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Research Article

Suicidality among Psychiatric Patients at Madonna University Teaching Hospital Elele, Rivers State Nigeria; A 5 Year Review

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Abstract

Objective: The study was designed to study suicidal variables among psychiatric patients at Madonna University Teaching Hospital Elele, Rivers State, Nigeria.

Materials and Methods: Case files of all psychiatric patients who attended the psychiatric clinic of Madonna University Teaching Hospital (MUTH) from January 2011 and December 2015 were reviewed.

Results: A total of 1631 psychiatric patients attended the hospital within the time frame stated; out of which 156 presented with at least one suicidal variable (9.56%).

The prevalence rates of suicidal ideation, death wish and suicidal attempt were 3.6%, 4.17% and 1.84% respectively. The single and unemployed constituted the greatest proportion of those with suicidal variables. Marital and literacy status were significantly associated with suicidality ($X^2 = 9.591$, df = 3, $p < 0.05$ and $X^2 = 16.795$, df = 8, $p < 0.05$ respectively). Similarly, family dysfunction and suffering from major depression were significantly associated with suicidality ($X^2 = 21.414$, df = 12.$p < 0.05$ and $X^2 = 12.944$, df = 14, $p < 0.05$ respectively).

Conclusions: Suicide is a problem of huge public health implications. The need to reduce under-diagnosis, step up anti-stigma campaign towards the mentally ill and address the endemic socio-economic variables that encourage poverty, insecurity and unemployment is urgent.

Keywords: *Suicide; Ideation; Attempt; Variable; Death Wish*

Introduction

Suicide which is an intentional self-inflicted death is as old as man but societal attitude towards it is varied. While the Stoics see it as a free person's last act [1], the African culture considers suicide a taboo while the church sees it as sin.

The global suicide rate is 11.4 per 100,000 and 6.11 per 100.000 in Nigeria [2]. Despite the profound emotional repercussions that await its survivors, this human tragedy accounts for an estimated one million deaths annually which translates to at least one death resulting from suicide every 40 seconds [3]. Reports indicate that there has been a steady rise in suicide mortality rates in the developed world in the past two decades [4-8]. Even though there is paucity of such compelling reports in sub-Saharan Africa, judging by recent occurrences, there appears to be a rising incidence of this human tragedy in Nigeria. The case of three university undergraduates from Babcock University in Ogun state, Ladoke Akintola University in Osun State and Abubakar Tafawa University, Bauchi as well as that of a medical doctor who ordered his driver to pull by the road side only to alight from this car and jump into the Lagos Lagoon readily come to mind [9]. The recent death of a lecturer with the Kwara State University is another case in point [10].

The apparent increasing incidence of this frightening phenomenon in Nigeria fuelled my interest in this subject. Besides, previous studies have reported that the majority of people who commit suicide have a diagnosable mental disorder, and suicidal behavior is more frequent in psychiatric patients [11]. Nevertheless there are paucity of reports on suicide among psychiatric patients in Nigeria. This is the reason for this study.

The title of this study is "Suicidality among psychiatric patients at Madonna University Teaching Hospital, Elele, Rivers State; a 5 year review".

It is expected that results from this work will not only act as an eye-opener to the dimension of this malady in our environment, it will stimulate discussions on the most practicable ways to stem this ugly tide as well as improve the overall management of our patients.

Suicidality represents a continuum of progressive harming behavior ranging from suicidal ideation, suicide attempt to completed suicide, where death wish may be regarded as a prodromal phase. Hence the variables: death wish, suicidal ideation and suicidal attempt or deliberate self harm are regarded as suicidal variables in this study.

Methodology

This retrospective study was conducted at the Madonna University Teaching Hospital (MUTH) Elele over a period of three months, from January 2015 to March 2015.

Case files of all psychiatric patients who presented at the psychiatric clinic of Madonna University Teaching Hospital (MUTH) Elele from January 2011 to December 2015 were reviewed. Patients who presented with documented suicidal variables: 'death wish', 'suicidal ideation' and 'suicidal attempt' were included in the study. Their socio-demographic variables, types of methods used to attempt suicide as well as other psychosocial and clinical characteristic of the patients were derived from the case files included in the study.

Before the commencement of this study, approval of the Ethical committee of the Madonna University Teaching Hospital (MUTH) was sought and obtained. The data was analyzed using the statistical package for social sciences (SPSS) version 16 at 5% level of significance and 95% confidence interval.

For any patient who presented with more than one suicidal variable, the weightiest of the variables is recorded for the person. The diagnosis was made using the ICD-10 diagnostic criteria.

