GENDER DIFFERENCES IN SUICIDAL IDEATIONS AND ATTEMPTS AMONG SECONDARY SCHOOL STUDENTS IN ILE-IFE, NIGERIA

MAPAYI Boladale[1,2], OLAKUNLE Oginni[2], OSILAJA Ronke[3], OYEBODE Babatunde[4], OGUNYEMI Morenike[5], ADEWOLE Oluwatosin[5], and FATUSI Adesegun[6]

[1.] *Department of Mental Health, Obafemi Awolowo University, Ile-Ife, Nigeria*
[2.] *Department of Mental Health, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria*
[3.] *Lagos State University Teaching Hospital, Lagos, Nigeria*
[4.] *Olabisi Onabanjo University Teaching Hospital, Sagamu, Nigeria*
[5.] *Federal Medical Centre, Owo, Ondo, Nigeria*
[6.] *Department of Public Health, Obafemi Awolowo University, Ile-Ife, Nigeria*

ABSTRACT

Although suicidal ideations and attempts are a serious public health issue, they are poorly understood phenomena in terms of prevalence, underlying factors, and gendered variations among young people in Nigeria. This study therefore seeks to identify and analyze by gender the prevalence of suicidal ideations and attempts and the factors associated with these concepts among secondary school students in Ile-Ife. The study uses a cross-sectional descriptive approach with samples drawn from students' population in both public and private secondary schools in Ife Central Local Government Area (LGA). Multistage sampling procedure was employed to select about 500 comprising 248 and 252 males and females, respectively, from about 25 secondary schools (18 private and 7 public). Relevant data were collected using validated socio-demographic schedule, a diagnostic predictive scale and the Nigerian version of the global school health survey. Appropriate research techniques were used to analyze the data. From the findings, about 17% (85) of the respondents had thought about suicide in the three months prior to the study while 7.8% (39) had attempted suicide. More females had ideations but more males attempted suicide. Suicidal ideation was found to be significantly associated with having repeated a class, parents separated, depressed mood, experience of lethargy, loneliness, ever having had sex, being forced by adults to have sex, being physically attacked and the use of cannabis while suicidal attempt was significantly associated with suicidal ideations, depressed mood, lethargy, feeling lonely, having ever had sex and being forced by adults to have sex. Regular screening for suicidal behaviours should be carried out among adolescents in schools. Adolescents with high risk factors should be identified and counselled as preventive measures. Measures to prevent sexual violence and abuse, promote mental health and prevent mental illnesses should be integrated into school programmes.

INTRODUCTION

Suicidal ideations and attempts are serious public health issues which result in varying levels of morbidity and mortality depending on the intensity and the means by which the act is carried out (Liu *et al*., 2005, Rodriguez *et al*., 2006). Though the adolescent period is regarded as a healthy time of life with peaks in strength, speed, fitness and cognitive abilities, major shifts in health and identity occur around this time which promotes risky behaviours like suicide and deliberate self-harm (Patton et al 2009). Suicidal ideation is a term used to denote thoughts about or an unusual preoccupation with suicide. The range of suicidal ideation meanders through fleeting ideas to detailed planning, role-playing, self-harm and unsuccessful attempts. Although most people who undergo suicidal ideation do not go on to make suicide attempts, significant proportions do (Gliatto, 1999). Adolescents are even more vulnerable to suicide risk because on-going neurodevelopment leaves planning and executive functions lagging behind emotional development. Ease of access to psychoactive substances may also heighten risks for suicidal attempts for the adolescent.

The World Health Organisation (WHO) recognises suicidal behaviours among adolescents as a significant social and health concern. International studies have shown that suicidal ideation and attempt is relatively high among adolescents (Brener, Krug & Simon, 2000; De Leo Heller 2004; Patton et al, 2009). The global burden of suicide and deliberate harm was well demonstrated by Patton et al (2009). The authors indicated that self-inflicted injuries were the second commonest cause of death among young people between the age of 10 and 24 years. It has been reported that there may be up to 50-or 100 suicide attempts or self-harm behaviours for every completed adolescent suicide (Brener, Krug & Simon, 2000). About 5% to 10% of adolescents who participated in self-report surveys in Australian schools reported an episode of self-harm in the previous 12 months in western countries (De Leo Heller 2004).

