

Perceived-Risk and Protective Factors in Suicidal Ideation and Attempt among Students in the Federal Polytechnic Offa Kwara State Nigeria

ABSTRACT

Background *Suicide usually occurs in response to a situation that one views overwhelming. Nigerian university students encounter diverse economic, financial, social, and psychological challenges which could become overwhelming for them. Risk and protective factors give a clear view and targets for intervention in both individuals and communities;*

Objective: *The broad objective of the study was to investigate the perceived risk and protective factors of suicidal ideation and attempt among students in the Federal Polytechnic Offa*

Methods *A descriptive cross-sectional survey was conducted using a six-stage sampling technique, a total of 236 respondents were selected. Data on knowledge was analyzed using 18-point knowledge scale, a score of ≥ 11 was classified as a good knowledge and a score of ≤ 10 was classified as having poor knowledge. Data on perception was equally analyzed using 22 point perception scale, a score of ≥ 11 was classified as a good perception and a score of ≤ 10 was classified as having poor perception. Lastly, data on prevalence was analyzed using a four-point scale. A total mean score was estimated for each respondent. A mean score of 2.5 to 4.0 was classified as a high prevalence while a mean scores below 2.5 was considered a low prevalence. Data were analyzed using descriptive statistics and Chi-square test at $p < 0.05$.*

Results *Ages of the respondents ranged from 15–30 years with a mean of 21.2 ± 2.8 years. About 50.4% of the respondents were within the age of 15–19 years, and 53.4% were females.*

Moreover, 86.4% identified “Relationship breakups, shame, loss, defeat, humiliation, or threat” as risk factors, while 85.6% noted “Academic failures,” and 83.1% reported “Experiences of sexual violence or abuse.” Protective factors included “Being calm when faced with difficulties by relying on problem-solving abilities” (92.4%), “Practicing moral sanctions against suicide” (91.9%), and “Getting emotional help and support from family and friends” (83.1%).

Conclusion *When the risk factors are decreased, the tendency to have a thought or attempt suicide is generally decreased and increasing protective factors generally also decreases risk, therefore an holistic and multi-sectoral strategies that strengthen protective factors such as, resilience skills that increase awareness of reasons for living and problem-solving capabilities in individuals as well as promoting the development of supportive family and school environments are recommended.*

Keywords: Suicidal Ideation, Suicidal Attempt, Risk factors, Protective factors

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Introduction:

At different times in people's life, different people are faced with varying life challenges. These challenges may seem overwhelming, while some survive from these challenges; others contemplate suicide as a way of escape. There have been studies that have shown suicide as the number two cause of death among individuals between the ages of 18 to 35 in the developed countries of the world (NOCK, 2008). Suicidal ideation and attempts among adolescents in a country like the United States have been reported and recognized as a public health problem (Stone, 2015). The World Health Organization (WHO) estimated the suicide rate in Nigeria at 6.9 per 100,000 population (2018). Recent evidence highlights that suicidal behaviour remains a significant concern across different age groups, with increasing trends in adolescents and young adults. Studies such as those by Twenge et al. (2020) and Turecki & Brent (2022) emphasize that societal and individual factors interplay significantly in influencing suicide rates.

A studies in Nigeria have highlighted that 20% of young people experience suicidal ideation, while 12% report attempting suicide (Omigbodun, Dogra, Esan & Adedokun 2008). This shows the critical link between suicidal thoughts and actual attempts, emphasizing the importance of early interventions.

Understanding the risk and protective factors help to identify the critical role in the prevention of suicide for both individuals and communities. Risk factors are the features and characteristics that make it more likely that individuals will consider, attempt, or die by suicide. Protective factors are characteristics that make it less likely that individuals will consider, attempt, or die by suicide. Risk factors are not exactly warning signs, major risk factors include prior suicide attempt(s), mood disorders, substance abuse, and access to lethal means. Major protective factors include effective mental health care, connectedness, problem-solving skills, and contacts with caregivers. Risk and protective factors give a clear view and targets for intervention in both individuals and communities: When the risk factors are decreased, the tendency to have a thought or attempt suicide is generally decreased and increasing protective factors generally also decreases risk. There are variances in the risk and protective factors between individuals and across different settings. Efforts should begin with a strategic planning process that among other goals, identifies and targets specific risk and protective factors for intervention during suicidal prevention programmes. Usually, young people are commonly those with high prevalence of Suicidal ideation and attempt, this is influenced by a number of risk factors such as anxiety,

hopelessness, depression, and stress) and also protective factors (coping, social support, and self-esteem).

1.2 Statement of Problem

Suicide is the third leading cause of death among young people aged 15-44 years, and ranks second for adolescents between ages 15 and 19 years old (WHO, 2014). Under an ideal and logical setting, students should be made to study under an enabling and conducive environment without unnecessary stress. A good and enabling environment is the one that promotes overall health and wellbeing of the students. It constitutes of a condition devoid of economic, financial, social, and psychological problems. This, however apparently is not the case with students in Nigerian higher institutions.

A key identified problem and driver for such alarming suicidal behaviour is the poor resilience skills and poor problem solving skills these students possess when they are faced with some seemingly overwhelming situations and challenges. Suicide affects all groups, but some are at higher risk than others, this could be attributed to differences in the threshold of the resilience and problem solving skills possessed by these young people, while some are able to exercise these self-protection skills, others result into suicide as a way out. Examining and understanding the predictors of suicidal behavior is vital in combating the crisis of suicide in young people. Suicide poses an unbearable social, economics and psychological effects in most societies of the world.(Nasrin, Mohsen, Reza and Shabnam, 2010).