Results

The total number of psychiatric patients seen at Madonna University Teaching Hospital from year 2011 to 2015 was one thousand, six hundred and thirty one (1,631); of this number, one hundred and fifty six (156) patients presented with at least one suicidal variable. This constitutes 9.56% of the total number of patients.

Table 1a depicts the prevalence of the suicidal variables in the cohort studied. Out of the 1,631 subjects studied, 58 (3.6%) presented with suicidal ideation, 68 (4.17%) presented with death wish and 30 (1.84%) attempted suicide.

Suicidal variable	Frequency	Prevalence (%)
Suicidal ideation	58	3.56
Death wish	68	4.17
Suicidal attempt	30	1.84

Table 1a: *Prevalence rates of the various suicidal variables.*
N = 1631.

Table 1b shows the frequency of the suicidal variables. Death wish constitutes the largest proportion (43.6%), followed by suicidal ideation (37.2%) and then suicidal attempt (19.2%).

Suicidal variable	Frequency	(%)
Suicidal ideation	58	37.2
Death wish	68	43.6
Suicidal attempt	30	19.2
Total	156	100

Table 1b: *Frequency of suicidal variables.*

Table 2 displays the types of methods employed by the patients to attempt suicide. Among the obvious methods identified, intake of overdose of prescribed medications was the most frequent method (36.7%) while jumping from a height was the least common method (13.3%).

Types of method used	Frequency	Prevalence (%)
Poison	9	30.0
Overdose of drugs	11	36.7
Jumping	4	13.3
Other	6	20.0
Total	30	100

Table 2: *Types of methods used.*

The frequencies of the sociodemographic characteristics of the patients who presented with suicidal variables are presented in table 3. The largest chunk of these patients belonged to the age category of 31 - 40 years while the least were age categories 51 - 60 years and those more than 60 years of age.

(Yrs)	Frequency	Prevalence (%)
11 - 20	8	5.1
21 - 30	46	30.8
31 - 40	71	46.2
41 - 50	15	7.7
51 - 60	8	5.1
>60	8	5.1
Total	156	100
Gender	**Frequency**	**Prevalence (%)**
Male	65	39.7
Female	91	60.3
Total	156	100
Employment	**Frequency**	**Prevalence (%)**
Unskilled	24	14.1
Skilled/trade	16	10.3
Professional	11	6.4
Student	44	28.2
Unemployed	61	41.0
Total	156	100
Marital status	**Frequency**	**Prevalence (%)**
Single	104	69.2
Separator/Divorce	9	1.3
Married	32	20.5
Hidard	11	9.0
Total	156	100
Literacy status	**Frequency**	**Prevalence (%)**
Primary Education	17	9.0
Secondary Education	30	17.9
Tertiary Education	94	61.5
Illiterate	15	9.0
Total	156	100
Religious	**Frequency**	**Prevalence (%)**
Christian	150	97.4
Tradition	6	2.6
Total	156	100

Table 3: *Frequency of the sociodemographic variables.*

Each of them made up 5.1% of the cohort with suicidal variables. Females were more in number 91 (60.3%) than men, 65 (39.7%) unemployed (41%), single (69.24), those with tertiary education (61.5%) and Christians (97.4%) constituted the largest categories.

Table 4 shows the association between socio-demographic variables and suicide. The socio-demographic variables that were significantly associated with suicide were marital and literacy status. Single patients and those with tertiary education constituted the majority of the cohort with suicidal variables.

Variables							
Age (Years)	**Suicidal Ideation Present N (%)**	**Death Wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
11-20	4 (50)	3 (37.5)	1 (12.5)	8	9.641	10	.473
21-30	12 (26.1)	22 (47.8)	12 (26.1)	46			
31-40	30 (42.31)	30 (42.3)	11 (15.5)	71			
41-50	4 (26.7)	7 (46.7)	4 (26.7)	15			
51-60	4 (50.0)	2 (25.0)	2 (25.0)	8			
>60	4 (50.0)	4 (50.0)	0 (0.0)	8			
Gender	**Suicidal Ideation Present N (%)**	**Death Wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Male	22 (33.8)	25 (38.5)	18 (27.7)	65	0.974	2	.615
Female	36 (39.5)	43 (47.3)	12 (13.2)	91			
Employment	**Suicidal Ideation Present N (%)**	**Death Wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Unskilled labour	12 (50.0	8 (33.3)	4 (16.7)	24	8.332	8	.402
Skilled labour	2 (12.5)	11 (68.8)	3 (18.8)	16			
Professional	4 (36.4)	4 (45.5)	2 (18.2)	11			
Student	18 (40.9)	18 (40.9)	8 (18.2)	44			
Unemployed	22 (36.1)	26 (42.6)	13 (21.3)	61			
Marital Status	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Single	42 (40%)	40 (38.5)	22 (21.2)	104	9.591	3	0.022
Separated/Divorce	3 (33.3)	4 (44.4)	2 (22.2)	9			
Married	10 (31.3)	18 (56.3)	4 (12.5)	32			
Widow	3 (27.3)	6 (54.6)	2 (18.2)	11			
Literacy status	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Primary Education	6 (35.3)	7 (41.2)	4 (23.5)	17	16.795	8	0.032
Secondary Education	8 (26.7)	18 (60.0)	4 (13.3)	30			
Tertiary Education	35 (37.2)	38 (40.4)	21 (22.3)	94			
Illiterate	9 (60.0)	5 (33.3)	1 (6.7)	15			
Religion	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Christian	56 (37.3)	65 (43.3)	29 (19.3)	150	3.364	2	0.186
Islam	2 (33.3)	3 (50.0)	1 (16.7)	6			

