

## **Severity of Suicide Behaviors among Parasuicidal Adolescents at Federal Neuropsychiatric Hospital, Kappa-Lagos, Nigeria**

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### **Abstract**

The purpose of this study was to establish the severity of suicide behaviors and co-existing mental disorders at Federal Neuropsychiatric Hospital, Kappa-Lagos, Nigeria. The sample size of 115 participants was selected at 80% power and 30% effective size using purposive sampling technique. The research used Suicide Behavior Questionnaire (SBQ-R), Beck's Depression Inventory (BDI), and Mood Disorders Questionnaire (MDQ) to collect data. Data obtained from researcher-generated socio-economic demographic questionnaire and standardized psychological assessment tools was analysed using Statistical Package for the Social Sciences (SPSS) version 23 and summarized in percentages. The results of the study show that suicide behaviors were more predominantly severe among participants aged 18-21 than participants aged 14-17. The prevalence of suicide behavior was noticed among female, university students, and Christians, especially the Pentecostals. In addition, the severity of suicidal behaviors was high among adolescents whose fathers were employed, whose mothers were jobless, whose family economic status was poor and slightly higher among adolescents whose parents lived together compared to those whose parents lived apart.

*Keywords:* suicide behaviors, parasuicidal, adolescents and mental health disorders

### **Introduction and background**

One of the major global public health recurrent distresses is suicide behavior especially among adolescents (World Health Organization [WHO], 2002). The epidemiological data shows that over one million adolescents and young adults die of suicide yearly (Miller, Rathus, & Linehan, 2007) making suicide the second leading cause of death after road traffic injuries, and one of the leading causes of death globally (World Health Organization, 2017). Suicide is also the second leading cause of death among adolescents in America and in Europe (Cutler, Glaeser, & Norberberg, 2001). Suicide behaviors among African adolescents are equally alarming. For instance, the prevalence of suicidal behaviours in South Africa was rated to be among the highest in the world (Bertolote & Fleischmann, 2002). African suicide

epidemiological data noted that approximately 6,500 suicides and 130,000 suicide attempts occurred annually in South Africa (Naidoo & Schlebusch, 2014).

In addition, in a research conducted among sub-Saharan African adolescents, Palmier (2011) showed that East African countries are not immune from the endemic tragedy of suicide. According to the study, Zambia had the highest prevalence of suicidal ideation (31.9%), followed by Kenya (27.9%), Botswana (23.1%), Uganda (19.6%) and Tanzania (11.2%) among youth who eventually committed suicide. The prevalence of suicidal ideation in Botswana, Kenya, Uganda and Zambia was higher (19.6%-31.9%) than in the U.S. (16.9%) and Europe as seen in prior studies (Swahn, Bossarte, Eliman, Gaylor, & Jayaraman, 2010). In a similar research conducted in Nigeria among 1,429 adolescent students by Omigbodun, Dogra, Esan, and Adedokun (2008), over 20% of the students reported suicidal ideation while 12% had attempted suicide in the previous year. The research also indicated that adolescents in urban areas, especially from polygamous or disrupted families, had higher rates of suicidal behavior.

The annual age-standardized suicide rate globally as at 2013 was 11.4 per 100,000 in the population, whereas in Nigeria, the suicide rate according to WHO mortality database documentation was 6.11 per 100,000 in the population (WHO, 2013). This ranked Nigeria the 30<sup>th</sup> most suicide-prone out of 183 nations in the world and 10<sup>th</sup> in Africa. (Obinna, 2017). Adewuya et al.(2016) reported the World Mental Health Survey (WMHS) to have estimated the rate of suicidal ideation at 9.2% globally and specifically in Nigeria at 3.2%. Meanwhile, in a research conducted by the authors in Lagos State-Nigeria, it was found that out of 11,246 who participated in the study, 7.5% of the participants presented with suicidal ideation (Adewuya et al., 2016).

