Academic Stress as a Predictor of Suicide Ideation among University Students in Nairobi County, Kenya

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Abstract: *In Kenya, a concern has been expressed on the rate at which the number of deaths by suicide is growing among the young adults in the universities and majority of these cases involve university students in Nairobi County. The main purpose of this study was to assess the relationship between the predictor variable (Academic Stress) and suicide ideation among university students in Nairobi County, Kenya. A quantitative research method was adopted using a correlational research design. The target population was 128,984 students. The sample size was 398 respondents which was arrived at using Yamane's formula. Multi-stage sampling procedure was applied in selecting 5 universities from which the sample size of the students is derived. In the first stage, stratified sampling was used to select the universities which are 1 public university, 2 private universities managed by a religious congregation and 2 private universities not managed by religious congregation. Finally, simple random sampling technique was used in selecting students from each of the universities selected for the study. Questionnaires were used to collect the data. Using Statistical Package for Social Sciences (SPSS version 25), descriptive statistics was applied and data were presented in tabular form. Pearson's product moment correlation was performed to establish the relationships between the predictor and suicide ideation among university students in Nairobi County. The results indicated that there is a moderate positive correlation between academic stress and suicide ideation. Lastly the study recommended some way of coping with suicide thoughts.*

Ke words*: Academic Stress, Suicide Ideation and coping strategies, University students Nairobi County Kenya*

1. Introduction

Predictors of suicide ideation are some of the factors that can elicit suicide thought. One of which under study is academic stress. Suicidal ideation is the early process of suicide which often happens before the completion of suicide which may be considered a cause for attempted and completed suicide. In order to avoid suicide, it is important to consider the possible risk factor of suicidal ideation in the initial phases of suicide (Lu Lu, et al., 2020). Suicide can be seen as a global psychological pandemic which poses challenges to the public wellbeing. The World Health Organization [WHO] (2018) hypothesizes that there are indications that in any death of each adult who dies of suicide, there may be more than 20 other people who are attempting suicide. Thus, WHO (2018) estimated that over 800, 000 people commit suicide every year. This implies that an individual commits suicide in every 40 seconds and so, making suicide the second leading cause of death after accidents (unintentional injuries) among the young adults ranging from 15-29-year-old globally.

In Kenya, Jenkins, et al. (2015), discussed the prevalence of suicide ideation. Their results indicated that a quarter of the sampling, that is 24.1 percent had thought that life was not worth living at some point in their lives, while a fifth had experienced death wishes at some stage. About 7.9 percent reported suicidal thoughts and 1.9 percent had made actual suicide attempts at some point in their lives. It can be seen that the prevalence of suicidal thoughts was 0.7 percent, 4.2 percent, 3.7 percent and 7.9 percent for last week, last year, at some other time, and lifetime respectively, while the prevalence of suicidal attempts was 0.5 percent, 1.2 percent, 0.7 and 1.9 percent respectively.

Ouma (2018) presented cases whereby the Education stakeholders expressed concern on the rate at which the number of deaths by suicide was growing among the young adults in the universities in Kenya. However, majority of these cases involve university students in Nairobi County. According to him, these suicide cases took place in between year 2017 to 2018. It involved a fourth-year student who was expected to graduate in May/June 2018, a second-year law student who had few days before he was to report back to the University. A University student who died at a police station in Nairobi, and a final year student who committed suicide at the home of his older sister in Kasarani, Nairobi, a few days before he was expected to sit for his semester-end exams. Another student left a suicide note clarifying that the reason for suicide was exam stress and fee issues; a student from university in Nairobi who had a degree in engineering set himself on fire at the Siaya County. A 24-year-old fourth-year student at the University committed suicide at his parents' house. Another student committed suicide in Shauri Moyo in June 2017 two weeks after he was sent home for tuition fee. Again, a second-year student, 22 years, was discovered hanging in his family home. The statistics given above are in line with the findings of an overview of the causes of suicide and preventive strategies in Kenyan universities conducted by Kabugi (2019), that students in universities in Kenya especially those in Nairobi are at a higher risk of committing suicide and that the rate of suicide increase among them is alarming.

2. Literature Review

The vulnerability of university students to academic stress has also been associated with significant emotional and psychological issues, a known precursor to suicide. For certain students, the search for identity which is a naturally stressful demand on young people, may be frightening and predispose them to suicidal thoughts. Weak or over-achieved academic performance may function as a precursor to stress, subsequent depression, and suicidality. This pressure can lead them to increase the lethality of their suicidal intent through academic stress (Wilbum et al., 2005).