Research Objectives

The broad objective of the study was to investigate the perceived risk and protective factors of suicidal ideation and attempt among students in the Federal Polytechnic Offa

The specific objectives of the study were to:

1. Assess the level of knowledge of suicidal ideation and attempt among students of the Federal Polytechnic Offa
2. Determine the perception of students of the Federal Polytechnic Offa on suicidal ideation and attempt.
3. Assess the perceived risk factors influencing suicidal ideation and attempt among students in the Federal Polytechnic Offa

4. Examine the perceived protective factors of suicidal ideation and attempt among students of the Federal Polytechnic Offa

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Materials and Methods:

The nature and purpose of the study was explained to the participants with emphasis on confidentiality, privacy and anonymity of the information provided. Any form of identification will not be included in the questionnaire. The information gathered from the respondents was stored in the computer package for analysis by the principal investigator and with no access to unauthorized persons.

Study Design

The study was descriptive cross-sectional in nature. It was designed to find out the perceived-risk and protective factors of suicidal ideation and attempt among students in the Federal Polytechnic Offa.

Study Population

For the purpose of this study, both male and female students in the Federal Polytechnic Offa who are within the age range of 15-44 years and were currently studying at the time of the data collection were recruited for this study.

Study Area

The study area selected for this study is the Federal Polytechnic Offa, Offa, Kwara State. It was established in 1992 during the administration of General Ibrahim Babangida, the Polytechnic offers National Diploma and Higher National Diploma courses. The Polytechnic as at the time of the study has 21 courses offered at National Diploma (ND) level, 23 at Higher National Diploma (HND) level and Pre-ND programmes in Arts and Science. The current student population is about 14,812 students at present. The Polytechnic Mini Campus is located at the southern end of the town along Offa-Osogbo Way, while the Main Campus is located along Offa-Ojoku Road, Offa. This study site was selected based on the observed prevalence of suicidal attempt in 2019 when there was several reported cases of students involved in suicidal attempt at the general hospital Offa. The study area predominantly contains the students, staffs and other members of the school community.

Determination of Sample Size

In a previous study on the prevalence and correlates of suicidal behaviour among young people in Nigeria, Prevalence of suicidal ideation and attempt were 20% and 12% respectively (Omigbodun, Dogra, Esan & Adedokun 2008). The prevalence of 20% suicidal ideation was used on the Leslie Kish's formula to calculate for the sample size for this study.

$$n = \frac{z^2 \times (P \times 1 - P)}{d^2}$$

$$N = \frac{Z^2 pq}{d^2}$$

N= Minimum sample size

Z= Standard normal deviation set at 1.96 normal interval

p= Proportion estimated to be obtained in the target population {suicidal ideation of 20% prevalence).

q= Proportions that does not have the characteristics being investigated

$$(q=1-p) \quad q= 1 - 0.20= 0.80$$

d= Degree of accuracy set at 0.05 (precision set at 5% significant)

Therefore, the sample size $N = \frac{(1.96)^2 \times 0.20 \times 0.80}{0.05^2}$

$$N = \frac{0.589824}{0.0025}$$

$$N = 235.9296$$

Sample size was calculated to be 236

A non-response rate of 10% of 236 = 23.6 =24

Therefore, 24 was added to the sample size calculated to make the sample size 259 in order to address issues of incomplete response.

Sampling Technique

For the purpose of this study, a multistage sampling technique was used to select the participants eligibility for the study.

Stage 1: The 6 faculties in the Polytechnic was stratified into the two Science and Art arms of the school.

Stage 2: Simple Random sampling was used to select 2 faculties each out of the 6 faculties in both the Science and Art arms of the school.

Stage 3: Simple Random sampling was used to select 2 out of 4 departments in each of the selected faculties.

Stage 4: Proportionate allocation based on the number of students in each department was applied in the selection of number of study participants in each of the selected department and

Stage 5: Simple Random sampling was used to select 2 levels from each of the selected department

Stage 6: Simple random sampling technique was used to select respondents for the study

Table 1: Number of participants in of the selected department

S/N	Name of Faculty	Name of Departments	Number of Students in the Department	Number of selected participants
1.	Sch. of Applied Science	Food Technology	334	23
2.	Sch. of Applied Science	Science Laboratory Technology	704	49
3.	Sch. of Engineering Tech	Mechanical Engineering	258	19
4.	Sch. of Engineering Tech	Computer Engineering	190	14
5.	Business and Management studies	Business Administration	511	36
6.	Business and Management studies	Accountancy	410	31
7.	Communication and information Tech	Mass Communication	432	30
8.	Communication and information Tech	Liberary & Information Science	500	34
	Total		3339	236



Validity of the Instrument

The instrument was thoroughly assessed and subjected to the supervisor and other lecturers from the department of Health Promotion and Education to ensure that the research objectives are met. Corrections made by these experts was adapted to improve the structure of the questionnaire.

Reliability of the Instrument

Reliability was done by pretesting 10% of the instrument among students of the Polytechnic of Ibadan, Oyo State. This population has similar characteristics with actual population but not consist of the population who will participate in the study. The internal consistency was determined using the Cronbach's Alpha coefficient analysis and a reliability coefficient of 0.741 was realized, thus considered reliable.

Procedure for Data Collection

The research assistants were two female HND holder and were within the age range of 24-25 years, they were recruited and trained for the study. The training was taken by an expert in the field of Health Promotion and Education as a facilitator and focused on the objectives and importance of the study. The research assistants were involved in pretesting the instrument.

An informed consent was sought from the students that took part in the study. The anonymity and confidentiality of the respondents was kept safe by the research assistant. The questionnaire was tagged with number for accountability of the questionnaire.

