Suicidal Ideation among a Sample of Students in Nigeria

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Abstract
Suicide is a growing public health problem all over the world. It may be ranked as one of the major leading cause of death among college and university students. Against this background, this study explored the influence of perfectionism and academic stress on suicidal ideation among medical students. Purposive and simple random techniques were used to select a total number of 296 students (105 males: 191 females) from Lagos State University Teaching Hospital, Lagos State. The age of the participants ranged from 17 to 30 years (Mean=21.50, SD=2.52). Three hypotheses were formulated and tested with Multiple Regression Analysis. Results showed that perfectionism had no significant influence on suicidal ideation. However, it was revealed that academic stress had a significant prediction with suicidal ideation. In the same direction, perfectionism and academic stress had significant and joint prediction on suicidal ideation. Therefore, it is recommended that in order to address academic stress that can induce suicidal ideation among medical students, government in collaboration with school management should develop, implement and monitor psychological programs aimed primarily at alleviating academic stress among students and especially among medical students.

Keywords: perfectionism, academic stress and suicidal ideation

1. Introduction
Suicide is a major global issue and it is among the central health challenges affecting young people (Olaseni et al., 2022). According to Zhang et al. (2019), suicide is the most prominent among individuals within the ages of 15-34 years. Suicide refers to the deliberate action of killing oneself which must have been accompanied by thoughts and ideations about killing oneself (Harmer et al., 2021). Turecki and Brent (2016) described suicide as a grave self-injurious act committed with the aim to end one’s life. It is noteworthy that the common associated terms with suicide include suicide behavior, suicide ideation, suicide plans, attempts and completed suicide (Chua & Mogan, 2021).

Based on the global health estimates from the World Health Organization [WHO] (2021) 703,000 people died from suicide every year. Suicide is among the leading cause of death worldwide. More deaths have been recorded through suicide than war, homicide or diseases such as malaria, HIV/AIDS and breast cancer. More than one in every 100 death (1.3%) in 2019 was as a result of suicide (WHO, 2021). WHO (2020) reported that suicide is the fourth leading cause of death among individuals between the ages of 15-29 years. Meanwhile, many countries globally have reported increasing suicide rates. WHO (2021) recorded 9.7% and 8.9% rates for China and United Kingdom correspondingly. In the Nigerian context according to World Population Review (2021), suicide rate is about 9.5% with 46 Nigerians committing suicide yearly. It is important to note that some may have happened without even been documented. It was gathered that out of the forty-six (46) victims of suicide in 2019, thirty-five (35) of them were students (Daily Trust, 23rd June 2020).

Extant literatures (e.g., Harmer et al., 2021; Ibrahim, 2021; Lew et al., 2019) have shown that individuals who deliberately end their lives have had ideations and thoughts about killing themselves before the act. For this reason, it is more advisable to investigate and manage suicidal ideation, which is the main determinant that leads to the act of suicide. Suicide ideation is described as a thoughts, desires and interest in killing oneself (Harmer et al., 2021). Brazier (2018) defined suicidal ideation as the means of thinking of plans for future attempt and act of suicide. According to the U.S Centers for Diseases Control (CDC), suicidal ideation involves thinking about, considering, or planning suicide (Klonsky et al., 2016). Suicidal ideation can sprout from the minds of people no
matter their age, status in the society, academic level, ethnic background, race, etc. This revealed clearly that medical students are not exempted from having the thoughts. Different psychological factors such as depression, stress, and anxiety have been identified to be significantly related to suicidal ideation (Bajaj & Makkar, 2020; Briede & Sudraba, 2020; Ibrahim, 2021; Lew et al., 2019; Mustaffa et al., 2014).

Generally, there are limited studies on psychological factors predicting suicidal ideation among medical students. The present study aims to examine variables that have not been explicitly investigated by past literatures that may significantly impact suicidal ideation level of medical students. Consequently, the present study will inform and aid the designing of psychosocial interventions that may help in reducing suicide rates among medical students.