Table 4: *Association between sociodemographic variables and suicide.*

N = 156.

Table 5 shows the association between socio-clinical variables and suicide. Of all the socio-clinical variables, depressive illness and family dysfunction were significantly associated with suicide, especially domestic conflicts and parental divorce/separation.

Variable	Suicidal Ideation Present N (%)	Death wish N (%)	Suicide Attempt N (%)	Total	X^2	df	P-value
Psychiatric substance abused					12.719	8	0.122
Alcohol	13 (29.5)	21 (47.7)	10 (22.7)	44			
Cannabis	8 (44.4)	4 (22.2)	6 (33.3)	18			
Others	1 (50)	1 (50)	0 (0)	2			
Polysubstances	6 (27.3)	15 (68.2)	1 (4.6)	22			
Nil use	30 (42.9)	27 (38.6)	13 (18.6)	70			
Variable	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Comorbid medical condition					1.462	7	0.917
Hypertension	16 (57.1)	8 (28.6)	4 (14.3)	28			
Diabetes melitus	2 (22.2)	5 (55.6)	2 (22.2)	9			
Cancer	0 (0.0)	4 (100.0)	0. (0.0)	4			
HIV	2 (12.5)	10 (62.5)	4 (25.0)	16			
Others	10 (40.0)	8 (32.0)	7 (28.0)	25			
No medical condition	28 (37.8)	33 (44.6)	13 (17.6)	74			
Variable	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Family Dysfunction					21.414	12	0.045
Parental Divorce/Separation	4 (18.2)	11 (50.0)	7 (31.8)	22			
Childhood abuse	10 (71.4)	2 (14.3)	2 (14.3)	14			
Domestic conflicts	13 (37.1)	19 (54.3)	3 (8.6)	35			
Nurtured by a mental ill parent	3 (60.0)	2 (40.0)	0 (0.0)	5			
Pather childhood adversity	2 (20.0)	7 (70.0)	1 (10.0)	10			
Family history of mental illness	7 (43.8)	5 (31.3)	4 (25.0)	16			
Nill	19 (35.2)	22 (40.7)	13 (24.1	54			
Variables	**Suicidal Ideation Present N (%)**	**Death wish N (%)**	**Suicide Attempt N (%)**	**Total**	**X^2**	**df**	**P-value**
Diagnosis					12.944	14	0.048
Undifferentiated schizophrenia	1 (14.3)	4 (57.1)	2 (28.6)	7			
Paranoid schizophrenia	9 (36.0)	12 (48.0)	4 (16.0)	25			
Cationic schizophrenia	1 (33.3)	2 (66.7)	0 (0.0)	3			
Hebephrenic schizophrenia	3 (37.5)	2 (25.0)	3 (27.5)	8			
Delusional disorder	5 (35.7)	6 (42.9)	3 (21.4)	14			
Schizoaffective disorder	3 (30.0)	8 (50.0)	1 (20.0)	10			
Major Depression	25 (39.7)	27 (42.9)	11917.5)	63			
Niplar Affective disorder	11 (42.3)	10 (38.5)	5 (19.2)	26			

***Table 5**: Association between socio-clinical variables and suicide.*

N = 156.