Data Analysis

The analysis was done by using statistical package for the social sciences (SPSS) version 21. The data collected was subjected to descriptive statistics (mean, median and mode) for the knowledge, risk perception and preventive practice score and chi-square was used to investigate the relationship between knowledge and demographic characteristics (age, gender, level of knowledge and educational status) of the respondents.

Data on knowledge was analyzed using Eighteen (18) point knowledge scale by allotting two (2) point to any correct answer and zero (0) point for any incorrect answer. Total score of ≥ 11 was classified as a good knowledge and a score of ≤ 10 was classified as having poor knowledge.

The perception of the students on suicidal ideation and attempt was equally analyzed using Twenty two (22) point perception scale by allotting two (2) point to any correct answer and zero (0) point for any incorrect answer. Total score of ≥ 11 was classified as a good perception and a score of ≤ 10 was classified as having poor perception.

Moreover, data on prevalence was analyzed using a four-point scale. The four categories of Very often, Often, Rarely and Not at all were assigned figures: 4, 3, 2, 1 respectively. A total mean score was estimated for each respondent. The criterion mean score was determined by adding all the scores assigned to the degree of behaviour to a statement and dividing it by the number of possible responses. Consequently, a mean score of 2.5 to 4.0 was considered as high prevalence towards suicidal ideation and attempt while a mean scores below 2.5 was considered a low prevalence of suicidal ideation and attempt among the students.

RESULTS

4.1 Respondent's Socio-demographic characteristics

The ages of the respondents ranged from 15-13 years with a mean of 21.2 ± 2.8 years. Findings revealed 50.4% were within the age of 15-19 years and 53.4% of the respondents were females. 97.9% of them were observed to be Yoruba and single. Also, it was observed that 57.2% of the respondents were Christians and 46.6% of the respondents were in their OND1. The details of the results are presented in Table 2 below.

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Table 2: Socio-demographic characteristics of the respondents (N=236)

Socio-demographic Variables	Frequency	(%)
Age		
15-19	119	50.4
20-25	98	41.5
26-30	19	8.1
Gender		
Male	110	46.6
Female	126	53.4
Ethnicity		
Yoruba	231	97.9
Igbo	2	0.8
Hausa	2	0.8
Ebira	1	0.4
Religion		
Islam	101	42.8
Christianity	135	57.2
Marital status		
Single	229	97.0
Married	6	2.5
Divorced	1	0.4
Department		
Food Technology	23	9.7
Science Laboratory Technology	49	20.8
Mechanical Engineering	19	8.1
Computer Engineering	14	5.9
Business Administration	36	15.3
Accountancy	31	13.1
Mass communication	30	12.7
Library and information Science	34	14.4
Highest Educational Level		
OND1	110	46.6
OND2	58	24.6
HND1	17	7.2
HND2	51	21.6

4.2 Respondent's Knowledge of Suicidal Ideation and Attempt

4.2.1 Respondent's Awareness of Suicidal ideation and cases of suicidal attempt in the institution

The awareness level of suicidal ideation and cases of suicidal attempt was assessed among the respondents. 69.1% reportedly to have heard of suicidal Ideation and attempt. . However, when asked if they are aware of suicidal attempt cases in their institution, 47.5% acknowledged to have heard of cases of suicidal attempt in their institution. The responses are presented in the bar chart below.

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4.2.2 Respondent's Knowledge of suicidal ideation and attempt

The level of knowledge was observed to be high among the respondents since more than half of them had good knowledge (60.2%) and 39.8% of had poor knowledge of suicidal ideation and attempt. Majority (83.3%) of the respondent agreed that suffering from emotional imbalance can results to having suicide ideation. However, 59.3% reported that killing one's self is one of the ways of solving problems. The respondents were observed to have good knowledge on the various risk factors of suicidal attempt and the definition of suicidal attempt and ideation. A few stated that they have close friends lost as a result of suicide in their institution.

Other responses are presented in Table 3. The overall knowledge score of suicidal ideation and attempt obtained from the respondents was 9.4 ± 3.2 .

Table 3: Knowledge of suicidal ideation and cases of suicidal attempt (N=236)

Knowledge Variables	Frequency	%
Killing of one's self is one of the ways of solving problems		
Yes	140	59.3
No	96	40.7
Suffering from emotional imbalance can results tore suicide ideation		
Yes	197	83.5
No	39	16.5
Low academic performance and depression are risk factors for suicidal attempt		
Yes	187	79.2
No	49	20.8
Suicidal ideation is a suicide plan without the suicide act itself		
Yes	160	67.8
No	76	32.2
Suicidal attempt is the self-directed and potentially injurious behaviour with the intent to die as a result of the behaviour		
Yes	190	80.5
No	46	19.5
Suicidal ideation and attempt is an intentional self-inflicted act of taking one's life by oneself		
Yes	193	81.8
No	43	18.2
Loss of close friends was experienced due to suicide in my institution		
Yes	59	25.0
No	177	75.0
Level of knowledge		
Poor Knowledge	94	39.8
Good knowledge	142	60.2
Average knowledge score	9.5 ±3.2	

4.4 Perception of students on suicidal ideation and attempt

The perception of the students on suicidal ideation and attempt was analyzed using a twenty two (22) point perception scale by allotting two (2) point to any correct answer and zero (0) point for any incorrect answer. Total score of ≥ 11 was classified as a good perception and a score of ≤ 10 was classified as having poor perception.

The analysis of the data revealed that 88.1% had a good perception and 11.9% had a poor perception on Suicidal Ideation and Attempt. This result reveals that the larger percentage of the participants have a good perception of Suicidal Ideation and Attempt.