Predictors of Suicide Ideation and Suicide Attitudes as a Moderator by Brown (2011) done in Toledo, United States, examines four different variables as predictors of suicide ideation in a college sample. One of the variables are perceived stress. Students' suicide attitudes were also investigated to determine the extent to which they moderate the relationships between the perceived stress and suicide ideation. Participants in this study included 565 university students (386 women, 179 men) enrolled in undergraduate psychology courses. Perceived Stress Scale (PSS) was used. This is a 14-item global measure of perceived stress designed to assess the degree to which situations in one's life are viewed as being stressful. The Internal consistency of this tool was estimated to range from .78 to .87 while the alpha coefficient was .78, suggesting a high level of internal consistency. Adult Suicide Ideation Questionnaire

(ASIQ) with a 25-item self-report measure of suicide ideation and behaviour in adults was used to rate the Participants' frequency of suicidal thoughts or behaviour during the past month. 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. The alpha coefficient obtained for the ASIQ in this study is .99, suggesting a high level of internal consistency. Correlational analyses and stepwise, hierarchical multiple regressions revealed that perceived stress are significant predictors of suicide ideation, but the relationship between perceived stress and suicide ideation was moderated by suicide attitudes. Therefore, this finding will agree with the current study because students may perceive academic work as stressful, and so start contemplating suicide as an option. The geographical location under which the study is done as well as the cultural background are different from the current study, hence, it may affect the perception of stress.

Sheetal and Srivastava (2020) carried their research on Correlational Study of Academic Stress and Suicidal Ideation among Students in India. Hence, to investigate the correlation between academic stress and suicide ideation, Purposive sampling technique was used. A sample size of 200 participants were selected from Allen Institute of Kota (Rajasthan). Respondents who were Indian Institute of Technology (IIT) aspirant students were 100 and another 100 respondents were National Eligibility cum Entrance Test (NEET) aspirant students. The Academic Stress Scale and the Suicidal Ideation Scale were used in testing the academic stress and suicide ideation of the participants. The result of the analysis indicated that the obtained value of r (0.259) is significant at the 0.01 level, implying that there was a significant correlation between academic stress and suicidal ideation among university students.

The above study made use of students who have been studying in Kota for at least two years both those living inside and outside the school hostel. These students are aspirants of both IIT and NEET. Suicide ideation in this condition will basically be on the expectation of meriting the admission into IIT or NEET which may be mounting pressure on the aspirants The total population was unknown, and the use of purposive sampling does not give room to every aspirant student to participate in the study and it is sometimes open to selection bias and error, and even if one tries to eliminate selection bias to the best of one's ability, it can be difficult to defend the choices for participants. However, the current study will give equal chance for the entire students to participate. This will bring out a general experience of students on academic pressure.

A study was carried out by Fathi-Ashtiani, et al., (2007) on the relationship between self-concept, self-esteem, Anxiety, depression and academic achievement in adolescents. The study was to survey some of the personality characteristics of adolescents and their associations with academic achievement. For the sample

size, 1,314 randomly allocated students of Tehran's high schools were assessed by Beck self-concept inventory, Coopersmith self-esteem inventory, Spielberger State-Trait anxiety inventory, Beck depression inventory. The results indicated that self-concept was positively correlated with self-esteem with significant level of (p<0.01) and these two have positive impacts on augmenting academic achievement. Moreover, the increase of self-concept and self-esteem are related to the decrease of anxiety. In addition, a negative significant relationship was established between self-concept, self-esteem and depression, and depression contributed to a decrease in academic achievement. Although this study is totally different from the current study, there is an information here on how one issue leads to another. Seemingly, in relation to the current study, low self-esteem and depression can decrease academic achievement leading to academic stress which can trigger suicidal thought.