Though global figures suggest a significant burden of suicidal behaviour among young people, local data is sparse. Suicidal behaviour in Africa was thought to be rare in the past, but recent studies suggest that it represents a substantial public health burden (Ovuga, Boardman &Wassermann, 2005). Studies conducted in Africa indicate that suicidal behaviour varies across the Continent. For example, among students, self-reported suicidal ideation ranges between 19.6% in Uganda, 23.1% in Botswana, 27.9% in Kenya, and 31.1% in Zambia (Swahn *et al*, 2010). In Nigeria there is limited scientific information on the issue of suicidal ideation and attempts among adolescents. Yet some sporadic reports from hospitals showed that suicide behaviour is already a major health concern in Nigeria. A 6-month prospective study on attempted suicide in three hospitals in a southwestern city of the country revealed that 39 out of 23859 (0.16%) patients who

presented to these hospitals had attempted suicide (Odejide *et al,* 1986). Similarly, a study on autopsy results for over a period of eleven years in another southwestern city indicated suicide rate of 0.4 per 100,000 population with a male to female ratio of 3.6 to 1(Nwosu and odesanmi, 2001). Both studies found higher rates in males. They also indicated that most victims were in their twenties and that the use of pesticides was the most common method of self-harm.

A study done by Omigbodun *et al* (2008), which was one of the first in the country, to examine the prevalence of self -reported suicidal ideation and attempts and associated psychosocial factors among urban and rural youth within the age bracket of 10 and 17years in southwestern Nigeria, showed that over 20% reported suicidal ideation while about 12% had attempted suicide in the 12 months preceding the study. Studies have reported associations of several psychosocial factors with suicidal behaviour among various categories of adolescents. There is increased incidence of suicidal behaviour among females (Bhugra *et al*, 2003), the older adolescents (Liu et al, 2005), socio-economically deprived adolescents (Ayton *et al*.,2003) and those from separated families (Aklaama & Hari,2005). There is a strong association between suicidal behaviour and adolescents who have been sexually abused, exposed to violence or engaged in psychoactive substance use (Howard & Wang, 2005).

Others have found factors such as hunger, sadness, anxiety, lack of parental attachment, lack of peer support, truancy, being bullied, substance use and sexual activity were associated with suicidal ideation (Peltzer&Pengpid, 2012). Omigbodun et al (2008) showed that adolescents living in urban areas, from polygamous or disrupted families had higher rates of suicidal behaviour. Multiple psychosocial factors such as sexual abuse, physical attack and involvement in physical fight were significant predictors for suicidal behaviour.

There is a dearth of information about deaths resulting from suicides and suicidal ideations among young people in Nigeria. A number of studies have been conducted in the global context but there is still paucity of information on the prevalence and factors associated with suicidal ideations and attempts among young people in Nigeria. Sporadic reports point to the fact that it does occur; but it is under reported because of associated cultural factors and the criminalisation of suicidal attempt in the country. For instance, Section 372 of the Criminal Code states that attempted suicide is a misdemeanour punishable by one-year imprisonment. As a result, issues of suicide are less known, especially variations by gender, in Nigeria. There is a need to improve knowledge in this area. Therefore, this study used standardised and validated protocol to determine the prevalence of suicidal ideations and attempts among the adolescents and identify any associations between suicidal ideations/ attempts and psychopathology, and demonstrates

variations between male and female adolescents. In doing so, it improves our understanding of the phenomenon vis-à-vis prevalence and underlying factors, and thereby provides scientific basis for the emergence of adolescent responsive interventions.

To this end, it identifies the prevalence of suicidal ideations and attempts and the factors associated with suicidal ideation and attempt among secondary school students in Ile-Ife, Nigeria and shows variations in these variables by gender.

METHODS

This cross-sectional descriptive study was carried out with samples drawn from the population of students in secondary schools in Ile-Ife (Ife central local Government) in the State of Osun. A minimum sample size of 246 students was obtained for this study using the Fischer's formula with an estimated prevalence rate of 20% (Omigbodun et al, 2012) and a precision of 0.05. This was then increased to 540 to allow more robust analysis. A multistage sampling method was employed in this study.

Stage 1: The town has two Local Government Areas (LGAs) namely, Ife Central and Ife-east LGAs. Ife Central Local Government Area has its headquarters in the south of the city of Ile-Ife. It has an area of 111km2 and a population of 167,254 as at the 2006 census. Ife Central local government was selected by simple random technique; this was done by a ballot.. A list of the number of schools in the selected local government was obtained from the state of Osun education Board and this list indicated the type of schools (public or private) and its population.

Stage 2 There are 18 private secondary schools and 7 public secondary schools in this local government. For the public secondary schools, the total number of students was 12,008, while for the private secondary schools the total number of students was 4,998. The sample was chosen from 6 public secondary schools and 3 private secondary schools in the local government, keeping the absolute number of students in public and private schools relatively proportional.