A study indicated that lack of parent-child bond could lead to confusion, conflict and frustration in the growing child. This, according to them, serves as an antecedent for an adolescent to develop psychopathology and suicidal behavior (Khasakhala, Ndetei, & Mathai, 2013). In addition, Linehan (2015) noted that suicidal behavior is a response to unbearable emotional suffering. According to her, “parasuicidal adolescents show a characteristic pattern of instability in affect regulation, impulse control, interpersonal relationship, and self-image” (Linehan, 2015, p. 5). Therefore, this research sought to establish the severity of suicide behaviors among adolescents at Federal Neuropsychiatric Hospital, Kappa-Lagos, Nigeria.

This study site is one of the referral Federal psychiatric hospitals in Nigeria and the only one in Lagos State.

Recent findings in understanding the epidemiology and emerging risk factors of youth suicide and suicidal behavior are instrumental in management of parasuicidal adolescents (Palmier, 2011). Studies have indicated that several factors that put adolescents at risk to exhibit suicidal behaviors include depression, older age, financial difficulties, dysfunctional family, gender, alcoholism, hopelessness, substance abuse, among others.

Studies have also shown that a prior suicide attempt is one of the strongest indicators of completed suicide. According to Bridge et al. (2006), the risk for repetition of suicide attempt is high within the first 3 to 6 months after a suicide attempt. Similarly, in another study, it was found that the rates of subsequent completed suicide among attempters are 0.5-1.0% per year, which are substantially elevated compared to the general population. Additionally, those who made attempts to commit suicide by lethality such as hanging, gun or jumping are more at a high risk for completed suicide compare to those with low ideation (Ani, 2010; Bridge, Goldstein, & Brent, 2006)

Studies have consistently found gender differences among adolescents who attempted suicide. For instance, in the USA, suicidal ideation and attempts are common among female adolescents whereas completed suicide is five times more common among male adolescents (Kennebeck & Bonin, 2016). The gender differences are also similar in Western European countries where completed suicide rates for males and females were reported to be equal in some Asian countries and are higher among female in China (WHO, 2002). Similar results were found in a research in Kenya where it was indicated that 84.8% of male youths presented with suicidal behaviors compared to 82% female (Khasakhala, Ndetei, & Mathai, 2013). Several factors may explain why females make more suicide attempts while males have a greater frequency of completed suicides. One of such factors may be that females have higher rates of mood disorders, which are connected with suicidal behavior whereas males have higher rates of aggressive behavior and substance abuse, which are often associated with completed suicide (Miller, Rathus, & Linehan, 2007).

According to the epidemiology reports on adolescent suicide rates, significant decline was noticed between 1980s and 2003 globally, which subsequently increased between 2003 and

2008. However, between 2009 and 2016, suicide accounted for 14 percent of deaths in adolescents aged 15 to 19 years, and 8 percent of deaths in youths aged 10 to 14 years. Additionally, suicidal thoughts, ideation and intent rates increased among female aged 10 to 14 years by 76 %, females aged 15 to 19 years by 32%, whereas suicidal attempts and suicide completion rates increased by 73% among males aged 15 to 21 years (Kennebeck & Bonin, 2016).

Interpersonal conflicts, separations, break up of a romantic relationship, disciplinary crises or legal problems, humiliation and bullying are some of the stressful life events identified as common precipitants to adolescent suicide among youths who have attempted and completed suicides around the world (Miller et al., 2007).

An epidemiological study on adolescent suicide conducted by Qin, Agerbo, and Mortensen (2003) indicated that unemployment and low income had stronger effects on suicide in male subjects. According to the researchers, the effect of unemployment remained significant and the odds ratios clearly increased with the degree of unemployment. Also, the risk was significantly higher for those in the lowest income quartile (Zhai, et al., 2015). Additionally, Gallucci (2012) also noted that chronic economic hardship, loss of job and low socioeconomic status increased suicide vulnerability. Experts in the field of mental health had observed that with the economic downturn in Nigeria occasioned by the falling prices of oil in the international market and massive losses of job, the country will record more suicide cases (Adeyemi, 2016).

