

Further, a study by Anteghini, Fonseca, Ireland, and Blum (2001). They documented that a good relationship with ones' family, a variable similar to family cohesion investigated in the present study, was associated with lower levels of suicidal ideation as observed from a survey with high school students. Perception of family cohesion and social support has increasingly been reported as an important factor diminishing suicidal ideas in a number of studies conducted with high school and university students (Harris & Molock, 2000; Lewinsohn et al., 1994). Thus, the idea of belonging to a group or feeling connected to a group seems to be strongly associated with the mitigation of suicidal ideas. Cheng and Chan (2007); documented that two theoretical models were constructed and tested in a study they found that family and friends support lowered the effect of stressful events on suicidality partly through reducing stress and death acceptance. The effect (direct and indirect combined) of family support was much stronger than that of friends support.

In addition, a number of studies have found that social support from family (Matlin, Molock, & Tebes, 2011) exert a direct protective effect against suicidal ideation and social support functioned as a protective factor in the presence of adversity and decrease suicidal ideation suggesting that risk factors are more likely to relate to poor outcomes among those with an impoverished social support network.

CONCLUSION

In conclusion, the results of the study support the role of Personal (Personality and Hopelessness) as risk factor for Post graduate student suicidal ideation in University of Ibadan. It was also observed that environmental factors (Perceived Stress, and Family cohesion) jointly and significantly predicted suicidal ideation among post graduate students in University of Ibadan. One peculiar finding that is obtained in the present study is that as far as buffering effect mechanism is concern, Perceived Social support was a significant moderator of suicidal ideation among Post graduate students in University of Ibadan. The results suggest that social support serve as a buffer for post graduate students who are hopeless, neurotic and are predisposed to perceived stress, from suicidal ideation. Such findings suggest that helping post graduate students and their parents to develop more supportive social networks, high level of family cohesion, stress coping strategy and building hope may help in eliminating or alleviating the negative stress outcome in the form of suicidal ideation.

RECOMMENDATION

In future studies, it would be useful to check the moderating effects of social support on the interactive influence of personal and environmental factors as predictors of suicidal ideation. Finally, future research should expand and replicate the results of this study to determine the reliability and generalizability of the results of this study.

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