Stage 3 A sample of 360 students for public and 180 students for private schools was used. 60 students were chosen from each school with full representation from all classes from JSS1 to SS3.

Stage 4 10 students were selected from each class (5 females and 5 males).

Measures

Socio- Demographic Questionnaire.

This section of the questionnaire obtained information such as gender, age as at last birthday, family structure (monogamous or polygamous), Parents' current marital status (married, divorced, separated or widowed), Level of education of parents and Parents' social class.

Diagnostic predictive scale

Suicidal ideation and attempt was measured using the Diagnostic Predictive Scale Items 23-25. The DISC predictive scale is a diagnostic specific self- reported inventory designed to identify youth who are likely to meet diagnostic criteria for one or more mental health disorders (including substance use disorders). It is a quick, easy and efficient way to provide mental health screening. The scale and related items are derived from a secondary analysis of a large epidemiological data set containing responses to the full diagnostic interview scheduled for children and other DSM III diagnostic information (Lucas et al, 2001). It has been validated for use among adolescents in Nigeria by Omigbodun et al (2008). Two questions from the DPS predictive scale for youth which looked at the suicidal ideation and attempt were used for this part of the assessment. Participants either indicated yes or no to these questions.

The Nigerian version of the global school health survey

The GSHS is a school Based survey conducted primarily among students aged 13-15 years. For the purpose of this study, the core questionnaire module was used to determine health behaviour related to dietary behaviour, alcohol and other drug use, sexual behaviour and exposure to violence. A question was added to obtain information on sexual abuse. This has been validated for use in Nigeria by Omigbodun et al (2008).

The general health questionnaire (GHQ).

David Goldberg developed one of the most widely used mental health screening devices (the General Health Questionnaire). GHQ is an instrument that has been found useful in screening for mental ill-health among adolescents and adults especially in our settings and has been extensively used and validated in Nigeria (Adelekan *et al,* 1993).

There are many versions. Originally designed in a 60-item format, a number of shorter versions have subsequently been derived. The 12 item version has been widely used in Nigeria for detecting presence or absence of psycho-social morbidity. Its major value lies in its ability to segregate those who are mentally healthy from those who are mentally ill.

The GHQ-12 is scored using either the Likert method (0-1-2-3) or the bimodal method (0-0-1-1). Each item is accompanied by four possible responses, typically being 'not at all', 'no more than usual', 'rather more than usual' and 'much more than usual', scoring from 0 to 3, respectively. The total possible score on the GHQ 12 ranges from 0 to 36 (likert) and it has a cut-off point of greater or equal to 7/8 in this environment and also from 0 to 12 (bimodal) with a cut-off point of 2/3. In a study by Gureje et al, 1991., the alpha coefficient of the GHQ-12 was 0.82. It is also known that the higher the score on the

instrument, the higher the likelihood of the severity of the psychopathology. The bimodal method of scoring was used and a cut-off score of greater or equal to 3 was adopted for this study.

Data analysis

Data analysis was carried out using the SPSS 16 software. Uni-variate analysis was used to determine the prevalence of suicidal ideations, attempts and psychopathology. Association at bivariate level was assessed using chi-square as appropriate. A P value of <0.05 is considered statistically significant in all cases.

Ethical consideration

Permission to carry out the study was obtained from the state of Osun education Board and Ethical approval from the Ethics Committee, Institute of Public Health, O.A.U. The aims and objectives of the study were explained to the participants and written consent obtained from respondents and parents/guardians (for respondents under 18) and assent obtained from the respondents. The participants were also assured of confidentiality.

RESULTS

Sociodemographic and behavioural characteristics

A total of 540 respondents within the age bracket of 10and 19years completed the questionnaire, out of which 500 respondents answered the questions on suicidal ideations and attempts completely and were incorporated into the final analysis, giving a response rate of 92%. There were 248 (49.6%) male adolescents and 252 (50.4%) female adolescents. Of the respondents, 87% of the parents were married and 13% separated, divorced or widowed. Most respondents were from monogamous homes (77%) and most parents were from middle and high socioeconomic class.