This result of the perception of the students on suicidal ideation and attempt was assessed and it was revealed that 88.1% of the students had a positive perception towards suicidal ideation and attempt. More than half (66.5%) of the students attested to the fact that suicide cases are now rampant among the student population and 80.5% agreed that students have thoughts of suicide when they are depressed. However, more than half of the student agreed to the statement “suicide is the last resort when one has severe incurable diseases) which indicates a poor perception towards suicidal attempt and ideation. Other responses are presented in Table 4.

Table 4 Perception of suicidal ideation and attempt among the respondents (N=236)

Variables	Agree Freq (%)	Undecided Freq (%)	Disagree Freq (%)
Suicide cases is now common among the student's populace	157(66.5)	33(14.0)	46(19.5)
Poor academic performance can make a student attempt suicide	157(66.5)	28(11.9)	51(21.6)
Suicide ideation is as a result of being hopeless	173(73.3)	32(13.6)	31(13.1)
Suicidal ideation and attempt can be caused by being jilted by a loved one	173(73.3)	32(13.6)	31(13.1)
Students have thoughts of suicide when depressed	190(80.5)	29(12.3)	17(7.2)
Students suffering from an emotional imbalance can have suicide ideation and attempt	185(78.4)	25(10.6)	26(11.0)
Suicide ideation can be caused by acute financial crisis and poverty	191(80.9)	15(6.4)	30(12.7)

Table 5 Perception of suicidal ideation and attempt among the respondents (N=236)

Variables	Frequency (%)
Suicide is the last resort when one has severe incurable disease	
Agree	139(58.9)
Undecided	41(17.4)
Disagree	56(23.7)
Suicide poses an unbearable social, economic and psychological effect	
Agree	161(68.2)
Undecided	42(17.8)
Disagree	33(14.0)
Level of perception	
Negative	28(11.9)
Positive	208(88.1)
Average perception score	13.5 ±3.15

4.4 Prevalence of students on suicidal ideation and attempt

. The Analysis conducted with respect to the variables measuring suicidal ideation revealed a low prevalence of suicidal ideation among the students since a grand mean score of 1.42 was gotten for the responses gotten for each variable which is less than the estimated criterion mean score of 2.5 ($x=1.42 < 2.5$). However, a mean score of 1.78 for the variable “How often do you talk about suicide was observed to have a mean score close to the criterion mean which can suggests that it’s the major variable measuring the level of suicidal ideation among the students. Further analysis conducted showed that 91.5% had low prevalence towards suicidal ideation while a few 8.5% were observed to have tendency towards suicidal ideation.

The Analysis conducted with respect to the variables measuring suicidal attempt revealed a low prevalence of suicidal attempt among the students since a grand mean score of 1.41 was gotten for the responses for each variable and they were less than the estimated criterion mean score of 2.5 ($x=1.41 < 2.5$). However, a mean score of 1.49 for the variable “Do you often have reasons to

take your life” were observed to have a mean score close to the criterion mean. Further analysis was conducted by respondent and findings show that majority (94.5%) had low prevalence towards suicidal ideation while a few (5.5%) were observed to have tendency towards suicidal attempt. The details are presented in Table 6.

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Table 6 : Prevalence of Suicidal ideation and attempt (N=236)

Variables	Total Weighted responses				Mean scores
	Not at all (1)	Rarely (2)	Often (3)	Very Often(4)	
Prevalence of Suicidal ideation					
Had thoughts of wanting to give up on life	190	34	63	32	1.35
Experienced loss of close friends through suicide in your university	183	72	39	24	1.31
How often do you talk about suicide	120	142	63	96	1.78
Ever thought about leaving a note or writing a letter to somebody about suicide	186	60	39	28	1.33
Often write about death or taking your own life?	194	50	33	24	1.28
Deliberately take care of your health	171	80	36	52	1.44
Grand Average	174	73	46	43	1.42

Prevalence of Suicidal attempt	Not all(1)	at Rarely (2)	Often (3)	Very Often(4)	Mean scores
Tried to take your own life whenever you fail exam	172	58	57	64	1.49
Often have the courage to take your life	179	60	45	48	1.41
Ever carried out any activity to prepare you for suicide	185	54	54	24	1.34
Grand Average	179	57	53	55	1.41

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Analyses by Respondents	No	%
Level of prevalence of suicidal ideation		
Low	223	94.5
High	13	5.5
Average Prevalence score	1.42±0.49	
Level of prevalence of suicidal attempt		
Low	216	91.5
High	20	8.5
Average Prevalence score	1.37±0.66	

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4.5 Perceived Risk factors of Suicidal Ideation and Attempt

The perceived risk factors identified among the students were based on the frequency of the given responses. 86.4% stated that the most common risk factors of suicidal ideation and attempt are “Relationship Break ups, shame, loss defeat, humiliation or threat between students and loved ones,” 85.6% identified Academic failures and 83.1% of the respondents identified Experiences from sexual violence or abuses are risk factors of suicidal ideation and attempt among the students. Also, a great number of the respondents agreed to the statement that “Suicide ideation and attempt is caused by poor psychosocial functioning”. Other responses are presented in Table 7

Table 7 Perceived Risk factors of Suicidal Ideation and Attempt (N=236)

Variables	Agree Freq (%)	Undecided Freq (%)	Disagree Freq (%)
Academic failures can make students have suicidal thought and suicidal attempt	202(85.6)	12(5.1)	22(9.3)
Experiencing disappointments could make a student consider putting an end to his/her life	177(75.0)	16(6.8)	43(18.2)
Students who experience sexual violence or abuses are more likely to attempt suicide	196(83.1)	16(6.8)	24(10.2)
Students that take excessive alcohol and other hard drugs are more likely to attempt suicide	177(75.0)	22(9.3)	31(13.1)
Relationship that leads to break ups, shame, loss defeat, humiliation or threat between students and loved ones can make students to attempt or commit suicide	204(86.4)	17(7.2)	15(6.4)
Suicide ideation and attempt is caused by poor psychosocial functioning	175(74.2)	32(13.6)	29(12.3)

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4.6 Perceived Protective factors of Suicidal Ideation and Attempt

The most common protective factors of suicidal ideation and attempt identified among the students are: “Being calm when faced with difficulties by relying on problem-solving abilities” (92.4%)”, “Practicing the moral sanctions against suicide that protects against suicidal behaviours (91.9%)” and “Getting emotional help and support from Family and friends(83.1%)” among the students. Other responses are presented in Table 8.