Khasakhala et al. (2013) reported that adolescents and youths who are at high risk of experiencing confusion, conflict and frustration include adolescents from single-parent families, youths who have parents with psychiatric disorders, those who have a family history of severe suicidal behaviors, violent and abusive family structures, youths with maladaptive maternal rejecting parenting behavior, or those whose parents are inadequate in exercising authority and those whose parents lack time to observe and deal with emotional distress. Dysfunctional family, according to these researchers, is a precursor for an adolescent to develop psychopathology and suicidal behavior. Charen (2017) added that adolescent depression and suicide are closely linked with divorce and single parenting. The researcher further noted that adolescents who could be predisposed to suicidal behaviors are those

whose families are dysfunctional, those with lack of care and adequate attention to emotional needs, or those whose parents lack basic understanding of parenting adolescents.

Researchers have indicated that suicidal behaviors among adolescents are clearly associated with mental disorders. Miller et al. (2007) noted that over 90% of adolescents completing suicide had a mental illness at the time of their death. Further, according to Miller et al. younger adolescents completing suicide tend to have higher rates of mental illness. Similarly, another study revealed a relationship between suicide behaviors and mental disorder. Adolescents with at least one diagnosed mental disorder were four times more likely to attempt suicide than those with no disorder. On the other hand, youths with three or more disorders were eight times more likely to attempt suicide or develop suicidal ideation than those with no psychiatric disorders (Khasakhala, Sorsdahl, Harder, Williams, & Ndetei, 2011).

Furthermore, a cross-sectional study at Mathari Psychiatric Hospital, Kenya, the indicated that schizophrenia patients recorded the lowest prevalence of overall suicidal symptoms (29.5%), which was less than the 40% -50% prevalence of suicidal ideas (Ndetei et al., 2009). Onset of schizophrenia indicated prevalence rates of between 20% and 50% for attempted suicide in schizophrenic patients (Eugene, 2013). Meanwhile, patients with bipolar disorders were high in prevalence of suicidal symptoms. This indicates that the mood component is the most important risk factor for suicidal symptoms and most especially the depressive episode in bipolar disorders. In addition, the prevalence is high in patients with substance use disorder especially when it is comorbid with mood disorders and schizophrenia, which may increase the risk for suicide behaviors (Ndetei, et al., 2009).

In addition, depressive disorders have been reported among adolescents attempting and completing suicide, at rates ranging from 49% to 64% with the highest rates among psychiatric inpatients (Shain, 2007). Posttraumatic Stress Disorder has also been associated with adolescent suicidal behavior. What is more, personality disorders especially borderline personality traits are increasingly being linked with adolescent suicidality (Wichstrom, 2009). It has been suggested that the co-occurrence of mood disorders and borderline personality patterns in adolescents represent a particularly significant risk factor for suicidal behavior (Miller et al., 2007).

## **Methodology**

This research was designed to use quantitative research approach that emphasizes on the importance of measurement and analysis of causal relationship between variables (Shah & Corley, 2006). A quantitative method of research was employed using randomized clinical trial groups for hypothetical deductive analysis under a standardized and controlled situation. A research population is defined as a well-defined collection of individuals or objects known to have similar characteristics (Mugenda & Mugenda, 2003). Therefore, the target population of this study were parasuicidal adolescents with any of the mood disorders in Nigeria. The sample size in this study was calculated using the 20% prevalence of suicide behaviors in Nigeria (Omigbodun et al., 2008), and 40% prevalence of suicidal adolescents at Federal Neuropsychiatry Hospital, Kappa-Lagos (Lawal, 2016). The following aspects in the calculation of the sample size were considered; the prevalence of the suicide behaviors (20%), the significance level of 0.05, the confidence level of 95% and the power which was at the lowest (80%). The formula by Casagrande, Pike, and Smith (1978) was used to calculate the sample size of 115 subjects.