Data in Table 1 showed that almost half (48.8%) of the respondents reported depression with the female gender having a higher percentage (48.8% to 48.6%). Prevalence of lethargy was 42.4%, use of alcohol was 16.2%, use of cannabis was 5.2%, being sexually active was 20.2%, forced sex was 58.4% and being physically attacked was 20.6%. More males compared to females reported lethargy (44.4% to 40.5%), use of alcohol (21% to 11.5%), being sexually active (26.6% to 13.9%) and physical attack (24.3% to 17.1%) while more females reported forced sex (68.6% to 47%)

Suicidal ideation and attempt

The prevalence of suicidal ideation was about 17% with 85 respondents reporting that they thought seriously about killing themselves in the past 3 months. The prevalence of suicidal ideation was 7.8% with 39 respondents reporting that they had tried to kill themselves in the past 3 months. Gender discrepancy existed with both

ideations and attempt. More females reported ideations (17.1% to 16.9%) and more males reported attempt (8.5% to 7.1%) (Table 1).

Factors associated with suicidal ideations

Data in table 2 shows the sociodemographic and behavioural characteristics associated with suicidal ideations which included separated, divorced or widowed parents (0.01), repeated a class (0.01), depressed mood (<0.001), lethargy (<0.001), loneliness (<0.001), cannabis (0.002), being sexually active (0.001), been forced to have sex (<0.001) and been physically attacked (<0.001).

Gender variations in suicidal ideations

Table 3 presents data on gender variations in factors associated with suicidal ideations. Being depressed, lethargic, lonely, sexually active and forced to have sex had significant associations for both males and females. Separation of parents, divorced or widowed were only significantly associated with ideations for the females while repeating a class, use of cannabis and being physically attacked were significant associations for males. On multivariate analysis (Table 6), most of these findings remained significant. For females, separation of parents, divorced or widowed led to a 3-fold increase in report of suicidal ideations. Both males and females were more likely to report suicidal ideations if they had depressed mood (9-fold increase), lethargy (3-fold males and 7-fold females), loneliness (3-fold males and 4-fold females), use of cannabis (5-fold), use of other substances (5-fold males and 3-fold females), being sexually active (3-fold) and a history of sexual abuse (3-fold males and 4-fold females).

Factors associated with suicidal attempts

Data in table 4 show that sociodemographic and behavioural characteristics associated with suicidal attempts included suicidal ideations (<0.001), depressed mood (<0.001), lethargy (<0.001), loneliness (0.03), being sexually active (<0.001), being forced to have sex (0.003).

Gender variations in suicidal attempts

Being depressed, lethargic, sexually active and forced to have sex had significant associations for both males and females while use of psychoactive substances and being physically attacked were significant associations for males (Table 5). On multivariate analysis (Table 6), most of these findings remained significant. For males, use of other substances led to a 3-fold increase in report of suicidal attempts. Both males and females were more likely to report suicidal attempts if they had depressed mood (6-fold increase), lethargy (4-fold males and 5-fold females), being sexually active (3-fold males and 5-fold females) and a history of sexual abuse (4-fold increase).

Table 1: Socio-demographic and behavioural characteristics of respondents

Variable	Total (n=500)	Males (n=248)	Females (n=252)
	N (%)	N (%)	N (%)
Sex			
Male	248 (49.6)		
Female	252 (50.4)		
Age (years)			
	204 (40.8)	91 (36.7)	113 (44.8)
14-16	219 (43.8)	113 (45.6)	106 (42.1)
>16	77 (15.4)	44 (17.7)	33 (13.1)
Type of school			
Private	166 (33.2)	79 (31.9)	87 (34.5)
Public	334 (66.8)	169 (68.1)	165 (65.5)
Class			
Junior	258 (51.6)	125 (50.4)	133 (52.8)
Senior	242 (48.4)	123 (49.6)	119 (47.2)
Married	435 (87.0)	216 (87.1)	219 (86.9)
Separated/divorced/widowed	65 (13.0)	32 (12.9)	33 (13.1)
Repeated any class			
No	415 (83.0)	207 (83.5)	208 (82.5)
Yes	85 (17.0)	41 (16.5)	44 (17.5)
Suicidal ideations			
No	415 (83.0)	206 (83.1)	209 (82.9)
Yes	85 (17.0)	42 (16.9)	43 (17.1)
Suicidal attempt			
No	461 (92.2)	227 (91.5)	234 (92.9)
Yes	39 (7.8)	21 (8.5)	18 (7.1)
Depressed			
No	256 (51.2)	127 (51.4)	129 (51.2)
Yes	244 (48.8)	120 (48.6)	123 (48.8)
Lethargy			
No	288 (57.6)	138 (55.6)	150 (59.5)
Yes	212 (42.4)	110 (44.4)	102 (40.5)
Problematic alcohol use			
Level of			
No	419 (83.8)	196 (79)	223 (88.5)
Yes	81 (16.2)	52 (21)	29 (11.5)
Use of cannabis			
No	474 (94.8)	231 (93.1)	243 (96.4)
Yes	26 (5.2)	17 (6.9)	9 (3.6)
Ever had sex			
No	399 (79.8)	182 (73.4)	217 (86.1)
Yes	101 (20.2)	66 (26.6)	35 (13.9)