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Table 8 Perceived Protective factors of Suicidal Ideation and Attempt (N=236)

Variables	Agree Freq (%)	Undecided Freq (%)	Disagree Freq (%)
I remain calm when facing difficulties because I can rely on my problem-solving abilities	218(92.4)	7(3.0)	11(4.7)
I feel I am a person of worth with an equal plane with others	206(87.3)	15(6.4)	15(6.4)
I get the emotional help and support I need from my family and friends	213(90.3)	7(3.0)	16(6.8)
I can talk about my problems with my family	212(89.8)	7(7.6)	17(7.2)
I have a high level of reasons for living which help protect against suicide thoughts and attempt	201(85.2)	18(7.6)	17(7.2)
Moral sanctions against suicide promoted by the church helps protect against suicidal behaviours	217(91.9)	32(3.4)	29(4.7)

4.7 Test of hypotheses

4.7.1. Hypothesis 1: There is no significant association between the socio-demographic characteristics (such as age, sex) of respondents and their level of knowledge.

Chi-square analysis was conducted to check if there is a significant association between the Socio-demographic variables (Sex, Age and Highest level of education) and level of knowledge of Suicidal ideation and attempt. Findings revealed that there is a significant association between the socio-demographic variables “Age (p-value:0.006)” and “Highest level of education (p-value:0.000)” Since the calculated value is greater than the table value, the null hypothesis (H_0) is hereby rejected. There is a significant association between gender and the level of knowledge of students on suicidal ideation and attempt with a p-value: 0.828. Table 9 shows the presentation of the results gotten from the analysis.

Table 9: Socio-demographic variables significantly associated with level of knowledge of suicidal ideation and attempt among the students (N=236)

Variables	Level of Knowledge		Chi-square (p-value)	Cramer's V (p-value)	Rmrks
	N (%)				
	Poor	Good			
Age					
15-19	59(25.0)	60(25.4)			
20-25	31(13.1)	67(28.4)	10.26(0.006)	0.209(0.006)	significant
26-30	4(1.7)	15(6.4)			
Highest level of education					
OND1	59(25.0)	51(21.6)			
OND2	14(5.9)	44(18.6)			
HND1	3(1.3)	14(5.9)	18.637 (0.000)	0.281(0.000)	significant
HND2	8(7.6)	33(14.0)			
Sex					
Male	43(18.2)	67(28.4)			
Female	51(21.6)	75(31.8)	0.047(0.828)	0.014(0.828)	not significant

4.7.2. Hypothesis 2: There is no significant association between level of knowledge of respondents and their perception on suicidal ideation and attempt

Chi-square analysis was done to test if there is a significant association between the level of perception and level of knowledge of Suicidal ideation and attempt. Findings revealed that there is a significant association between the level of knowledge and level of perception of suicidal ideation and attempt (p-value: 0.000). However, Cramer' v test revealed the strength of the association as weak (Cramer v value: 0.237). This was confirmed from the table presented that about 60% of the students that had good knowledge of suicidal ideation and attempt were also found have showed a positive perception towards suicidal ideation and attempt. Therefore, the level of knowledge is directly proportional to the level of perception among the students. Since the calculated value is greater than the table value, the null hypothesis (H_0) is hereby rejected. Table 10 shows the presentation of the results gotten from the analysis.

Table 10 : Level of perception significantly associated with level of knowledge of suicidal ideation and attempt among the students (N=236)

Variables	Level of Knowledge		Chi-square (p-value)	Cramer's V (p-value)	Rmrks
	N (%)				
	Poor	Good			
Level of perception					
Negative	20(8.5)	8(3.4)			
Positive	74(31.4)	134(56.8)	13.235(0.000)	0.237(0.000)	significant

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4.7.3. Hypothesis 3: There is no significant association between their perception on suicidal ideation and attempt and risk factors influencing suicidal ideation and attempt.

Chi-square analysis was done to check if there is a significant association between the level of prevalence and perceived risk factors of Suicidal ideation and attempt. Findings revealed that only the variable “Relationship that leads to break ups, shame, loss defeat, humiliation or threat between students and loved ones can make students to attempt or commit suicide” showed a significant association with the level of prevalence of suicidal ideation and attempt (p-value:0.026). However, Cramer’ v test revealed the strength of the association as weak (Cramer v value: 0.179). Since the calculated value is greater than the table value, the null hypothesis (H_0) is hereby rejected. Therefore, students that tends to have break ups in relationship, pass through shame, defeat, humiliation and threats have a great tendency towards suicide ideation and attempt. Table 11 shows the presentation of the results gotten from the analysis.