A total of 115 participants were recruited using Structural Clinical Interview for Mood Spectrum (SCI-MOODS) and Suicide Behavior Questionnaire pre-treatment assessment tools. Out of the 121 case files of the inpatients that were reviewed, 38 were recruited, which constituted 33.3% of the total parasuicidal adolescents who were eligible to participate in the study. Another 34 representing 29.6% of the total participants were recruited from the outpatients. The remaining 43 constituting 37.4% were discovered patients from friends and the relatives of those who usually come for outpatient clinics at Federal Neuropsychiatric Hospital Child and Adolescent clinics, Kappa-Lagos, Nigeria. Ethical issues to ensure that the research process did not cause physical, emotional, mental and psychological or any other harm to participants were considered (Barnyard & Flanagan, 2005). Institutional approval was obtained from Daystar University Research and Ethics Review Board through the Head of Department (HOD) of the Psychology and Counselling, as well as, from the Research and Ethics Board at the Federal Neuropsychiatric Hospital, Yaba-Lagos, Nigeria where the study was carried out in accordance with the principles of declaration of Nigeria. Written informed consent was obtained from each respondent or their proxies prior to participation. Participants were also made aware that their participation was voluntary and that they could withdraw at any time without any penalty. The participants were informed prior to the commencement of the study that if they were not interested in participating, their participation would not be pursued. Identity numbers were used for all sources of data to protect their confidentiality.

The assessment focused on background characteristics such as socio-demographic factors, participant's educational status, religious affiliation, parents' employment status, family's economic status and participant's family setup. Recruitment and assessments took four weeks of four hours per week to complete. The assessment focused on suicidal behaviors of the participants as well as their depression severity and mood spectrum status. The Statistical Package for Social and Sciences (SPSS) version 23 was used to analyse data collected using socio-demographic questionnaire, Beck Depression Inventory (BDI), Mood Disorders Questionnaire (MDQ), and Suicide Behaviors Questionnaire Revised (SBQ-R).

**Results**

*Table 1: Socio-Demographic and Economic Characteristics of Adolescents at Federal Neuropsychiatric Hospital, Lagos*

Socio-demographic and economic attributes	Frequency	%
Participants Age		
14 – 17	42	36.5
18 – 21	73	63.5
Participants Sex		
Male	41	35.7
Female	74	64.3
Education level		
Secondary school	16	13.9
College education	28	24.3
University education	46	40.0
Others	25	21.7
Religion		
Pentecostal	58	50.4
Evangelical/ Orthodox	22	19.1
Catholic & others	10	8.7
Islam	25	21.7
Father’s Economic Status		
Father employed	53	46.1
Father Jobless	25	21.7
Father self-employed	30	26.1
No father	7	6.1
Mother’s Economic Status		
Mother employed	17	14.8
Mother jobless	63	54.8
Mother self-employed	19	16.5
No mother	16	13.9
Family’s Economic Status		
Poor	29	25.2

Average	55	47.8
Affluent	31	27.0
Family Set-up		
Parents living together	53	46.1
Parents living apart	48	41.7
Living with a guardian	14	12.2

Table 1 presents the socio-economic demographic characteristics of adolescents at Federal Neuropsychiatric Hospital, Lagos. The distribution of study participants showed that the proportion of adolescents aged 18-21 were higher (63.5%) than middle adolescents (36.5%) aged 14-17. This implies that the prevalence of suicidal behaviors among adolescents aged 18-21 were more predominant than middle adolescents aged 14-17. Gender distributions of the study participants indicated that female adolescents were more (64.3%) than male adolescents (35.5%). In other words, female adolescents were more suicidal than male adolescents in this study. The education levels of the study participants at the study site were also considered. Participants with university education were more (40%) than other educational levels of the participants. The result indicate that the prevalence of suicide behaviors was higher among university students than other educational levels.

The proportion of religious affiliation among the study participants at the study site shows that the percentage of Christians was significantly higher (78.3%) than Muslims and more especially among Pentecostal denomination (50.4%) than other denominations (27.9%). In other words, the prevalence of suicide behaviors was higher among Christians, especially Pentecostal denominations, than non-Christians. In addition, the prevalence of suicidal behaviors was high among adolescents whose fathers were employed at 46.1%, whereas the prevalence of suicidality was high among adolescents whose mothers were jobless. The family set-up of the participants was grouped into three categories, namely the adolescents whose parents were living together, those whose parents were living apart and those that were living with guardians. It was noted that the severity of suicide behavior was slightly higher among the participants whose parents were living together at 46.1% compared to the adolescents whose parents lived apart at 41.7%, but significantly lower at 12.2% among adolescents who lived with guardians. The result of this study suggests that the majority of the participants, whose parents were living together, perhaps came from dysfunctional family, or their parents were too busy to provide emotional needs of their adolescents, or they lacked

basic parenting skills for adolescents that eventually predisposed them to suicidal behavior. This points to the fact that when family is dysfunctional, and when family is together but not emotionally connected, adolescents from such family are vulnerable to suicide behavior.