An important psychological variable that may impacts medical students’ level of suicidal ideation is perfectionism (Rankin et al., 2018). Perfectionism was described by Stoeber and Childs (2010) as an individual’s pre-occupation with attaining exactness or precision and flawlessness which is followed by a critical self-evaluation and concerns about how others sees him/her. Different researches have been carried out on the psychological implications and outcomes of perfectionism. Studies (e.g., Cumming & Duda, 2012; Damian et al., 2017; Gaudreau & Verner-Filion, 2012; Mackinnon & Sherry, 2012) have identified a connection of perfectionism with chronic feelings of failure and dissatisfaction, bouts of depression and anxiety, interpersonal problems, and even suicide.

Perfectionism is a multifaceted personality construct that centers on individuals pre-occupation with attaining unrealistic objectives which may eventually lead to adjustment problems such as feelings of low mood, increased anxiety etc. These factors invariably aggravate thoughts about putting an end to one’s life (Yang & Stoeber, 2012). Eum and Rice (2011) in their findings on perfectionism discovered that it exerts significant influence on individuals’ thoughts about suicide. According to Curran and Hill (2019) the issue of perfectionism is more prominent among youths (including medical students). It important to note that perfectionism can be adaptive and otherwise benefit students. Students who are high on perfectionism shows better coping skills when faced with academic problems (Noble et al., 2014), and are less likely to procrastinate on assignments (Burnam et al., 2014). Noble et al. (2014) found that individuals who possess healthy and adaptive perfectionism show good level of flexibility in their evaluations about their performances.

Apart from perfectionism, academic stress may also be another risk factor that may have predictive influence on suicidal ideation among medical students (Mishra, 2018). Academic stress has to do with stress that result from both academic and non-academic factors. It has the ability of triggering ideations about suicide and if not attended to may lead to actual suicide (Uyanne, 2021). In the context of Nigerian medical students, they are compounded with loads of stress in school which can result from relationships, excessive academic demands, inadequate school facilities, examination stress, and transportation issues within campus, toxic learning environment, and many others which may have significant negative effect on their mental wellbeing.

Kio et al. (2018) discovered in their research that stress is a major determinant of students’ level motivation, productivity, and antisocial behaviors. Mishra (2018) reported that academic stress is a function of excessive school workload and homework, impacting students’ anxiety levels. This in turn may make a student not to be actively involved in other academic related activities. The excessive demand that results from the academic environment causes significant stress for students which may put them at risk of having thoughts about suicide. For example, Nwonyi (2020) in his study on academic stress and suicidal ideation in a sample of 482 students found that suicidal ideation and academic stress are statistically related. An increased level of stress was related to an increased level of suicidal ideation. Similarly, in a sample of adolescents in Lagos state Nigeria, Olaseni (2018) examined rumination and academic hardiness as predictors of suicidal ideation and the study explicitly reported that academic hardiness is a significant determinant of suicidal ideation. Among 505 university undergraduates from South-Eastern Nigeria, Okechukwu et al. (2022) investigated the moderating roles of coping and resilience in the relationship between academic stress and suicidal ideation and reported that thoughts about committing suicide increased with academic stress.

A gap in knowledge exists in the reviewed studies on perfectionism and academic stress on suicidal ideation. This was evident in that the reviewed studies did not explicitly examine the predictive roles of these factors among medical students. Though, past studies have shown a connection between these factors and suicidal ideation among students, there is need to further examine the level at which perfectionism and academic stress predicts suicidal ideation, particularly among medical students. Therefore, this study focused on the independent and joint predictions of perfectionism and academic stress on suicidal ideation among medical students. Based on the literature reviewed the following hypotheses were tested.
(1) Perfectionism will significantly predict suicidal ideation among medical students in Lagos State.
(2) Academic stress will significantly predict suicidal ideation among medical students in Lagos State.
(3) There will be a significant joint prediction of perfectionism and academic stress on suicidal ideation among medical students in Lagos State.