Ang and Huan (2006), carried out a research among secondary school students in Singapore on the Relationship between Academic Stress and Suicidal Ideation. They tested for Depression as a Mediator Using Multiple Regression. A total of 1,108 adolescents (596 males, 508 females, and 4 did not specify gender) from a secondary school in Singapore participated in the study. A convenience sample was used in selecting the participants. Academic Expectations Stress Inventory (AESI), Children's Depression Inventory—Short Form (CDI-Short) and Suicidal Ideation Questionnaire—Junior High School Version (SIQ-JR) were used.
From their finding, according to the above demonstration table, Adolescents' self-report of academic stress was significantly correlated with both adolescent depression and suicidal ideation in the expected direction. However, academic stress was positively correlated with both adolescent depression ($r = 0.25$, $P < 0.01$, Cohen's $d = 0.52$), and suicidal ideation ($r = 0.22$, $P < 0.01$, Cohen's $d = 0.45$). they first established that the predictor (academic stress), was related to the outcome variable (suicidal ideation). Academic stress was significantly associated with suicidal ideation ($B = 0.44$, $b = 0.22$, $P < 0.001$). Therefore, this research simply demonstrated that there is a significant relationship between academic stress and suicide ideation.

The study is similar to the current study by looking at the relationship between academic stress and suicide ideation among students only that they defer in the level of their student's participants, as the former used secondary school students while the latter study uses university students. Again, the above study concentrated on depression as a mediator between academic stress and suicide Ideation, while the current study is interested in self-esteem, academic stress and social anxiety in relation to suicide ideation. The use of convenience sampling brings about the inability to generalise the results of the survey to the whole population. The current study will therefore use a random sampling procedure in order to give equal chance to the entire population.

On the contrary, Babatunde (2020), in his research on Suicidal Ideation among Undergraduates in Nigeria: The Predictive Role of Personality Traits and Academic Stress, concluded that academic stress is not a predictor of suicide ideation among university students. 203 undergraduate students of a particular university participated in the study. They were sampled from Five Faculties and subsequently five departments through a Multi-Stage Sampling Technique, and Simple Random Sampling Technique. The ages of the participants ranged from 18-29 years, with a mean age of 22.53 percent and a standard deviation of 2.33 percent. Student Academic Stress Scale (SASS) and Suicidal Ideation Attribute Scale (SIDAS) were distributed and analysed after getting them back. Thus, the result from the regression analysis showed that Suicidal Ideation was not significantly predicted by academic stress, $F (1,196) = -.457$, $P < .05$. and so, his hypothesis which stated that academic stress could predict Suicidal Ideation was rejected.

The study was looking at the Suicidal Ideation among Undergraduates in Nigeria…, the researcher made use of a few students from only one institution to represent the entire students from all the universities in Nigeria. The question arising from this is, can one university represent the entire universities in a country? The current student will make use of the 20 percent of the entire universities in the county which according to Mugenda and Mugenda (2012) is acceptable as a representative sample. The age range of the above study is limited to 18 to 28 years while the current study will give room for any university student beyond 28 years. Furthermore, Babatunde was interested in only two variables which are academic stress and suicide ideation while the current study will consider four variables namely; self-esteem, academic stress, social anxiety and suicide ideation.

In agreement with Babatunde above, Ngondi (2016), in her research, she examined the relationship between Kenya Certificate of Secondary Education (KCSE) examination scores and symptoms of anxiety, Depression, and suicide ideation among adolescents in Nairobi, Kenya. The study asserts the fact that academic grade may not trigger suicide thought since it is present in both those who have high grade and those who have low grade. That conclusion was based on Pearson correlation performed between suicide ideation and KCSE score. The result obtained were $r = -0.07$ with 0.491 as level of significance. Thus, indicating that academic grade is not a determinant for suicide ideation. For this researcher it is an academic expectation that has relationship with suicide ideation since the correlation between grade expected and grade scored revealed that 49 percent of the participants did not get the grade they expected, and so, it triggers feelings of hopelessness regarding the further opportunities; resulting in ideas of ending one's life. Data was collected using The Centre for Epidemiological Studies Depression Scale, the Beck's Anxiety Inventory and the Columbia Suicide Severity Scale (Screener version) in addition to the researchers own questions targeting the participants'

attitude towards this examination. This was done with a targeted population was 519,607 from which convenient sampling was used to selected 100 students ranging from 16 to 19 years.

This is an important information for the current study as it seeks to establish the relationship between academic stress and suicide ideation. Moreover, the unmet expectation may be considered as part of academic stress. However, as the above study used convenient sampling in selecting the participants, focused on high school students and specify not on academic stress, the current study will use random sampling in selecting participants which are the students of universities in Nairobi and also focus on academic stress specifically which is one of the variables being studied.