Table 11: Level of prevalence significantly associated with perceived risk factors of suicidal ideation and attempt among the students (N=236)

Values with * were analysed using Fischer exact test

Variables	Level of Perception		Chi-square (p-value)	Cramer's V (p-value)	Rmrks
	N (%)				
	Low	High			
Perceived risk factors					
Relationship that leads to break ups, shame, loss defeat, humiliation or threat between students and loved ones can make students to attempt or commit suicide					
Agree	196(83.1)	8(3.4)			
Undecided	14(5.9)	3(1.3)	7.564(0.026) *	0.179(0.026) *	significant
Disagree	13(5.5)	2(0.8)			

Values with * were analysed with Fischer exact test

UNDER

4.7.4. Hypothesis 4: There is no significant association between their knowledge on suicidal ideation and attempt and perception influencing suicidal ideation and attempt

Chi-square analysis was done to check if there is a significant association between the level of perception and perceived risk factors of Suicidal ideation and attempt. Findings revealed that variables “Suicide ideation and attempt is caused by poor psychological functioning (p-value:0.006)”, “Academic failures can make student to have suicidal thought and suicidal attempt (p-value: 0.000) and “Experiencing disappointments could make a student consider putting an end to his/her life (p-value: 0.001) showed a significant association with the level of perception of suicidal ideation and attempt. Since the calculated value is greater than the table value, the null hypothesis (H_0) is hereby rejected. However, the Cramer’ v test revealed the strength of the association as weak (Cramer v value: 0.203, Cramer v value: 0.333 and Cramer v value: 0.273). Table 12 shows the presentation of the results gotten from the analysis.

Table 12: Level of perception significantly associated with perceived risk factors of suicidal ideation and attempt among the students (N=236)

Variables	Level of Perception		Chi-square (p-value)	Cramer's V (p-value)	Rmrks
	N (%)	N (%)			
	Negative	Positive			
Perceived risk factors					
Suicide ideation and attempt is caused by poor psychological functioning					
Agree	14(5.9)	161(68.2)			
Undecided	7(3.0)	25(10.6)	9.744(0.006) *	0.179(0.008) *	significant
Disagree	7(3.0)	22(9.3)			
Academic failures can make student to have suicidal thought and suicidal attempt					
Agree	17(7.2)	185(78.4)			significant
Undecided	1(0.4)	11(4.7)	26.179(0.000) *	0.333(0.000) *	
Disagree	10(4.2)	12(5.1)			
Experiencing disappointments could make a student consider putting an end to his/her life					
Agree	12(5.1)	165(69.9)			
Undecided	4(1.7)	12(5.1)	17.600(0.001) *	0.273(0.000) *	significant
Disagree	12(5.1)	31(13.1)			

Values with * were analysed using Fischer exact test

4.7.5. Hypothesis 5

Chi-square analysis was done to check if there is a significant association between the level of knowledge and protective factors of Suicidal ideation and attempt. Findings revealed that only the variable “I have a high levels of reasons for living which helps protect against suicide thoughts and attempt” showed a significant association with the level of knowledge of suicidal ideation and attempt (p-value:0.009). However, Cramer’ v test revealed the strength of the association as weak (Cramer v value: 0.199). Since the calculated value is greater than the table value, the null hypothesis (H_0) is hereby rejected. Therefore, a good knowledge of suicidal ideation and attempt would encourage the use of the protective factors of suicidal ideation and attempt. Table 12 shows the presentation of the results gotten from the analysis.

Table 13 : Level of Knowledge significantly associated with protective risk factors of suicidal ideation and attempt among the students (N=236)

Variables	Level of Knowledge		Chi-square (p-value)	Cramer's V (p-value)	Rmrks
	N (%)				
	Poor	Good			
Protective risk factors					
I have a high levels of reasons for living which helps protect against suicide thoughts and attempt					
Agree	72(30.5)	129(54.7)	9.316(0.009) *	0.199(0.009) *	significant
Undecided	12(5.1)	6(2.5)			
Disagree	10(4.2)	7(3.0)			

significant

Discussion

Socio-demographic profile

Findings revealed that half of the respondents were within the age of 15-19 years. This shows that most of the respondents are late adolescents. This is similar to the findings of the study conducted by Anderson, (2002), where most respondents are in their late teens and that suicide incidence increases in the late teens and continues to rise until the early twenties. Most of the respondents were females and this finding was similar to a study conducted by Adedayo, & Omilola (2020), where female respondents were found to be more in number than male respondents. Based on marital status, 229 (97.0%) constituting the majority of the respondent were single, this could be attributed to the fact that majority are within the young age group and also the desire for higher education had influenced the age of entry into marriage as most people prefer to finish school before getting married (Arowojolu et al., 2002). The fact that majority (97.9%) were Yoruba could be attributed to the location of study area as it is located in the Kwara South part of Kwara State where the predominant ethnic group is Yoruba.

Respondent's awareness and knowledge of suicidal ideation and attempt

The result shows that the respondents are aware of what suicidal Ideation and Attempt, this was reveals by the larger percentage of respondents who said that they have heard of suicidal ideation

and attempt in their Institution. This can be established by the cases of suicidal behaviours that have happened previously in that environment which ordinarily will go viral and make one to be eager to know more. Moreover, this high awareness prevalence could be attributed to the fact that suicidal ideation and attempt occurs among young people and most people would have come across or heard about someone that had experienced it.

The level of knowledge was observed to be moderately high among the respondents since more than half of them had good knowledge (60.2%) and about a quarter having a poor knowledge (39.8%) of suicidal ideation and attempt. This good knowledge demonstrated may be explained by the setting of the population that is, the level of educational status of the respondents.

Prevalence of students on suicidal ideation and attempt

The Analysis conducted with respect to the variables measuring suicidal ideation revealed a low prevalence of suicidal ideation among the students since a grand mean score of 1.42 was gotten for the responses gotten for each variable which is less than the estimated criterion mean score of 2.5 ($x=1.42 < 2.5$). However, a mean score of 1.78 for the variable “How often do you talk about suicide” was observed to have a mean score close to the criterion mean which can suggest that it’s the major variable measuring the level of suicidal ideation among the students. Further analysis conducted by respondent shows that majority (91.5%) had low prevalence towards suicidal ideation while a few (8.5%) were observed to have tendency towards suicidal ideation. This result was not in agreement with the findings of Omigbodun, Dogra, Esan and Adedokun, (2008), who conducted a study on the prevalence and correlates of suicidal behaviour among adolescents in southwest Nigeria.