2. Method

2.1 Design and Participants

The study adopted a cross-sectional survey design and examined two hundred and ninety-six (296) to study 296 (105 males; 191 females) medical students from four faculties (basic clinical sciences, basic medical sciences, clinical sciences, dentistry) across Lagos State University Teaching Hospital (LASUTH) in Lagos state, Nigeria. Their ages ranged from 17-30 years with a mean of 21.50 years and standard deviation of 2.52. The number of children in the family ranged between 1-14 with a mean of 4.31 and SD of 2.30. Ninety three of the total participants fell into the category of first child; 149 were middle born; and 54 were last child. In regards to type of family, 242 (81.8%) students were from monogamous family while 48 (16.2%) students were from polygamous family.

2.2 Instrument

The instrument used to gather information in this study was questionnaire. The first part of the questionnaire was used to gather socio-demographic information of the participants. These included age, gender, number of children in the family, position in the family, type of family and students’ faculties.

The next section in the questionnaire measured perfectionism using Frost Multidimensional Perfectionism Scale (FMPS) developed by Frost et al. (1990). It consists of 35 items. The FMPS has 4 sub-scales of perfectionism. The sub-scales are: concern over mistakes and doubts about actions (13 items), excessive concern with parents' expectations and evaluation (9 items), excessively high personal standards (7 items), concern with precision, order and organization (6 items). The instrument was rated on a 5 point Likert scale (1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree). Sample items include: “It is important to me that I am thoroughly competent in what I do” and “I hate being less than the best at things”. Frost et al. (1990) reported a Cronbach Alpha of .83. Based on the current sample, a Cronbach Alpha of .90 was obtained. Higher score represent dysfunctional perfectionism, while average score represents healthy perfectionism.

The academic stress experienced by the students was measured via the questionnaire. It was measured using Academic Stress scale (ASS). The scale was originally developed and standardized by Kim (1970). It was designed to measure academic stress in students. It consists of 40 items. It has 5 dimensions; Personal Inadequacy (8 items), Fear of Failure (8 items), Interpersonal difficulties with teachers (8 items), Teacher-pupil relationship/Teaching methods (8 items), Inadequate study facilities (8 items) towards Academic stress. The instrument was rated on 5-point Likert scale (1 = No Stress 2 = Slight Stress 3 = Moderate Stress 4 = High Stress 5 = Extreme stress). Sample items include: “Teachers make too many extra demands on students” and “Worrying about the examinations”. Kim (1970) reported a Coefficient Alpha of .82. With the current sample, a Cronbach Alpha of obtained .93 was obtained. High score indicate higher level of academic stress and vice versa.

The last segment of the questionnaire contained the measure of suicidal ideation. In the present study, suicidal ideation was measured using Columbia-Suicide Severity Rating Scale (C-SSRS) developed by Posner et al. (2011). The C-SSRS comprised of 4 subscales: suicidal ideation, suicide intensity, suicide behavior, and suicide lethality. For the purpose of this research, only the suicidal ideation subscale was used. It is made up of 5 categories, all of which maintain binary responses (Yes/No) to indicate a presence or absence of suicidal ideation. The five categories included in the C-SSRS are as follows: category 1- Wish to be Dead; category 2- Non Specific Active Suicidal Thought; category 3- Active Suicidal Ideation with Any Methods (Not Plan) Without Intent to Act; category 4- Active Suicidal Ideation with Some Intent to Act, Without Specific plan; Category 5- Active Suicidal Ideation with Specific plan and intent. Posner et al. (2011) reported a Cronbach’s alpha of 0.95. The current study reported a Cronbach Alpha of .76. High score indicate high level of suicidal ideation and vice versa.
2.3 Procedure
In order to meet the ethical standards involving human participants, the University Ethical Committee assessed the instruments and procedures adopted in the study. This was to ensure the study poses no physical and psychological harm to the participants. The study questionnaires were administered to medical students in Lagos State University Teaching Hospital. Explanation on the research process was made clear to the participants. They were covered with anonymity as they were not told to include their names and identity numbers. The confidentiality of their responses was also assured. Sample selection and completion of data collection took 3 weeks. A total of 350 copies of questionnaire were administered, 330 were retrieved but only 296 were duly completed and found usable for the analysis. This gives a response rate of 85%.