Wanyoike (2015) was interested in the causes, implications and interventions of suicide among university students in Kenya. The study was made up of both qualitative and quantitative methods of data collection and analysis. The random sampling technique was adopted in selecting 50 university students from 6 Universities and 40 mental health practitioners. A 60-item questionnaire and 12 structured interview schedules were used to gather data regarding the views of students on the topic of suicide. Thematic analysis was used to analyse the data collected.

The first section of the analysed data discussed the causes of suicide. According to the respondents one of the main causes of suicide amongst university students is Social Pressure, which composes of, high cost of education, academic performance and so on. The researcher maintained that the main aim of attending a university is to achieve an academic degree or diploma or other qualifications. This pressure to perform has been noted as one of the main stressors experienced by a university student. When students are pressured because their performance is not accepted as good enough, students tend to find different manners to deal with the pressure. This could lead individuals to face hopelessness which affected 30 percent of the students' population as identified by the respondents.

Thus, from the above finding, academic stress would be a main cause of suicide ideation. Nevertheless. The study has not indicated the quantitative data analysis procedure, the researcher only specified the thematic analysis that was used in the study. The thematic analysis approach does not capture the 'whole' due to its phrase-based nature. This may make the research spend more time in the explanation of the analysis.

An Overview of the Causes of Suicide and Preventive Strategies in Kenyan Universities by Kabugi, (2020) is similar to the study of Wanyoike (2015). Kabugi asserted that academic pressure is a contributing factor to suicide ideation. So, in analysing the youth as a group that is at a higher risk of suicide, he insisted on the importance of students performing academically for university qualification as a core purpose for university education which include attainment of a diploma or degree or any other form of certifications. And as a social burden on them, the pressure to perform has been noted as one of the main stressors experienced by university students. Hence, whenever a student's performance is not accepted as good enough, they tend to find different means to overcome the academic burden placed on them. Among the many ways through which students in universities deal with academic pressure is to engage in suicidal tendencies. Conclusively, academically excellent students can become highly stressed when there is a change in their performance. They then end up overworking themselves and due to low self-esteem, they end up emphasizing on their performance, thus cannot handle the burden that comes with failure. This leads to depression and indulgence in risky behaviours such as substance abuse, when the burden becomes too heavy to bear, there is a likelihood of students entertaining suicidal thoughts. This is the reason many universities are losing students to suicide across the globe. This overview is adopted, even though it is not an empirical study, but it inspects different empirical studies which are relevant to the current study.

From the different empirical studies discussed above, different results have been established about the correlation between academic stress and suicide ideation. Some established positive correlation while others a negative correlation. It will be the concern of this current study to find out the correlation that exist between this predictor and suicide ideation among university students in Nairobi County.

3. Methodology

The study was carried out in Nairobi which is the capital and the largest city of Kenya. The population of Nairobi County according to the 2019 census was 4,397,073 and the County covers an area of 696 km^2 (269 sq mi), (KNBS, 2019). This County borders Kiambu, Machakos and Kajiado Counties.

The targeted population is a group of people the research intends to reach out to (Vonk, 2017). The population of this study was 128,984 undergraduate students enrolled in 25 universities (public and private) in Nairobi. This is the population of the university students in Nairobi County according to Kenya National Bureau of Statistic (2018), cited by (Nyagah, 2019).

Yamane's (1967) formula of sample size determination was used in the study to obtain the sample size. Thus, Yamane's formula is:

$$n = \frac{N}{1+N (e)2}$$

where
N = Target population
n = Sample formula
e = Interval level
Therefore, $n = \frac{128,984}{1+25,796 (0.05)2} = 398$

So, the sample size of the study comprised 398 students drawn from the population of the study. This was arrived at through a multi-stage sampling procedure. In the first stage, out of the 25 universities in Nairobi, stratified sampling was used in selecting 5 universities. The strata included 6 public universities, 8 private universities sponsored by religious congregation and 11 private universities not sponsored by religious congregation. So, 20 percent of each stratum were considered in accordance with Mugenda and Mugenda (2012) who considers this percentage as an adequate representative sample. Therefore, this included 1 public university, 2 private university sponsored by religious congregation and 2 private universities not sponsored by religious congregation, giving a total of 5 universities.