*Table 2: Suicide Behavior Classifications among Adolescents at Federal Neuropsychiatric Hospital, Lagos*

Suicide Behavior Classification	Frequency	%
Suicide thought	23	20
Suicide plan without intent	24	20.9
Suicide plan with intent	5	4.3
Suicide attempt without intent	27	23.5
Suicide attempt with intent	36	31.3
Total	115	100.0

Table 2 presents the prevalence of suicide behaviour classifications among the participants at Federal Neuropsychiatric Hospital, Lagos-Nigeria. Suicide Behaviors Questionnaire-Revised classifies suicide behaviors into six categories namely, suicide thought/ideation, suicide plan without intent, suicide plan with intent, suicide attempt without intent and suicide attempt with intent. The percentage of adolescents with suicide thought was 20%. The frequency of suicide plan without intent was higher (20.9%) than the adolescents who had suicide plan with intent (4.3%). However, suicide attempt with intent was more severe (31.3%) than those who had attempted suicide without intent (23.5%). This seems to suggest that a higher percentage of the participants had attempted suicide with intent.

Table 3: Key Demographic Characteristics with Suicidal Behavior Classifications

Variables	Suicide Behavior Classifications										d <sup>2</sup>	P value			
	Total		Thought/Ideation		Plan without Intent		Plan with intent		Attempt without intent				Attempt with intent		
	N	%	N	%	N	%	N	%	N	%			N	%	
<b>Age</b>															
14-17	42	(36.5)	9	(7.8)	11	(9.6)	5	(4.3)	8	(7.0)	9	(7.8)	2.824	1	.930
18-21	73	(63.5)	14	(12.2)	13	(11.3)	0		19	(16.5)	27	(35.5)			
<b>Sex</b>															
Male	41	(35.7)	7	(6.1)	5	(4.3)	4	(3.5)	1	(0.9)	24	(20.9)	2.972	1	.015
Female	74	(64.3)	16	(13.9)	19	(16.5)	1	(0.9)	26	(22.6)	12	(10.4)			
<b>Educational Level</b>															
Secondary	16	(13.9)	7	(6.1)	4	(3.5)	0		3	(2.6)	2	(1.7)	34.729	3	.001
College	28	(24.3)	9	(7.8)	6	(5.2)	2	(1.7)	1	(0.9)	10	(8.7)			
University	46	(40.0)	7	(6.1)	5	(4.3)	0		17	(14.8)	17	(14.8)			
Others	25	(21.7)	0		9	(7.8)	3	(2.6)	6	(5.2)	7	(6.1)			

Table 3 presents the distribution of key demographic characteristics with suicidal behavior classifications. The table shows the prevalence of suicide plan without intent (9.6%) compared to suicide ideation (7.8%), suicide plan with intent (4.3%), suicide attempt without intent (7%) and suicide attempt with intent (7.8%) among the participants aged 14-17 years. On the other hand, frequency of suicide attempt with intent was higher among participants aged 18-21 at 35.5% compared to suicide attempt without intent (16.5%), suicide plan without intent (11.3%), and suicide ideation (12.2). These findings seem to suggest that suicide plan without intent was noticeable among participants aged 14-17 whereas suicide attempts with intent were severe among participants aged 18-21. This implies that younger adolescents seem to be suicide planners but without intent, whereas older adolescents seem to be suicide attempters with intent, although, the chi-square analysis indicated no significant difference between the two variables ( $p=0.930$ ).