The Analysis conducted with respect to the variables measuring suicidal attempt revealed a low prevalence of suicidal attempt among the students since a grand mean score of 1.41 was gotten for the responses for each variable and they were less than the estimated criterion mean score of 2.5 ($x=1.41 < 2.5$). However, a mean score of 1.49 for the variable “Do you often have reasons to take your life” were observed to have a mean score close to the criterion mean which might suggest that it’s the major variable measuring the level of suicidal attempt among the students. Further analysis was conducted by respondent and findings show that majority (94.5%) had low prevalence towards suicidal ideation while a few (5.5%) were observed to have tendency towards suicidal attempt. **The low prevalence of suicidal ideation in this study aligns with findings from**

McKinnon et al. (2021), who observed similar trends in low- and middle-income countries, attributing this to cultural and familial support structures.

Perceived Risk factors of Suicidal Ideation and Attempt

The key findings showed that the most common risk factors of suicidal ideation and attempt are mainly the social factors. These risks are embedded in social interactions within the school environment, the home and their interpersonal relationships. This include Relationship Break ups, shame, loss defeat, humiliation or threat between students and loved ones, financial problems and “Experiences from sexual violence or abuses among the students. Also, a great number of the respondents agreed to the statement that “Suicide ideation and attempt is caused by poor psychosocial functioning”. Bentley et al. (2021) demonstrated in a meta-analytic review the close association between anxiety and suicidal thoughts, reinforcing the multidimensional nature of risk factors such as academic stress and interpersonal conflicts.

Perceived Protective factors of Suicidal Ideation and Attempt

It was observed that majority of the students agreed to be using most of the protective factors against suicidal ideation and attempt. The most common protective factors of suicidal ideation and attempt identified among the students are: “Being calm when faced with difficulties by relying on problem-solving abilities” Majority of the respondent practiced the moral sanctions against suicide that protects against suicidal behaviours. Majority also feel getting emotional help and support from Family and friends is a protective factor for them. Protective factors like strong interpersonal connections and coping strategies are pivotal in mitigating suicidal thoughts. This is further supported by the findings of O'Connor and Kirtley (2021), who elaborate on the role of motivational systems in promoting resilience.

Relationship between the level of perception and perceived risk factors of Suicidal ideation and attempt

The results showed that a positive significant relationship exists between the level of perception and perceived risk factors of Suicidal ideation and attempt. Findings revealed that variables “Suicide ideation and attempt is caused by poor psychological functioning”, “Academic failures can make student to have suicidal thought and suicidal attempt and “Experiencing disappointments could make a student consider putting an end to his/her life” showed a

significant association with the level of perception of suicidal ideation and attempt. This study agrees with the findings of Vogel et al., (2007), which stated that the stronger one's perception about the fear of being publicly shamed, the greater the self shame, which in turn creates a more negative attitude toward counseling and decreased willingness to seek help.

Relationship the level of knowledge and protective factors of Suicidal ideation and attempt

The result of this study confirms that there is a significant association between the level of knowledge and protective factors of Suicidal ideation and attempt. Findings revealed that the variable "I have a high levels of reasons for living which helps protect against suicide thoughts and attempt", "relying on problem-solving abilities" and "Getting emotional help and support from Family and friends" showed a significant association with the level of knowledge of suicidal ideation and attempt. A good knowledge of suicidal ideation and attempt would encourage the use of the protective factors of suicidal ideation and attempt. This result supports the literature that reported that good knowledge of suicidal behaviours and prevention increases the likelihood of identifying student who are at risk (Condrón et al. 2014).

Implications for Regional and Global Suicide Prevention Strategies

The findings highlight the significant role of specific risk factors such as academic failures, interpersonal conflicts, and experiences of abuse in driving suicidal ideation among youth. Addressing these challenges requires a holistic understanding of how these factors interplay with individual, societal, and cultural elements. The socio-economic conditions surrounding students, particularly in developing regions, exacerbate vulnerabilities. Academic pressures, financial difficulties, and social stigma are pronounced in environments like Nigeria, where institutional support systems may be underdeveloped. Regional strategies must thus focus on alleviating these immediate stressors while building a supportive infrastructure.

Protective factors identified in the study, such as resilience, familial support, and moral sanctions, reflect the importance of leveraging existing social and cultural strengths. Communities with strong traditions of collective care and moral guidance can serve as a foundation for broader preventive measures. Global strategies should recognize these intrinsic protective factors and find ways to integrate them into formal support systems. Additionally,

public health initiatives must be sensitive to cultural nuances, ensuring that interventions are both respectful and effective within specific regional contexts.

Youth-centric approaches are crucial, given the high prevalence of suicidal ideation among young individuals in educational settings. Adolescents and young adults often experience heightened emotional and social turbulence, making them particularly susceptible to suicidal behavior. Educational institutions must play an active role, serving not only as places of learning but also as hubs for mental health support. This requires training teachers and administrators to recognize early signs of distress and providing students with resources to manage stress effectively.

The findings also emphasize the need for consistent and culturally sensitive public awareness campaigns. Stigma around mental health issues remains a significant barrier to seeking help, particularly in regions where discussing mental health is taboo. Collaborative efforts involving governments, NGOs, and community leaders can help normalize conversations around mental health. Such efforts can be augmented with global partnerships to adapt successful suicide prevention models to local contexts, ensuring their relevance and impact.