Data for this study were collected using 2 sets of questionnaires. The first questionnaire titled Suicide Ideation Questionnaire (SIQ) is a 6-item standardized instrument adopted from the Columbia-Suicide Severity Rating Scale (C-SSRS) 2008. It is a measure used to identify and assess individuals at risk for suicide. Questions were phrased for use in an interview format, but can be completed as a self-report measure if necessary. The CSSRS measures four constructs: the severity of ideation, the intensity of ideation, behaviour and lethality. It includes "stem questions," which if endorsed, prompt additional follow-up questions to obtain more information. However, it was adapted to 6 items scale to measure suicide ideation. Items 1 and 2 measure mild suicide ideation, items 3 and 4 measure moderate suicide ideation and items 5 and 6 measure severe suicide ideation. The C-SSRS intensity subscale was examined at two assessment intervals: since the recent visits. The internal consistency of the intensity subscale was high, with a Cronbach's alpha of 0.937 since the recent visits. The Columbia-Suicide Severity Rating Scale (C-SSRS) was created to be the prospective counterpart to the classification system called the Columbia Classification Algorithm for Suicide Assessment (C-CASA). The C-CASA was developed as a retrospective method for evaluating adverse events in clinical trials and was found to possess an overall reliability of 0.89.

The second instrument tagged Academic Stress Questionnaire (ASQ) is a standardized questionnaire adopted from Depression, Anxiety and Stress Scale – 21 (DASS 21) Lovibond & Lovibond, (1995). This was adapted to 7 item scale to measure academic stress. It is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Scores for academic stress are calculated by summing the scores for the relevant items. The Depression, Anxiety and Stress Scale (DASS-21)'s test-retest and split-half reliability coefficient scores were 0.99 and 0.96 respectively. These results demonstrate that the DASS is a valid and reliable instrument.

Descriptive analysis such as frequency and percentage were used to present quantitative data in the form of Tables on research questions. Again, the inferential analysis helped in testing the relationship between the three predictor-variable (academic stress) and suicide ideation among the university students in Nairobi County. Accordingly, for the inferential analysis, correlation Pearson's product moment was performed to establish the relationships between the predictor (academic stress) and suicide ideation among university students in Nairobi County.

4. Results and Discussion

Differences in gender and Suicide Ideation Crosstabulation

The students were asked to indicate their gender. In analyzing the responses, the mean of the male students was 11.18 which more suicidal than the female students which has a mean of 10.95. This is in line with Taylor, (2018) who found a high risk on severe suicide ideation among the male students as compared to female students.

Table 1: Differences in gender and Suicide Ideation Crosstabulation

	Mean	N	Std. Deviation	% of Total Sum
Male	11.18	125	1.521	34.7%
Female	10.95	240	1.695	65.3%
Total	11.03	365	1.639	100.0%

The researcher went further to perform ANOVA test. The degree of freedom was found to be 1 and F value was 1.739. However, the significant level was 0.188 which is greater than 0.05. Thus, the difference in suicide ideation with respect to gender was found to be insignificant as it is illustrated in the Table 2 below.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.662	1	4.662	1.739	.188
Within Groups	973.064	364	2.681		
Total	977.726	365			

With the independent t test, under equal variance assumed, the results were t (1.303), df (363) and p (0.193). with these results, p (0.193) > α (0.05), thus this research fails to reject the null hypothesis that there is no significant difference in suicide ideation with respect to gender and concludes that suicide ideation is not subject to gender. This finding is in line with the findings of Brown (2011) in her study; Predictors of Suicide Ideation and the Moderating Effects of Suicide Attitudes. In the analyses, she compared the means between males and females for each of the study variables (depression, hopelessness, and perceived stress as predictors of suicide ideation) and the result revealed no significant gender differences among the variables examined in the study.

Another supporting study is Yuhui Wan et al, (2019) on the Effects of Self-Esteem on the Association between Negative Life Events and Suicidal Ideation in Adolescents. Their aim was to examine gender differences in the association of suicide ideation with negative life events in adolescents, and to assess the effects of self-esteem on the association and their gender variations. After using Multivariate-adjusted logistic regression to calculate the odds ratio (OR) of having suicide ideation in relation to negative life events, increased risk of suicide ideation was significantly associated with negative life events (adjusted OR 2.19, 95%CI 1.94–2.47), showing no gender differences (in females 2.38, 2.02–2.80, in males 1.96, 1.64–2.36, respectively). Table 3 below gives us the independent t test results;

Table 3: Independent t test Table

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Suicide ideation	Equal variances assumed	3.573	.060	1.319	363	.188	.238	.181	-.117	.593
	Equal variances not assumed			1.365	276.290	.174	.238	.175	-.105	.582

However, the finding is contrary to the finding of Mugambi et al (2020) who showed that, focusing on gender, a higher prevalence of females in comparison to males was observed on suicide behaviour. The prevalence of suicide behaviour in females was 25.4% (n=136) and that of males 17.5% (n=88). Therefore, there was a statistically significant difference on the gender presentation of suicide behaviour at p<0.01. The study therefore, indicates that female adolescents are more vulnerable to the development and expression of suicide behaviour compared to males.