The table also shows the frequency of suicide attempt with intent to be higher among male participants (20.9%) compared to suicide without intent (0.9%), suicide plan with intent (4.3%), suicide plan without intent (4.3%) and suicide ideation (6.1%). By contrast, the prevalence of suicide attempt without intent was higher among female participants at 22.6% as opposed to suicide attempt with intent (10.4%). This seems to imply that female suicidal adolescents attempted suicide without intention to complete suicide, perhaps to draw attention to themselves or cry for help. On the other hand, male suicidal adolescents attempted suicide with intention to complete suicide. Chi-square analysis shows that the association is statistically significant ( $p= 0.015$ ). This can be interpreted that female adolescents attempt suicide more than male; however, male adolescents are more likely to commit suicide than female adolescents.

In terms of the educational level of the participants, Table 3 shows higher frequency of suicide attempts with intent (14.6%) and suicide attempt without intent (14.6%) among university students compared to secondary school students (1.7%), college students (8.7%) and others who were not in school as at the time of data collection (6.1%). This seems to suggest that suicide attempts with and without intentions to complete suicide is more predominant among university students than other participants' educational level. This finding is statistically significant when chi-square is used for the analysis ( $p=0.001$ ).

*Table 4: Suicidal Behaviors among Adolescents at Federal Neuropsychiatric Hospital, Lagos*

Suicide Behavior Conditions	Frequency	%
Non-pathological suicide condition	13	11.3
Psychiatric suicide condition	102	88.7
Total	115	100

Table 4 shows the classification of suicidal conditions. The broad range of information obtained in the administration of Suicide Behavior Questionnaire-Revised set the cut-off at  $\geq 8$  and those who fell within this category are interpreted to be pathological/psychiatric suicide condition and they were at high risk of committing suicide and those who scored  $\leq 7$  were classified to non-pathological suicide condition. The severity of those with high risk of suicidal tendencies was significantly higher (88.7%) than the adolescents with non-pathological suicide condition (11.3%).

*Table 5: Mental Health Condition among Adolescents at Federal Neuropsychiatric Hospital, Lagos*

Mental Health Conditions	Frequency	%
Major depressive disorder	48	41.7
Bipolar I disorder	18	15.7
Bipolar II disorder	6	5.2
Depressive disorder due to another medical condition	21	18.3
MDD with psychotic features	8	7.0
Persistent depressive disorder	5	4.3
Substance induced depressive disorder	9	7.8
Total	115	100.0

Table 5 presents the prevalence of mental health condition among the adolescents who participated in the study. The research examined which of the mental health conditions was severely associated with suicide behavior among adolescents. Major depressive disorder was found to be significantly related to suicide behavior among the participants at 41.7% more than other mental health conditions. This implies that major depressive disorder was severely related to suicide behaviors among the participants.

*Table 6: Severity of Depression among the Participants*

Classifications	Frequency	%
Normal	2	1.7
Mild mood disturbance	19	16.5
Borderline clinical depression	13	11.3
Moderate depression	25	21.7
Severe depression	23	20.0
Extreme d	33	28.7
Total	115	100.0

In addition, the prevalence of depressive classification was also studied. Table 6 presents the severity of depression among parasuicidal participants. The proportion of participants that were diagnosed with extreme depression was higher (28.7%) than other degree of

depressions. Severe depression was 20% of the sample while moderate depression was 21.7% of the sample. This can be interpreted to mean that adolescents who are presenting between moderate depression and extreme depression can exhibit suicide tendencies. Therefore, the three severity of depression seem to be the most serious and therefore warrant keen attention.

*Table 7: Prevalence of Depressive Illness among Adolescents at Federal Neuropsychiatric Hospital, Lagos*

Categories	Frequency	%
No clinical depressive illness	34	29.6
Clinical depressive illness	81	70.4
Total	115	100.0

At borderline depression (>20), Table 7 presents the severity of clinical depressive illness among parasuicidal adolescents. The participants who scored above 20 were considered to be clinically depressive. The severity of clinical depressive illness among parasuicidal adolescents at the study site was significantly higher (70.4%) compared to the participants who were not clinically depressive (29.6%).