Table 1: Socio-demographic and behavioural characteristics of respondents *(Contd.)*

Variable	Total (n=500)	Males (n=248)	Females (n=252)
	N (%)	N (%)	N (%)
Forced to have sex with an adult (N=101)			
No	42 (41.6)	31 (53.0)	11 (31.4)
Yes	59 (58.4)	35 (47.0)	24 (68.6)
Being physically attacked			
No	396 (79.4)	187 (75.7)	209 (82.9)
Yes	104 (20.6)	60 (24.3)	43 (17.1)
Being in physical fights			
No	355 (71.0)	164 (66.1)	191 (75.8)
Yes	145 (29.0)	84 (33.9)	61 (24.2)

Table 2: Association between Socio-demographic and behavioural characteristics of respondents and suicidal ideations

Variable	No suicidal ideations (%)	Suicidal ideations (%)	X^2 value	df	P value
Parents' marital status					
Married	368 (84.6)	67 (15.4)			
Separated/divorced/ widowed	38 (70.4)	16 (29.6)	6.9	1	0.01
Repeated any class					
No	309 (85.8)	51 (14.2)			
Yes	63 (74.1)	22 (25.9)	6.9	1	0.01
Depressed					
No	243 (94.9)	13 (5.1)			
Yes	171 (70.4)	72 (29.6)	53.2	1	<0.001
Lethargy					
No	263 (91.0)	26 (9.0)			
Yes	152 (72.0)	59 (28.0)	33.3	1	<0.001
Loneliness					
No	237 (90.1)	26 (9.9)			
Yes	178 (75.1)	59 (24.9)	19.9	1	<0.001
Use of cannabis					
No	400 (83.7)	74 (16.3)			
Yes	15 (57.7)	11 (42.3)	12.5	1	0.002
Ever had sex					
No	343 (86.0)	56 (14.0)			
Yes	72 (71.3)	29 (28.7)	12.3	1	0.001
Forced to have sex with an adult					
No	378 (85.7)	63 (14.3)			
Yes	37 (62.7)	22 (37.3)	19.5	1	<0.001
Been physically attacked					
No	342 (86.4)	54 (13.6)			
Yes	72 (69.9)	31 (30.1)	15.7	1	<0.001

Table 3: Gender variations in factors associated with suicidal ideations among respondents

		Suicidal ideation											
		Male						Female					
		No		Yes				No		Yes			
		freq	%	freq	%	X^2	p	freq	%	freq	%	X^2	p
Age	<13	72	79.1	19	20.9	4.43	0.11	99	87.6	14	12.4	5.5	0.06
	14-16	100	88.5	13	11.5			81	76.4	25	23.6		
	>16	34	77.3	10	22.7			29	87.9	4	12.1		
Class	Junior	105	84	20	16	0.16	0.69	108	81.2	25	18.8	0.6	0.44
	Senior	101	82.1	22	17.9			101	84.9	18	15.1		
Repeats	No	177	85.5	30	14.5	5.31	**0.02**	175	84.1	33	15.9	1.21	0.27
	Yes	29	70.7	12	29.3			34	77.3	10	22.7		
Family type	Mono	155	80.7	37	19.3	3.3	0.07	164	84.1	31	15.9	0.83	0.36
	Poly	51	91.1	5	8.9			45	78.9	12	21.1		
Parents mar status	separated	25	78.1	7	21.9	0.64	0.43	22	66.7	11	33.3	7.1	**0.008**
	married	181	83.8	35	16.2			187	85.4	32	14.6		
Depressed mood	No	120	94.5	7	5.5	24.5	**<0.001**	123	69.9	6	4.7	28.77	**<0.001**
	Yes	85	70.8	35	29.2			86	69.9	37	30.1		
Lethargic	No	124	89.9	14	10.1	10.2	**0.001**	139	92.7	11	7.3	24.79	**<0.001**
	yes	82	74.5	28	25.5			70	68.6	32	31.4		
Loneliness	Rarely/never	124	89.2	15	10.8	8.5	**0.004**	113	91.1	11	8.9	11.56	**0.001**
	Sometimes/always	82	75.2	27	24.8			96	75	32	25		
Sexually active	No	158	86.8	24	13.2	6.8	**0.009**	185	85.3	32	14.7	5.93	**0.015**
	Yes	48	72.7	18	27.3			24	68.6	11	31.4		
Sexual abuse	No	146	88	20	12	8.53	**0.004**	184	86.8	28	13.2	14.03	**<0.001**
	Yes	60	73.2	22	26.8			25	62.5	15	37.5		
Physically attacked	No	166	88.8	21	11.2	18.19	**<0.001**	176	84.2	33	15.8	1.41	0.24
	Yes	39	65	21	35			33	76.7	10	23.3		
Cannabis	No	196	84.8	35	15.2	7.62	**0.006**	204	84	39	16	4.94	**0.05**
	Yes	15	3.6	11	12.9			5	55.6	4	44.4		
Psychoactive substance	No	144	91.1	14	8.9	20.18	**<0.001**	174	86.6	27	13.4	9.25	**0.002**
	Yes	62	68.9	28	31.1			35	68.6	16	31.4		