Differences in Year of Study (class) and Suicide Ideation

There is a mean difference in suicide ideation with respect to the year of study. However, the difference is minimal with the highest score being the 4th year students scoring 11.11 while the least are those in year one with the mean of 10.81. this gives a range of 0.30 translating to 30% of sample. So, this has be shown in the table 4 below.

Table 4: Differences in Year of Study

Suicide ideation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Year 1	21	10.81	1.750	.382	10.01	11.61	7	12
Year 2	63	10.89	1.647	.208	10.47	11.30	6	12
Year 3	97	11.09	1.568	.159	10.78	11.41	6	12
Year 4	95	11.11	1.447	.149	10.81	11.40	7	12
Others	89	11.03	1.849	.196	10.64	11.42	6	12
Total	365	11.03	1.630	.085	10.86	11.20	6	12

The researcher went on to do an ANOVA test, finding that the degree of freedom was 4 and the F value was 0.323. However, the significant level was 0.863, which is larger than 0.05, indicating that the differences in suicide ideation by year of study were insignificant, as seen in the table 5.

Table 5: Difference in suicide ideation by year of study

ANOVA

Suicide ideation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.197	4	.799	.299	.879
Within Groups	963.472	361	2.676		
Total	966.668	365			

Differences in Age in years and Suicide Ideation

In the case differences in suicide ideation with reference to age of the participants, those students above 28 years of age scores the highest in suicide ideation mean of 11.52. These were followed by those between the age of 25 to 28 years who had the mean of 11.21, then, those aged 21 to 24 years with mean of 10.91 while the least were those aged between 17 and 20 years who scored a mean of 10.44. The difference in mean between the lowest and the highest was 1.08. This difference seemed to be minimal. However, on conducting the ANOVA, the results were; Df (3), F (5.106) and significant level of 0.002 were established. Being that $0.002 < 0.05$, the analysis of variance indicates that there is a significant difference between age and suicide ideation. Tables 6 and 7 below show this analysis.

Table 6: Age in years and suicide ideation

Suicide ideation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
17-20 years	48	10.44	2.010	.290	9.85	11.02	6	12
21-24 years	175	10.91	1.653	.125	10.67	11.16	6	12
25-28years	67	11.21	1.503	.184	10.84	11.58	6	12
Above 28years	75	11.52	1.234	.143	11.24	11.80	7	12
Total	365	11.03	1.630	.085	10.86	11.20	6	12

Table 7: ANOVA of Age in years and suicide ideation

Suicide ideation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	39.347	3	13.116	5.106	.002
Within Groups	927.321	364	2.569		
Total	966.668	365			

The relationship between academic stress and suicide ideation among university students in Nairobi County

The objective of the study was to establish the relationship between academic stress and suicide ideation. The researcher calculated the mean score of the data summing up as academic stress. As per the data, the mean scores were; suicide ideation (mean = 1.8384, std. deviation = 0.2716) and academic stress (mean = 2.0183, std. deviation = 0.4430) Pearson's correlation was then used to determine the relationship between suicide ideation and academic stress and the results were as shown in the table 8 below.

Table 8: Relationship between academic stress and suicide ideation among university students in Nairobi County

		Suicide ideation	Academic stress
Suicide ideation	Pearson Correlation	1	.416**
	Sig. (2-tailed)		
Academic stress	Pearson Correlation	.416**	1
	Sig. (2-tailed)	.000	
	N	365	

**. Correlation is significant at the 0.01 level (2-tailed).

Discussion

The results reveal that there is a moderate positive correlation of (r = 0.416) between suicide ideation and academic stress. This means that the higher the level of academic stress among students, the higher the thought of committing suicide. The data was considered statistically significant following the significant value of p (0.000) < α (0.01) meaning that the correlation is highly significant and not just as a result of a function of random sampling error.

