SUICIDE RISK AMONG PSYCHIATRIC IN-PATIENTS IN NORTH-CENTRAL NIGERIA

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Background: Over the last 45 years, mortality due to suicide has increased in some developed and developing countries among both adults and young people. Suicide has also been reported to be high for individuals with substance abuse, mood and personality disorders, and relatively low rates were reported for patients with anxiety disorders. This study was therefore to determine the socio-demographic and clinical factors associated with the risk of suicide among psychiatric in-patients in North-Central Nigeria.

Objective: The aim of this study is to look at the socio-demographic and clinical correlates of having suicide risk among psychiatric in-patients.

Method: This is a cross-sectional descriptive study conducted on 112 in-patients admitted in the psychiatric wards of BSUTH Makurdi, FMC Makurdi and JUTH Jos during the study period of July to September, 2017. Every consecutive in-patient who consented for the study was assessed with a proforma carefully designed by the authors to measure socio-demographic and clinical attributes. Suicide risk was determined using the 'Suicidality Module' of Mini International Neuropsychiatric Interview (M.I.N.I.).

Results: Forty-five (40.2%) were males while 67(59.8%) were females. The mean age was 36.98 ±11.09 years, fifty-four (48.2%) subjects were still married at the time of the study. Eighty subjects representing 71.4% of the respondents reported having low (46), moderate (16) or high (18) suicide risk. Having a risk of suicide was significantly associated with the history of default (p=0.001), previous episodes of illness (p=0.005), co-morbid diagnosis (p=0.001), long duration of illness (p=0.001), and not having a good relationship with sexual partner (p=0.002).

Conclusion: The study justifies the need for the assessment of suicide risk among in-patients with high degree of suspicion.

Key Words: Suicide risk, in-patient, correlates

INTRODUCTION

Over the last 45years, mortality due to suicide has increased in some developed and developing countries among both adults and young people[1,2].

As deaths rates decline for many medical conditions, suicide rates have risen approximately 60% over this 45 year period with yearly estimate of 1million suicides worldwide[3].

Approximately 25-40% of suicide victims are known to be in contact with psychiatric services in the year before death[4], 14% received in-patient care during this year and around one-fifth of these deaths occur while in hospital[5].

The clinical decision to admit a psychiatric patient to hospital is primarily based on judgment about dangerousness to self and others, and the patient's safety is one of the prerequisite for in-patient care in a psychiatric ward.

Clearly, in supporting such an admission, the patient's family and friends expressly assume that the patient will be protected from harm, including harm to self and this protection will extend for some reasonable time, and into the days after discharge.

The effective assessment of suicide risk is dependent on several factors like the availability of sensitive and specific measures of long term risks factors, the presence of short term warning signs and an appreciation for the complexity and variability of suicide risk over time.

Unlike many other diagnostic procedures that assess relatively stable phenomena, we are yet to obtain a test that accurately identifies the emergence of suicide behaviour. Thus, despite decades of research, the accurate prediction of suicide and suicide attempts remain elusive. Therefore, the American Psychiatric Association (APA) Guidelines on Suicide Behaviour concluded that, predicting suicide appears impossible in large part due to the rarity of suicide even among high risk individuals such as psychiatric in –patients[6]. Also, it is pertinent to note that, the longitudinal prediction of suicide using variables such as psychiatric diagnosis, demographic and self reported psychological states consistently yield high false-positive prediction rates, therefore, limiting their predictive values[7,8].

Retrospective and psychological autopsy studies however, indicate that a diagnosable mental illness is present in at least 90% of all completed suicide[9,10]. Many patients who attempted suicide have some affective symptoms, also personality disorders have been reported in about a third to halve of such persons. Clinicians and researchers have long presumed that some psychiatric disorders convey greater risk for suicide than others. Harris and Barracough found increased suicide risk for all psychiatric disorders except mental retardation. Suicide rates were highest for individuals diagnosed with substance abuse and eating disorders, moderately high rates for mood and personality disorders, and relatively low rates for anxiety disorders[11].

Here in Nigeria, there is a dearth of studies in the field of suicide, suicide risk and suicidal attempts. However, in a 6-year retrospective study of risk factors for repeated suicidal attempts among patients at the emergency unit of a tertiary hospital, Agbir et al[12] found a statistically significant association between repeated suicidal attempts and a diagnosis of depression. There was also a disproportional overrepresentation of alcohol use among patients with repeated suicidal attempt in that study[12].