3. Data Analysis and Results
3.1 Test of Relationships among the Study Variables
Pearson Product Moment Correlation was used to test the extent and direction of relationship among the study variables. The results are presented in Table 1.

Table 1. Correlation Matrix Showing the Relationships among the Study Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.16*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No of Children in the Family</td>
<td>.19**</td>
<td>-.12*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position in the Family</td>
<td>.13*</td>
<td>-.05</td>
<td>.73**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Type</td>
<td>.21**</td>
<td>-.15*</td>
<td>.56**</td>
<td>.33**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perfectionism</td>
<td>-.08</td>
<td>.05</td>
<td>-.06</td>
<td>-.07</td>
<td>-.02</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Stress</td>
<td>.04</td>
<td>.05</td>
<td>-.07</td>
<td>-.09</td>
<td>-.04</td>
<td>.25**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suicide Ideation</td>
<td>-.01</td>
<td>.02</td>
<td>-.06</td>
<td>-.00</td>
<td>-.04</td>
<td>.10</td>
<td>.12*</td>
<td>1</td>
</tr>
<tr>
<td>Mean</td>
<td>21.50</td>
<td>4.31</td>
<td>2.62</td>
<td>111.43</td>
<td>117.21</td>
<td>1.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>2.52</td>
<td>2.30</td>
<td>1.90</td>
<td>18.95</td>
<td>24.78</td>
<td>1.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ** p < 0.01, * p < 0.05, N= 296; Gender was coded: Male=1, Female=2; Position in Family was coded: First birth=1, Middle birth=2, Last birth=3; Type was coded: Monogamy =1, Polygamy =2.

The result in Table 1 on the tested psychological factors revealed that perfectionism had no significant relationship with suicidal ideation \[r(294)= .10, p > .05\]. This implies setting extremely high personal standards to avoid making mistake had no connection with the intent to conceive the idea or attempt to take one’s life.

On a different note, academic stress had a significant relationship with suicidal ideation \[r(294)= .12, p < .05\]. This means that having mental distress with respect to some anticipated frustration associated with academic failures is linked to possible intent of having thoughts, ideas and attempting to take one’s life.

The relationship between the tested demographic factors and suicidal ideation was such that; age \[r(294)= -.01, p > .05\], gender \[r(294)= .02, p > .05\], Number of children in the family \[r(294)= -.06, p > .05\], position in the family \[r(294)= -.00, p > .05\], and family type \[r(294)= -.04, p > .05\], had no significant relationship with suicidal ideation. This means that being young or old, either male or female, number of children in the family, being first, middle or last child of the family and coming from either of monogamous or polygamous family has no connection with the intent, idea or attempting to ends one’s life.

3.2 Test of Hypotheses 1, 2 and 3
The test for the formulated hypotheses was carried out using multiple regression analysis. It was used to test for both the independent and joint prediction of the independent variable (perfectionism and academic stress) on the dependent variable (suicidal ideation). The results are presented in Table 2.
Table 2. Multiple Regression Analysis Showing Perfectionism and Academic Stress Predicting Suicidal Ideation

<table>
<thead>
<tr>
<th>Predictors</th>
<th>β</th>
<th>t</th>
<th>R</th>
<th>R²</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfectionism</td>
<td>.07</td>
<td>1.14</td>
<td>.26</td>
<td>.14</td>
<td>2,293</td>
<td>2.96*</td>
</tr>
<tr>
<td>Academic Stress</td>
<td>.11</td>
<td>1.80*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p< 0.01, * p < 0.05, N= 296

The results in Table 2 revealed that perfectionism did not significantly predict suicidal ideation (β= .07, t= 1.14, p > .05). This implies that setting excessively flawless and high standard to avoid making mistakes does not determine possibility of having thoughts, ideas and attempting to ends one’s life. It could be then be inferred that medical students attempting to always avoid errors and putting in all effort to avoid castigation in the medical profession which possibly might be unrealistic targets in life does not determine possible attempt or willingness to ending one’s life. Therefore hypothesis 1 which stated that perfectionism will significantly predicts suicidal ideation among medical students in Lagos state was denied and rejected.