This finding, is supported by Dat Tan Nguyen et al., (2019) who researched on the general academic stress, self-esteem and their association with anxiety, depression, and suicidal ideation in Vietnamese Secondary School Students. Ang & Huan (2014) also supported this finding in their research on relationship between academic stress and suicidal ideation: testing for depression as a mediator using multiple regression. Their finding indicated that academic stress was positively correlated with suicidal ideation at (r = 0.22, P < 0.01, Cohen's d = 0.45).

Similarly, Ngondi (2016), who dealt with grade expectation which in this case be compared to academic stress. She examined the relationship between Kenya Certificate of Secondary Education (KCSE) examination scores and symptoms of anxiety, Depression, and suicide ideation among adolescents in Nairobi, Kenya. The result obtained were r = -0.07 with 0.491 as level of significance. Thus, indicating that academic grade is not a determinant of suicide ideation. the researcher concluded that it is rather academic expectation that has relationship with suicide ideation since the correlation between grade expected and grade scored revealed that 49 percent of the participants did not get the grade they expected, and so, it triggers feelings of hopelessness regarding the further opportunities; resulting in ideas of ending one's life. This conclusion is in agreement with the current study as this conflict between the grade expected and grade achieve is what amounts to academic stress.

Mohammadinia et al., (2012) conducted research where they wanted to determine some of the reasons and factors that lead to suicidal ideation among medical students. One of the key findings was the intensity of work leading to stress which makes the students develop ideas of committing suicide. This is a form of stress that the medical students experience academically as they are subjected to pressure and a lot of school work. These findings, among others, perfectly support the findings of this study as seen above that indeed there is appositive correlation between academic stress and suicidal ideation among university students in Nairobi County.

5. Conclusion and Recommendation

The main aim of this study was to determine one of the factors that lead to suicidal ideation among university students in Nairobi County. The researcher was motivated to carry out this study following the recent trends in the number of suicide cases. In Kenya, for instance, a concern has been expressed on the rate at which the number of deaths by suicide is growing among the young adults in the universities and majority of these cases involve university students in Nairobi County. From the entire process of research, the study successfully met its goals and objectives. It is thus just to conclude that indeed academic stress has a direct impact on suicide ideation and in turn results to the rampant number of suicide cases reported today among university students in Nairobi County. The study also provided some of the mitigations and coping strategies that can be adopted in order to reduce these cases among the students. Thus, recommended that institutions of learning should consider setting up functioning counselling departments where students can feel free to go and interact with the counsellors in reference to various challenges that they are facing. Also, an awareness about suicide and various ways with which students in universities can cope should be made among the students thus reducing the chances of suicidal ideation and the increasing numbers of suicide reported.

References

Ang R. P. & Huan, S. V., (2006). Relationship between Academic Stress and Suicidal Ideation: Testing for Depression as a Mediator Using Multiple Regression. *Child Psychiatry & Human Developmen* 37:133–143. doi:: 10.1007/s10578-006-0023-8

Babatunde, S. I. (2020). Suicidal Ideation among Undergraduates in Nigeria: The Predictive Role of Personality Traits and Academic Stress. *International Journal of Innovative Research & Growth,* Vol 9 Issue 2. https//doi:10.24940/ijird/2020/v9/i2/FEB20001

Brown, K. (2011). Predictors of Suicide Ideation and the Moderating Effects of Suicide Attitudes. *Master Dissatation for the faculty of Arts Degree in Clinical Psychology*. pp 20-28

Dat Tan Nguyen, Pamela W, Christine D, Tam Thi P & Joske B. (2019). Low Self-Esteem and Its Association With Anxiety, Depression, and Suicidal Ideation in Vietnamese Secondary School Students: A Cross-Sectional Study. *Nationa Library of Medicine*. doi:10.3389/fpsyt.2019.00698

Fathi-Ashtiani. A., Ejei, J., Mohammad-Karim, K., & Tarkhorani, H. (2007). Relationship between Self-Concept, Self-esteem, Anxiety, Depression and Academic Achievement in Adolescents. *Journal of Applied Sciences*.