Table 4: Association between Socio-demographic and behavioural characteristics of Respondent and suicidal attempts

Variable	No suicidal attempts (%)	Suicidal attempts (%)	X^2 value	df	P value
Suicidal ideations					
No	415 (90.0)	0 (0.0)			
Yes	46 (10.0)	39 (100.0)	20.7	1	<0.001
Depressed					
No	249 (54.1)	7 (17.9)			
Yes	211 (45.9)	32 (82.1)	18.8	1	<0.001
Lethargy					
No	277 (60.1)	11 (28.2)			
Yes	184 (39.9)	28 (71.8)	15.0	1	<0.001
Loneliness					
No	249 (54.0)	14 (35.9)			
Yes	212 (46.0)	25 (64.1)	4.7	1	0.031
Ever had sex					
No	377 (94.5)	22 (5.5)			
Yes	84 (83.2)	17 (17.8)	14.4	1	<0.001
Forced to have sex with an adult					
No	413 (93.7)	28 (6.3)			
Yes	48 (81.4)	11 (18.6)	10.9	1	0.003

Table 5: Gender variations in factors associated with suicidal attempts

		Suicidal attempt											
		Male						Female					
		No		Yes				No		Yes			
		freq	%	freq	%	X^2	p	freq	%	freq	%	X^2	p
Age	<13	83	91.2	8	8.8	0.77	0.68	107	94.7	6	5.3	1.47	0.52
	14-16	105	92.9	8	7.1			96	90.6	10	9.4		
	>16	39	88.6	5	11.4			31	93.9	2	6.1		
Class	Junior	116	92.8	9	7.2	0.52	0.47	123	92.5	10	7.5	0.06	0.81
	Senior	111	90.2	12	9.8			111	93.3	8	6.7		
Repeat a class	No	193	93.2	14	6.8	4.69	0.06	193	92.8	15	7.2	0.01	0.93
	Yes	34	82.9	7	17.1			41	93.2	3	6.8		
Family type	Mono	175	91.1	17	8.9	0.16	0.69	182	93.3	13	6.7	0.3	0.57
	Poly	52	92.9	4	7.1			52	91.2	5	8.8		
Parents marital status	separated	27	84.4	5	15.6	2.43	0.16	29	87.9	4	12.1	1.42	0.27
	married	200	92.6	16	7.4			205	93.6	14	6.4		
Depressed mood	No	123	96.9	4	3.1	9.63	**0.002**	126	97.7	3	2.3	9.25	**0.002**
	Yes	103	85.8	17	14.2			108	87.8	15	12.2		
Lethargic	No	132	95.7	6	4.3	6.81	**0.01**	145	96.7	5	3.3	8.11	**0.004**
	yes	95	86.4	15	13.6			89	87.3	13	12.7		
Loneliness	Rarely/never	131	94.2	8	5.8	3.01	0.08	118	95.2	6	4.8	1.95	0.16
	Sometimes/always	96	88.1	13	11.9			116	90.6	12	9.4		
Sexually active	No	171	94	11	6	5.18	**0.02**	206	94.9	11	5.1	10.13	**0.001**
	Yes	56	84.8	10	15.2			28	80	7	20		
Sexual abuse	No	158	95.2	8	4.8	8.62	**0.003**	201	94.8	11	5.2	1.69	**0.01**
	Yes	69	84.1	13	15.9			33	82.5	7	17.5		
Physically attacked	No	175	93.6	12	6.4	4.3	**0.04**	195	93.3	14	6.7	0.37	0.55
	Yes	51	85	9	15			39	90.7	4	9.3		
Psychoactive substance	No	150	94.9	8	5.1	6.51	**0.01**	188	93.5	13	6.5	0.68	0.41
	Yes	77	85.6	13	14.4			46	90.2	5	9.8		