On a different note, academic stress significantly predicted suicidal ideation (β= .11, t=1.80, p < .05). This shows that having mental distress with respect to some anticipated frustration associated with academic failures is a determinant of possible intent to have thoughts, ideas and making attempt to ends one’s life. This result affirms the formulated hypothesis 2 and it was therefore, accepted.

This result further revealed that perfectionism and academic stress had significant joint prediction on suicidal ideation [F(2,293)=2.96; p <.05]. Both perfectionism and academic stress yielded 14% (R²=0.14), variance in the measure of suicidal ideation. This means there are other variables which contributed to the students’ intent to having thoughts, ideas and possibly attempting to ends one’s own life. This result confirms the formulated hypothesis 3 and was therefore, accepted.

4. Discussion

This study investigated perfectionism and academic stress as predictors of suicidal ideation among medical students in Lagos State, Nigeria. Perfectionism did not significantly predict suicidal ideation among medical students of Lagos State. This finding concurs with the study of Etherson et al. (2022) which revealed that self-orientated perfectionism had no significant relationship with suicidal ideation. Perfectionism did not have predict suicidal ideation in this study because Nigerian students are actively involved and engaged in academic activities which improve their self-esteem and feelings about life being worthwhile.

However, as projected in hypothesis 2, academic stress significantly predicted suicidal ideation among medical students in Lagos State. The result supports the findings of Okechukwu et al. (2022) which showed increased level of academic stress is significantly related to students thoughts about suicide. The result equally supported the findings of Nkwuda et al. (2020) revealing that suicidal ideation was significantly related to academic stress among students. Academic stress predicted suicidal ideation this research because medical students are faced with many academic challenges and stressors that could cause significant mental distress in them.

Furthermore, as expected in hypothesis 3, perfectionism and academic stress both had significant joint influence on suicidal ideation among medical students in Lagos State. This implies that perfectionism and academic stress contribute to increasing levels of suicidal thoughts among students. This result supports the findings of Park and Kim (2018) which showed that college life stress, emotion centered stress coping strategies, and maladaptive perfectionism had a positive correlation with suicidal ideation. The Nigerian educational system which places much value on medical students with high expectations for them to be perfect and flawless in might have added additional pressure on them to be unrealistically perfect and flawless in their academic world. This, coupled with the excesses that results from the Nigerian educational system might have influenced the outcome of this study.
5. Conclusion

The present study examined the influence of perfectionism and academic stress on suicidal ideation among medical students in Lagos State, Nigeria. The present study added significant practical implications to the body of knowledge. The result of this research confirmed that perfectionism did not significantly predict suicidal ideation among the medical students. The result further showed that academic stress significantly predicts suicidal ideation among the students. In addition, the result of the analysis showed that perfectionism and academic stress jointly predicts suicidal ideation among the medical students.

Academic stress is a crucial factor predicting suicidal ideation among undergraduate students, and as such efforts should be made by school managements in developing, implementing and monitoring programs directed at the alleviation of stress in schools. The programs should include public awareness on common stressors (like excessive academic demands, time pressures, unrealistic coursework demands and so on) in schools and how to manage them effectively.

Annual or periodic psychological assessment of students for possible traces of elevated levels of stress should be adopted by schools. Coping skills should be taught and included in academic calendar as this may help students develop adequate stress management skills. Mental health professionals who are experts in the field of suicide management should be employed and made their services readily available for students in need. Social clubs aimed towards suicide prevention should be formed in the society/universities. The study equally recommends that school-based mental health services should be established in every medical school in Nigeria.

The present study has its limitations and shortcomings. Firstly, the study sample is small and the research was limited to medical students only (in Lagos state university teaching hospital). This makes it difficult to generalize the result of the study in Nigeria and across the globe. Apart from that, students in private universities were not sampled in this study. This made generalization more difficult. It is therefore advised that further studies should cover students in other states and include samples from private universities.

References


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