## **Discussion**

The objective of this study was to establish the severity of suicide behaviors among the participants. This is needed so as to indicate the need for treatment and help the clinicians to make appropriate treatment plans. The brief 4-item SBQ-R was classified into two scores. The respondents' with score  $\leq 7$  were classified to have general suicide behavior while respondents with score  $\geq 8$  were classified as having psychiatric suicide behaviors and were at a higher risk than the general suicide behaviors. The prevalence of psychiatric suicide behaviors among adolescents from this study was significantly higher (88.7%) than general suicide behaviors among the adolescents who participated in the study (11.3%). The severity of psychiatric suicide behaviors among adolescents from this study also supports the study conducted by Nock et al. (2013) which found that a majority of suicidal adolescents were significantly pathological and needed psychiatric attention. This study also found that the severity of suicide attempt with intent is relatively higher (31.3%) than suicide attempts without intent (23.5%), suicide plan without intent (20.9%) and suicide thought (20%). These findings is congruent with similar study among people with mental illness at Jumma

University Teaching Hospital, Pschiatric Clinic in Ethiopia by Salelew, Dube, and Aber (2016) which found that suicide attempt among adolescents is predominantly higher especially among older adolescents than other suicidal behaviors such as suicide ideation and suicide plan.

Further, this research has shown that major depressive disorder and depressive disorder due to another medical conditions were noticeably more severe among suicidal adolescents compared to other co-existing mental conditions such as bipolar spectrum disorder, persistent depressive disorder, substance induced depressive disorder and major depressive disorder with psychotic features. Apart from the proportional divergence, other studies reported similar prevalence of co-existing mental health disorders among suicidal patients (Rihmer, Rihmer, & Dome, 2015; Dube & Aber, 2016). Major depressive disorder is frequently cited as significant risk factor for suicide behavior among the young and adults (Chu, et al., 2016). This research in Nigeria among suicidal adolescents also correlates with ongoing studies (Ani, 2010; Adewuya et al., 2016; Obinna, 2017) which have linked suicide behaviors with major depressive disorders among adolescents and adults everywhere.

However, this study basically grouped the depression categories into two. The participants who score above borderline (20 scores) were classified into clinical depressive illness while those who scored below the borderline were re-classified to be absence of clinical depressive illness. The severity of clinical depressive illness was significantly higher (70.4%) compared to the participants who were not clinically depressive (29.6%). Another recent research also found the severity of depressive illness in suicidal behavior among adolescents to be significantly high (Lewis, et al., 2014).

Additionally, this study revealed that suicide behaviors among adolescents were predominantly higher among christians at 78.3% compared to non-christians at (21.8%) and most especially among Pentecostal denomination (50.4%) as opposed to other denominations (27.9%). A comparative study of suicide rates among the prevalent religious denominations in some selected countries revealed a remarkable difference between Islamic countries and other religion dominated countries. The study showed that in Muslim countries like Kuwait, the total suicide rate is close to zero (0.1 per 100,00 population), Hindus e.g. India, the suicide rate is 9.6 while in Christian countries like Italy, the suicide rate was 11.2 per 100,000 population (Bertolote & Fleischmann, 2002). This is also similar with the findings of this

study that showed that suicide behavior among Christians seem to be higher than other religions. Similarly, Hsu (2013) in an article titled “When suicide strikes in the body of Christ” suggested an emperical enquiry into why suicide is becoming rampact among Christians today.

### **Conclusion**

This study identified severe suicide behaviors among adolescents. This research revealed that parasuicidal behaviors were predominant among female participants compared to male. However, the severity of suicide attempt without intent was predominant among female adolescents while the severity of suicide attempt with intent was significant among male. In terms of educational level of the participants, the research found out that suicide behaviors among university students seemed to be higher compared to students at other levels of learning.

Additionally, this research established that adolescents’ suicidality was high among those whose fathers were employed and those whose mothers were jobless. This implies the need for fathers to be emotionally available for their adolescents. More so, what affected mothers reflect on the emotions of their adolescents. This research also found out that there was a slight difference in suicidal tendencies between adolescents whose parents lived together and those whose parents lived apart.

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