Table 6: Logistic regression of predictors of suicidal ideations and attempts among respondents

Age (years)	0.97	0.83	1.12				1.08	0.92	1.26				1.07	0.87	1.31				1.08	0.87	1.36		
Family type*	0.41	0.15	1.10				1.41	0.67	2.97				0.79	0.26	2.46				1.35	0.46	3.95		
Parents' marital status**	1.45	0.58	3.61				**2.92**	1.29	6.60				2.32	0.79	6.83				2.02	0.62	6.56		
SES***																							
Very low	1.08	0.11	10.69				2.17	0.48	9.75				0.00	0.00	0.00				3.17	0.50	19.88		
Low	1.27	0.47	3.39				1.70	0.59	4.94				1.58	0.40	6.25				1.34	0.28	6.35		
Middle	0.66	0.25	1.72				1.10	0.43	2.82				0.88	0.22	3.43				1.24	0.33	4.61		
High	0.79	0.31	2.02				1.08	0.41	2.80				1.34	0.37	4.84				0.64	0.14	2.97		
Depressed mood	**7.06**	2.99	16.64	**8.79**	3.50	22.06	**8.82**	3.57	21.81	**9.15**	3.59	23.29	**5.08**	1.66	15.56	**5.56**	1.75	17.70	**5.83**	1.65	20.69	**6.29**	1.71 23.14
Lethargy	**3.02**	1.50	6.09	**3.15**	1.51	6.56	**5.78**	2.75	12.14	**6.95**	3.11	15.50	**3.47**	1.30	9.28	**3.52**	1.29	9.63	**4.24**	1.46	12.28	**4.94**	1.61 15.17
Loneliness	**2.72**	1.37	5.43	**3.18**	1.53	6.59	**3.42**	1.64	7.16	**3.55**	1.66	7.62	2.22	0.88	5.56	2.51	0.96	6.55	2.03	0.74	5.60	2.05	0.72 5.79
Psychopathology	1.85	0.94	3.61	**2.01**	1.01	4.00	**2.21**	1.14	4.31	**2.26**	1.13	4.52	1.41	0.57	3.48	1.50	0.60	3.77	1.30	0.48	3.48	1.23	0.45 3.38
Alcohol use	1.66	0.78	3.53	1.98	0.90	4.36	1.01	0.36	2.83	1.01	0.35	2.93	1.57	0.58	4.28	1.76	0.62	5.00	1.60	0.43	5.90	1.42	0.37 5.46
Cannabis use	**3.92**	1.40	10.99	**5.26**	1.75	15.77	**4.19**	1.08	16.28	**5.15**	1.21	21.95	2.54	0.67	9.65	3.09	0.77	12.40	1.66	0.20	14.08	1.52	0.13 13.92
Other substance use	**4.65**	2.29	9.42	**5.41**	2.54	11.48	**2.95**	1.44	6.04	**3.05**	1.45	6.41	**3.17**	1.26	7.96	**3.33**	1.28	8.66	1.57	0.53	4.63	1.55	0.52 4.67
Repeated classes	**2.44**	1.12	5.31	**2.91**	1.23	6.86	1.56	0.70	3.46	1.38	0.60	3.17	**2.84**	1.07	7.55	**3.17**	1.08	9.28	0.94	0.26	3.40	0.74	0.20 2.80
Sexually active	**2.47**	1.24	4.93	**2.92**	1.39	6.14	**2.65**	1.18	5.93	**2.54**	1.05	6.12	**2.78**	1.12	6.88	**3.00**	1.16	7.78	**4.68**	1.68	13.07	**4.86**	1.55 15.28
Sexual abuse	**2.68**	1.36	5.26	**3.37**	1.60	7.08	**3.94**	1.86	8.38	**4.21**	1.85	9.57	**3.72**	1.48	9.38	**3.73**	1.40	9.94	**3.88**	1.40	10.71	**3.88**	1.28 11.75
Physical attack	**4.26**	2.12	8.56	**4.37**	2.11	9.08	1.62	0.73	3.59	1.44	0.63	3.28	**2.57**	1.03	6.45	2.52	0.97	6.54	1.43	0.45	4.57	1.26	0.39 4.12

1 – Unadjusted, 2 - Adjusted for age, fam type, parents' marital status, * (ref: monogamous), ** (ref: married), ***(ref: Very high), SES – Socio-economic Status