Table 6 depicts the odds for suicide. Neither gender is significantly more at risk to commit suicide.

a)

Suicide	Gender		Total
	Male	Female	
Nil attempt	46	76	122
Attempt	16	18	34
Total	62	94	156

b)

	Value	95% Confidence	
		Lower	Upper
Odd Ratio for suicide (Nill attempt/attempted)	.681	.316	1.456
For cohort gender = male	.801	.525	1.223
For cohort gender = female	1.777	.833	1.663
No of valid cases	156		

Table 6: *Odds for suicide.*

Discussion

Of all the suicidal variables, death wish was the most prevalent (4.17%) followed by suicidal ideation (3.56%). Suicidal attempt was the least prevalent of the three (1.84%) and constituted 19.2% of all the suicidal variables reported. The prevalence of suicidal ideation in this study is similar to the 3.2% reported by Gureje., *et al.* [12] in a large scale epidemiological study carried out in Nigeria. The prevalence of suicidal attempt in our study (1.84%) is higher than that of Gureje., *et al.* (0.7%). Higher figures of prevalence of suicidal ideation have been reported by other researchers [13,14]. However much higher figures between 18-24% have been reported in other studies that were [15-17] carried out on adolescents and young adults. Methodological differences of the various studies may be explanatory for the varying figures reported.

It is also possible that considering that this study was carried out in a religious, faith based institution as well as the strong societal disapproval of taking one's life may have led to under reporting of cases. The attenuating effect of religion may equally provide a plausible explanation for the low figures of prevalence. This study also showed that the method employed to attempt suicide among the study cohort was by taking overdose of medications (36.7%), followed by ingesting a poisonous substance (30.0%). This is similar to the report by Ethan C., *et al.* [19] in which self poisoning was more often adopted than fire arm injury as a preferred method to die.

The study shows that the socio-demographic sub-populations that presented most with suicidal behavior included the single, unemployed, females, those with tertiary education and Christians. These findings are in keeping with similar studies done elsewhere [12,20]. Unemployment is an adverse psychosocial stressor that leaves one in continuous distress and unsure of the future which may lead to a state of hopelessness. If is worse in the present harsh economic climate of Nigeria. Despite the fact that it has been proven to be a significant risk factor for suicide in previous studies [12,21] our study didn't confirm any significant association between unemployment and suicide.

Nevertheless, the socio-demographic variables associated with suicide from this study are being single and literacy status. Patients with tertiary education constituted the majority of all suicidal variables. It is also possible that the worsening economic downturn which has left many educated individuals unemployed and hopeless could be explanatory. Hence, these persons though unable to fend for themselves, have the extra burden of being depended on by their respective families for succor and daily provision.

It is not surprising that Christians constituted the largest category of those with suicidal variables because most of the subjects are of the Christian faith and the study was conducted in a Christian religious institution.

The psychiatric substances most associated with suicide attempt from the study are cannabis (33.3%) and alcohol (22.7%). Nevertheless there is no significant association between either of them and suicidal variables. Similarly, the co-morbid medical conditions most linked to suicidal variables are hypertension (14.3%) and Human immunodeficiency varies infection (25%). Similarly, there is no significant association between either of them and suicidal variables. Nevertheless, evidence suggests a heightened risks of suicidal attempts in young adults with chronic illness [22].

Of all that socio clinical variables, stressors linked to family dynamics and dysfunctions were significantly associated with suicide, especially domestic conflicts and parental/divorce and separation. This is in agreement with reports from several researchers [12,13,17]. Childhood adversity, childhood abuse, domestic conflicts, being raised by a mentally ill parent, parental separation/divorce as well as family history of mental illness are well documented enduring stressors that can precipitate a myriad of other psychological disorders, chief of which is depression. The relationship between depression and suicide is well known [12,23]. In this study most of the patients (63 out of the 156) who presented with suicidal variables had a diagnosis of major depression. In this study, there is also a significant association between depression and suicidal variables.

The study shows that neither gender was significantly more at risk to commit suicide than the other. (See the table of Odds Ratio and Risk Estimate). This is at variance with reports from other studies [24,25] which maintained that women are more likely to attempt suicide but men are more likely to complete it. The varying reports may be due to methodological differences.

Conclusion

Suicide is a problem of huge public health implications. Ameliorating this tragedy must essentially entail addressing the factors that cause it to happen of which Depression and the abuse of psychoactive substances are prominent. In this regard, the need to reduce the rate of under-diagnosis or missed diagnosis among family care physicians and general practitioners who see most patients first and the need for prompt referral to psychiatrists cannot be over-emphasized.

Furthermore, the need to step up advocacy against stigma towards the mentally ill to encourage more persons suffering from mental illness to seek for medical treatment early enough is imperative. The need for the government to sincerely address the endemic socio-economic variables that encourage poverty, insecurity and unemployment is urgent.

Finally, the need to return to the age old values of the sanctity of the human life, dignity of labour, respect for your neighbors, personal contentment and belief in judgment for actions both now and the hereafter should be taught by our religious and cultural institutions.

Limitations

This is a retrospective study. Therefore, data derived was from documentations in the patients' case files. The data would have been more accurate if they were derived first hand from the patients by the researchers. This is a limitation.

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