METHODOLOGY

This cross-sectional descriptive study was conducted at the psychiatric wards of the major psychiatric facilities in the North-Central Nigeria namely: the Benue State University Teaching

Hospital (BSUTH), the Federal Medical Centre (FMC) Makurdi, and the Jos University Teaching Hospital (JUTH) Jos. These three Psychiatric centre located within Benue and Plateau States are known to take care of people in need of psychiatric services within this region and the neighboring states. The psychiatric unit of BSUTH has a total of 32 beds with at least 25–30% bed occupancy rates at most time of the year. The psychiatric unit of FMC, Makurdi also has a total of 32 beds with 70–80% bed occupancy rate most time of the year. Similarly, the psychiatry unit of JUTH has a total of 50 beds with 75–80% bed occupancy rate at most period of the year.

All patients on admission for psychiatry care in these wards during the period of study were recruited consecutively for the study after obtaining an informed consent using; (1) a proforma to measure the subjects' socio–demographic and clinical attributes like age, gender, marital status, religion, occupation, psychiatry diagnoses, physical comorbid conditions, duration of illness, duration of stay on admission etc. (2) the 'Suicidality Module' of Mini International Neuropsychiatric Interview (M.I.N.I.) which was used to assess the subjects' suicide risk. This instrument (M.I.N.I.) rate suicide risk on a scale of: low (1–8points), moderate (9–16points) and high (17points). It has been reported to have shown an acceptably high validity and reliability[13]. Data entry was checked for accuracy, coded and analysed using the Statistical Package for Social Sciences version 22 and the level of significance was set at p? 0.05.

RESULTS

A total of 112 subjects (61 from Plateau and 51 from Benue) were studied, 45 (40.2%) were males while 67(59.8%) were females. The age ranged from 19 to 63 years with a mean of 36.98±11.09 years. As shown below in Table1, 30(26.8%) of the study subjects were never married, 54 (48.2%) were married at the time of the study while the remaining 28 (25.0%) were divorced, separated or widowed. The table also shows that 36 (32.2%) of the respondents were having a 'bad' relationship with their sexual partners.

Eighty out of the 112 study subjects were reported with having suicidal risk (Table2) representing 71.4% while the remaining 32(28.6%) had no risk of suicide. There was a statistically significant association between suicidal risk and respondents' average monthly income (p=0.001) and relationship with intimate partner (p=0.002). However, no statistically significant relationship was found between suicidal risk and occupational status (p=0.220), gender status (p=0.223), age group (p=0.293), marital status (p=0.332) as shown in Table 2.

Table3 shows the relationship between subjects' clinical characteristics and having the risk of suicide, there was a statistically significant association between suicidal risk and having a comorbid physical condition (p=0.001), previous episode of illness (p=0.005), long duration of illness (p=0.001), previous history of in–patient treatment (p=0.001), and default from follow up treatment (p=0.001).

Table 1: **Distribution of Subjects by Socio-demographic Characteristics**

VARIABLE	FREQUENCY (N)	PERCENTAGE (%)
AGE GROUP		
<35	46	41.1
35-44	36	32.1
45-54	22	19.6
=55	8	7.2
Total	112	100.0
GENDER		
Male	45	40.2
Female	67	59.8
Total	112	100.0
MARITAL STATUS		
Single	30	26.8
Married	54	48.2
Previously married	28	25.0
Total	112	100.0
PARTNER RELATIONSHIP		
Excellent	24	21.4
Good	52	46.4
Bad	36	32.2
Total	112	100.0
OCCUPATIONAL GROUP		
I-II	7	6.3
III-IV	24	21.4
V-VI	81	72.3
Total	112	100.0
EDUCATIONAL LEVEL		
No education	42	37.5
Primary	24	21.5
Secondary	23	20.5
Tertiary	14	12.5
Others	9	8.0
Total	112	100.0

Table 2: Relationship between Suicidal Risk and Subjects' Demographic Characteristics

VARIABLE	SUICIDE RISK	NO SUI. RISK	TOTAL	STATISTICS
AGE GRP(YRS)				X^2=3.722
<35	33	13	46	df =3
35-44	23	13	36	p=0.293
45-54	19	3	22	
=55	5	3	8	
Total	80	32	112	
GENDER				
Male	35	10	45	X^2=1.486
Female	45	22	67	df=1
Total	80	32	112	p=0.223
MARITAL ST				
Single	21	9	30	X^2=2.205
Married	36	18	54	df=2
Prv. married	23	5	28	p=0.332
Total	80	32	112	
PATNER REL.				
Excellent	17	7	24	X^2=12.039
Good	30	22	52	df=2
Bad	33	3	36	p=0.002
Total	80	32	112	
OCCUPATION				
I-II	3	4	7	X^2=3.029
III-IV	18	6	24	df=2
V-VI	59	22	81	p=0.220
Total	80	32	112	
INCOME				
<N18,000	36	22	58	X^2=19.423
N18-N35,000	27	0	27	df=4
N36-N53,000	4	0	4	p=0.001
N54-N71,000	11	10	21	
=N72,000	2	0	2	
Total	80	32	112	