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DISCUSSION

The result of this study shows a 17% prevalence of suicidal ideation and 8% prevalence of suicidal attempt. This is comparable to the results by Omigbodun et al (2008) that reoprted a 20% prevalence of suicidal ideation and 12% prevalence of suicidal attempt. Other studies of Self-reported suicidal ideation have reported 19.6% in Uganda, 23.1% in Botswana, 27.9% in Kenya and 31.1% in Zambia (Swahn et al, 2010). The variations in prevalence, though minimal, could be due to a number of factors. Instruments used, age group sampled and even the length of recall (3 months, 6 months or 12 months) may all lead to these differences though it might also be due to true cultural variations. Vague suicidal thought can occur in up to one-third of teenagers, the life time prevalence of deliberate self-harm in Adolescence has been found to be between 2 and 3.5 % in studies from Europe and higher in United States (about 9%). (Hawton et al, 2003.)

Our results did not show any appreciable gender differences in suicidal ideation and attempt though more females reported ideations while more males attempted suicide which is in keeping with studies by Carter et al, 2006 (New Zealand) and Chen et al, 2005 (Malaysia) that found that females have a higher chance of having depressed mood and suicidal intents. Eaton et al (2008) reported more ideations in females and more attempts in males, however, the local study by Omigbodun et al, 2008 found no gender differences in rates of suicidal ideation and attempts.

The results also show that psychosocial factors like having ever repeated a class, experience of physical attack, sexual abuse, being sexually active, loneliness and psychoactive substance abuse were both significant predictors of suicidal ideation and attempts in both male and female adolescents in secondary schools in Ile-Ife. In terms of gender disparity in factors associated with suicidal behaviour, females had more factors like sexual abuse, depression and being sexually active while males reported more factors like being physically attacked and the use of psychoactive substances. Adolescents from polygamous, divorced or separated families had higher rates of suicidal ideation. Sexual abuse and physical attack were also significant predictors of suicidal ideation in this study. Howard & Wang, (2005) in their study also found a strong association between suicidal behaviour and adolescents who have been sexually abused, exposed to violence or engaged in psychoactive substance use.

In this study, those who attempted suicide were significantly more likely to have had suicidal ideations, be depressed, sexually active, use psychoactive substances and have a history of sexual abuse. These findings are comparable to King et al (2001) which reported that even after further adjusting for the presence of a mood, anxiety or disruptive disorder, a significant

association persisted between suicidal ideation or attempts and poor family environment, low parental monitoring, low youth instrumental competence, sexual activity, recent drunkenness, current smoking and physical fighting. Other studies have found that an experience of bullying increases suicidal ideation and behaviours (Kim et al, 2005).

LIMITATIONS

The current Nigerian Legislation which mandates one-year imprisonment for attempting suicide was a limitation in this study because some of the respondents may be reluctant to give the information on suicidal attempt considering its legal implication.

The study is subject to both recall and reporting bias because all measures of suicidal ideations and attempts were based on self report, though it is expected that estimates will be no less reliable than those of other self-report surveys.

This study was a cross-sectional survey so a causal relationship between psychosocial risk behaviours and suicidal ideation and attempts cannot be inferred.

CONCLUSION

This study shows that 1 in 6 adolescents aged 10-19 years in secondary schools in Ile-Ife have experienced suicidal ideation in the last 3months, and 1 in 12 had attempted suicide in the past 3 months. Adolescents from families whose parents are separated, divorced or widowed have higher rates of suicidal ideation.

The burden of suicidal ideations and attempts among our respondents is similar to other findings in this environment buttressing the fact that suicidal behaviour amongst adolescents is a major public health concern in our environment. Factors associated with suicidal ideation and attempts, depression, loneliness, repeating a class, parents separated/divorced or widowed, are issues that can easily be screened for to identify at risk adolescents and appropriately refer them. A cause for concern however is that risky sexual behaviour (being forced to have sex and being sexually active) are also associated with suicidal ideations and attempt among this age group, another reason to advocate adolescent health programmers to integrate reproductive health with mental health in interventions. Also, the study demonstrated valuable gender variations in factors associated with suicidal behaviour for the adolescents.

This study adds to the existing body of knowledge through its use of standardised and validated instruments to determine the prevalence of suicidal ideations and attempts among adolescents and identify associations between suicidal ideations/attempts and specific characteristics in the adolescent. Regular screening for suicidal behaviours should be carried out among Adolescents in schools. Adolescents with high risk factors should be identified and counselled as

preventive measures. Measures to prevent sexual violence and abuse, promote mental health and prevent mental illnesses should be integrated into school programmes. Educational staff should be trained in identification of these behavioural disorders and best practices for seeking assistance.

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