Finally, the study shows the importance of leveraging digital health technologies to enhance the reach and effectiveness of suicide prevention strategies. Mobile apps, telehealth platforms, and AI-driven mental health tools can provide accessible, immediate support to individuals at risk. These technologies can bridge gaps in mental health care, particularly in under-resourced areas. Incorporating digital health solutions into existing frameworks offers a scalable and cost-effective approach to addressing mental health challenges globally.

Recommendations for Suicide Prevention

Holistic Policy Development

Governments and institutions should prioritize the development of comprehensive suicide prevention policies that address both risk and protective factors. Policies must focus on reducing stressors such as academic pressure and financial difficulties while fostering resilience among youth. Legislation should also ensure the availability of mental health

resources in schools, workplaces, and communities. In addition, national and regional policies should promote collaboration across sectors, including education, health, and social services, to ensure a unified approach to suicide prevention.

Education and Awareness Campaigns

Educational institutions should lead awareness campaigns that teach students, parents, and staff to recognize warning signs of suicidal ideation. Integrating mental health education into school curricula can equip young individuals with the skills to navigate stress and seek help. Public awareness initiatives should target cultural barriers that discourage individuals from seeking mental health support. These campaigns must include messaging tailored to specific demographics, using relatable language and culturally appropriate content. There should be an implementation of a whole-school Suicide Prevention Programme in the curriculum to develop resilience and that address the social stigmas amongst the school community. This would equally support the development of multi-stranded strategies to strengthen protective factors such as, easing pressure on students on grades increasing awareness of reasons for living and problem-solving capabilities in individuals whilst promoting the development of supportive family and school environments.

Enhanced Community Support Systems

Strengthening community-based support systems can significantly reduce the isolation and stigma that often accompany mental health challenges. Peer support networks within schools and neighborhoods can offer safe spaces for individuals to discuss their feelings and seek advice. Family-focused interventions should encourage open communication and provide parents with the tools to support their children emotionally. Community leaders and influencers can play a pivotal role in fostering environments that discourage stigma and promote acceptance.

Accessible Digital Health Solutions

Digital health technologies can revolutionize suicide prevention by providing immediate, accessible mental health support. Mobile apps such as mood trackers and guided meditation tools can help individuals manage their emotions. Telehealth platforms can connect individuals with counselors and therapists, even in remote areas. AI-powered chatbots can

offer real-time support and guidance for those in distress. Governments and organizations should invest in the development and promotion of these tools, ensuring they are affordable, user-friendly, and culturally sensitive.

Monitoring and Evaluation

Implementing robust mechanisms for monitoring and evaluating suicide prevention initiatives is essential. Surveys, focus groups, and other feedback tools can help assess the effectiveness of policies and programs. Data-driven insights can guide adjustments to strategies, ensuring they remain relevant and impactful. Establishing centralized databases to track trends in suicidal behavior can inform targeted interventions and resource allocation. Regularly publishing findings can also enhance transparency and encourage continuous improvement in suicide prevention efforts.

Conclusion

Based on the results of this study, the study concluded that Relationship Break ups, Academic failures, shame, loss defeat, humiliation or threat between students and loved ones are the major causes of suicidal ideation and in higher institution of learning while other causes like sexual violence or abuses, depression, hopelessness, financial crisis, conflict with parents among others can also cause suicidal ideation. The most common protective factors of suicidal ideation and attempt identified among the students are: “Being calm when faced with difficulties by relying on problem-solving abilities”, practicing the moral sanctions against suicide that protects against suicidal behaviours. Getting emotional help and support from Family and friends is a protective factor for them. Increasing these protective factors will generally decrease the risk factors. Building on evidence from Calati & Courtet (2020), addressing socio-economic inequalities alongside psychological support mechanisms is imperative for comprehensive suicide prevention strategies.

DEDICATION

This research work is dedicated to my mum, Mrs C.A. Kolawole who toiled day and night to lay the foundational stone of my educational career and also to the memory of my late father, Mr Rowland A. Kolawole.

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Ethical Approval:

Prior to the commencement of the study, ethics approval was sought and obtained in a written format from the Kwara State Ministry of Health Research Ethical Review Committee with reference number MOH/KS/EU/777/486. The committee ensured that the research work

conforms to the generally accepted scientific principles and international ethical guideline required in human subject research and to review the ethical components of the study.

Consent:

A written informed consent was sought from the students that took part in the study.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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Author(s) hereby declare that generative AI technologies such as Large Language Models, etc. have been used during the writing or editing of manuscripts. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology

Details of the AI usage are given below:

- 1.
- 2.
- 3.

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**MINISTRY OF HEALTH
KWARA STATE GOVERNMENT**

MOH/KS/EU/777/486

12th April, 2021.

KOLAWOLE EBENEZER TOBA

Department of Health Promotion and Education,
Faculty of Public Health,
College of Medicine,
University of Ibadan.

APPROVAL TO CARRY OUT A RESEARCH TITLED: "Perceived Risk and Protective Factor of Suicidal Ideation and Attempt among Students in the Federal Polytechnic Offa, Kwara State."

Sequel to your request and the interest of the State Ministry of Health in Health-related research activities to improve the health of the citizens. I am directed to forward to you the approval of the Ministry of Health to carry out the dissertation as itemized in your protocol. This approval dates from 12th April, 2021 to 12th April, 2022.

2. You are mandated to acknowledge the State Ministry of Health by your presentations/publications and deposition of the final copy of the research findings/publications.
3. Best wishes in your research project.

Alhaji Sidiq Abdulwahab Abubakar
For: Permanent Secretary

CMD/Officer in charge.

.....

.....

Above for your information and necessary action, please.