Table 3: Relationship between Suicide Risk and Clinical Characteristics of Respondents

VARIABLE	SUICIDE RISK	NO SUI. RISK	TOTAL	STATISTICS
PSY. DIAGNOSIS				
Depression	23	13	36	X^2 =8.650
Substance	20	4	24	df=4
Schizophrenia	23	4	27	p=0.070
Bipolar	7	4	11	
Others	7	7	14	
Total	80	32	112	
COMORBID DIA				X^2=19.528
Present	34	0	34	df=1
Absent	46	32	78	p=0.001
Total	80	32	112	
DEFAULTED				
Present	33	2	35	X^2=13.033
Absent	47	30	77	df=1
Total	80	32	112	p=0.001
ILLNESS DURATION (YRS)				
<1	36	32	68	X^2=28.988
1-4	19	0	19	df=2
=5	25	0	25	p=0.001
Total	80	32	112	
LENGTH OF STAY (WKS)				
<4	45	25	70	X^2=5.717
4-8	16	5	21	df=2
>8	19	2	21	p=0.057
Total	80	32	112	
PREV. ADMISSION				
Present	36	4	40	X^2=10.516
Absent	44	28	72	df=1
Total	80	32	112	p=0.001
EPISODES				
1	56	31	86	X^2=10.655
2-4	6	1	7	df=2

DISCUSSION

The study found 59.8% of the admissions to be females a finding that compares well with that of Ribeiro et al in a 4-year retrospective study of gender differences in patients admitted to a psychiatry ward in Portugal where 53.1% of the admissions were females[14]. Also, Baba et al in a Nigerian Teaching Hospital study reported 51.8% of their in-patients to be females[15]. This finding however, is not in keeping with that of Thompson et al that found an excess of males over females in their study[16]. The following factors have been proposed to explain these gender differences in the admission rates: the general prevalence rates of certain diagnosis like depression which is more common in females as well as other gender specific biological factors have been put forward to explain some of these differences. It is also possible that the different gender role could explain the seasonality of the admissions.

A substantial proportion of the subjects in this study were reported to having suicide risk, a finding in support of other retrospective and psychological autopsy studies that found a diagnosable mental illness in most cases of completed suicide[9,10]. However, a comparative and community based study may be needed to generalize this finding.

This study shows a significant association between suicide risk and having a difficult relationship with intimate partner. A finding that compares well with that of Till B et al[17], that shows that the risk factors for suicide are higher among people with unsatisfactory relationship. Similarly, poor quality in relationship and relationship separation are both found to be important risk factors for suicidal thoughts and behavior and are frequent triggers for suicide attempts[18]. The status of a relationship alone therefore, doesn't necessarily in itself protect individuals from suicidal risk rather, it is the quality of the relationship that matters as shown in this study.

The over-representation of participants with suicide risk among low income earners in this study has concurred with other similar findings. For instance, in the United Kingdom, a differential increase in suicide among those in manual occupation compared to those in higher skilled jobs was reported[19]. The Risks of suicide has also been found to increase during the period of global financial crises partly due to increase in the level of unemployment and economically inactive population[20].

The study shows a preponderance of subjects with risk of suicide among patients with the diagnoses of depression, schizophrenia and substance abuse. This difference however was not statistically significant probably because of the study location, where all the subjects have mental disorders requiring hospitalization. This finding however agrees with other studies that found a differential increase in suicide risk for certain psychiatric diagnoses like depression, substance use and schizophrenia.

There is an overrepresentation of subjects with suicide risk among those with comorbid medical conditions in this study. This finding is in tandem with that of Ping et al[21], that found suicide risk in physically ill people to vary substantially by the presence of psychiatric comorbidy. Similarly, Jia et al, found increase in suicide risk among patients with comorbid psychiatric disorders and HIV/AIDS infection[22]. This has shown the impact of physical illness on mental disorders and vice versa. Studies have shown that certain mental disorders like depression are known to occur at higher rates in patients with general medical conditions with negative effects on the clinical outcome of both conditions[23]

There is also a statistically significant association between having suicide risk and previous episodes

of mental disorders, history of defaulted treatment as well as having repeated hospitalization in these study facilities. These findings may just explain the important of follow up treatment and regular medication in the management of mental disorders. In conclusion, the study underscores the need for the assessment of suicide risk among psychiatric in−patients with high index of suspicion.

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