Jenkins R., Caleb O., Ray O., Linnet O., Peter S., Michael O., James K. M., David K. & Bernhards O., (2015). Tedium vitae, death wishes, suicidal ideation and attempts in Kenya-prevalence and risk factors. *BioMed Central Public Health*, 1-3. doi:10.1186/s12889-015-2089-3

Kabugi, P. (2020). An Overview of the Causes of Suicide and Preventive Strategies in Kenyan Universities. *African Research Journal of Education and Social Sciences* 6(3), 2019. https://www.researchgate.net/publication/342500691

Kenya National Bureau of Statistic. (2019). *Kenya Population and Housing Census.* Nairobi: Government Printer.

Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety & Stress Scales.* (2nd Ed. ed.). Sydney: Psychology Foundation.

Lu Lu, L. X., Xiaorong L., Sun L., Jiajia L., Wenzhe Q., Jiao Z., Xiang J., Yali W., Yu X., Yaozu L., & An'an J., (2020). Gender difference in suicidal ideation and related factors among rural elderly: a cross-sectional study in Shandong, China. *Annals of General Psychiatry,* (2020) 19:2. https//doi:10.1186/s12991-019-0256-0

Mohammadinia N., Mohammadali R., Tayebeh S., Fatemeh D., (2013). Assessing suicidal ideation frequency in medical students. *Quarterly Journal of Nursing Management, 1*(1). Retrieved from https://ijnv.ir/browse.php?a_id=48&slc_lang=en&sid= 1&printcase=1&hbnr=1&hmb=1

Mugambi P., Munene A & Mogute M., (2020). Prevalence of Suicidal Behavior among Adolescents with Depressive Disorders and Posttraumatic Stress in Informal Settlements of Nairobi, Kenya. *African Journal of Clinical Psychology, 03*(1). Retrieved from https://www.daystar.ac.ke/ajcp/downloads/articles/Priscilla.pdf

Mugenda, M., & Mugenda, G. (2013). *Research Methods: Quantitative and Qualitative Approaches.* Nairobi: ACTS.

Ngondi, J. M. (2016). The Relationship Between K.C.S.E Examination Scores and Symptoms of Anxiety, Depression and Suicide Ideation Among Adolescents in Nairobi, Kenya. *A Thesis Submitted to the School of Humanities and Social Sciences in Partial Fulfillment of the Requirement for the Degree of Master of Arts in Clinical Psychology*, 34-43.

Nyagah, V. W. (2019). Online Social Networking and Depressive Symptoms Among Undergraduates University Students in Nairobi County, Kenya. *Ph.D. Research Dissertation*.

Nyang'or V., Adibo J. & Moindi K., (2021). Influence of Parenting Styles on Suicidal Ideations among Secondary School Students in Westlands Sub County, Nairobi Kenya. *The International Journal of Indian Psychology, 9*(1). doi:10.25215/0901.186

Ouma, W. (2018). Worrying trend of university students committing suicide. *Daily Nation*.

https://allafrica.com/stories/201812080087.ht ml

Vonk, J. (2017). *Sampling*. Retrieved from www.jennifervonk.com: https://www.jennifervonk.com/uploads/7/7/3/ 2/7732985/lecture_6_sampling.pdf

Sheetal Y &. Srivastava, S. K., (2020). Correlational Study of Academic Stress and Suicidal Ideation among Students. *Indian Journal of Public Health Research and Development* Vol. 11, No. 10. pp. 58-60

Taylor, J. (2018). *Illegal Drug Use, Suicidal Ideation, and Attempted Suicide among New York Adolescents.* New York: Walden University.

Wanyoike, B. W., (2015). Suicide Among University Students in Kenya: Causes, Implications and Interventions. *Journal of Language, Technology & Enterpreneurship in Africa.* VOL 6. NO. 1. pp. 39-50.

Wilbum, V. R., & Delores E. S., (2005). Stress, Self Esteem, and Suideal Ideation in Late Adolescents. *Libra Publishers, Inc.* Vol. 40, No. 157. University of Akron, San Diego.

World Health Organisation [WHO]. (2018). *Preventing Suicide A community engagement toolkit.* Yusuke Nakazawa, Japan: Geneva: World Health Organization; Licence: CC BY-NC-SA 3.0 IGO. http://apps.who.int/iris.

Yuhui W., Ruoling C., Shanshan W., Orton S., Danni W., Shichen Z., Ying S. & Fangbiao T., (2019). Effects of Self-Esteem on the Association between Negative Life Events and Suicidal Ideation in Adolescents. *International Journal of Environmental Research and Public Health, 16*(2846). doi:10.3390/ijerph16162846