



(RESEARCH ARTICLE)



## Pattern of suicide behaviour among the mentally ill in a Tertiary Hospital in South-South Nigeria

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### Abstract

**Background:** Suicide has been recognized as the one of the commonest causes of death globally and mental disorders have been found to contribute about 70% to 80% of causes of suicide. A number of factors can predict or increase the risk of suicide among those who have mental illnesses.

**Aim:** This study aimed to determine the prevalence of suicidal behaviour among mentally ill at the University of Port Harcourt Teaching Hospital.

**Materials and Methods:** This was a descriptive cross-sectional study conducted among attendees of Neuropsychiatric Outpatient Clinic of the University of Port Harcourt Teaching Hospital. A structured questionnaire covering socio-demographic characteristics and other factors were self-administered to 75 patients diagnosed with various psychiatric disorders by consultants Psychiatrists and attending the out-patient clinic via a systematic random sampling. Ethical approval was obtained from the ethical committee of the University of Port Harcourt Teaching Hospital and all other ethical provisions were followed. Descriptive statistics was used to analyze the data.

**Results:** Majority of the respondents were male (81%), single (76.0%), unemployed (36.0%), low income earners (73.4%) and between the ages of 21 and 30 (44%). Majority had tertiary education (58.7%) followed by respondents with secondary education (33.3%). Those who were dissatisfied with life due to mental illness constituted 34.9% while those who were dissatisfied with living were 22.5%. Nineteen (25,3%) of the respondents has had suicidal thoughts while 7(9.3%) had attempted suicide. The commonest method employed was ingestion of poison.

**Conclusion:** Suicide behaviour was common among those with mental illness and unemployment, substance abuse, male gender, higher level of education, stigmatization, poor premorbid history, adverse childhood experience are among the factors that could affect suicide behaviour. It is therefore important to provide adequate attention and care to the mentally ill to help reduce the prevalence of suicidal haviour among them.

**Keywords:** Pattern; Suicide Behaviour; Mentally ill; South-South Nigeria

### 1. Introduction

According to Bradvik (2018), 1.4% of all deaths worldwide are caused by suicide, making it a serious mental health issue. Most suicides are caused by psychiatric disorders, with the most important risk factors being depression, substance use disorders, and psychosis (Conner *et al.*, 2017). However, organic mental disorders as well as those brought on by anxiety, personality, eating, and trauma-related disorders also play a part. Psychological autopsies

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conducted in the middle of the previous century showed that most people who died by suicide had a mental illness, according to Turecki *et al.* (2019). Turecki *et al.* (2019) also state that this figure may be at least 90%. However, most individuals with mental illnesses do not pass away by their own hands (Bradvik, 2018). According to estimates, the probability of suicide is between 5 and 8% for several mental illnesses, including depression, alcoholism, and schizophrenia (Baranyi *et al.*, 2019).

Adverse childhood experiences (ACEs) have been linked to several poor adult health outcomes, including mental disorders and suicide death, according to Cleare *et al.* (2018) research on ACEs and hospital-treated self-harm. Considering this, the author investigates the connection between ACE and hospital-treated self-harm in Glasgow, where ACE and repeat self-harm were compared, as well as mental health, psychosocial variables, and attachment style. The only variables that distinguished between first-time and repeat self-harm were ACE, female gender, and depressive symptoms. In the study by Cleare *et al.* (2018), it was further emphasised that Participants with 4+ ACE were considerably more likely to repeat even when there were no characteristics that distinguished the male group from the female group.

The most common diagnoses among suicide victims are depression and substance use disorders, primarily alcohol use disorders (Bradvik, 2018). Additionally, comorbid conditions have a greater risk of suicide (Albert *et al.*, 2018). Bradvik (2018) examined the relationship between co-occurring mental health conditions and the risk of suicide in patients with severe depression or melancholia (MDD-M/P). Alcohol was not found to be a common comorbidity, but anxiety, schizophrenia, and obsessive-compulsive symptoms were (Erfanian *et al.*, 2019). Contrary to expectations, the comorbidity of suicide victims and controls was the same. Therefore, comorbidity does not seem to raise the risk in MDD-M/P, contrary to the findings of Heu *et al.* (2018) on depression and suicide risk. This suggests that the significant risk of suicide associated with MDD-M/P may not be exacerbated by co-occurring conditions. The assessment of MDD-M/P seems crucial in determining suicide risk.

Due to the aforementioned, the current special issue on “suicide risk and mental disorders” represents a number of predictors, including ethnicity/immigrant status, traumatic childhood events, the degree of depression, and the comorbidity of mental diseases. The disclosure of suicidal ideation and suicide prevention policies in mental healthcare facilities are two additional significant factors that should be considered when assessing the risk of suicide. This study aims to conduct a descriptive cross-sectional study among patients at the University of Port Harcourt Teaching Hospital’s Neuropsychiatric Outpatient Clinic. A structured questionnaire covering socio-demographic characteristics and other factors was self-administered to patients diagnosed with a variety of psychiatric disorders by consulting psychiatrists and attending the out-patient clinic via a systematic random sampling method. As a result, the goal of this study was to assess the University of Port Harcourt’s Mentally ill population’s Suicide Behavior Pattern.

## 2. Material and methods

This was a descriptive cross-sectional study conducted among attendees of Neuropsychiatric Outpatient Clinic of the University of Port Harcourt Teaching Hospital. A structured questionnaire covering socio-demographic characteristics and other factors were self-administered to patients diagnosed with various psychiatric disorders by consultants Psychiatrists and attending the out-patient clinic via a systematic random sampling. Ethical approval was obtained from the ethical committee of the University of Port Harcourt Teaching Hospital and all other ethical provisions were followed. Descriptive statistics was used to analyzed the data.

## 3. Results

Descriptive Statistics Analysis of the sample of people with mental illness (Socio- Demographic Analysis)

Table 1 presents socio-demographic and prevalence data for a sample of people with mental illness. The table includes variables such as age, gender, tribe (ethnicity), highest level of education, marital status, religion, employment status, occupation, and average monthly income level.

In terms of age, the majority of the respondents (44%) are between the ages of 21 and 30, followed by those between the ages of 31 and 40 (32%). There are relatively fewer respondents in the other age categories. With regard to gender, the majority of the respondents are male (81%), while a smaller percentage are female (19%).

The table also includes information on the respondents’ tribes or ethnicities. The largest percentage of respondents are Igbo (37.3%), followed by those who belong to other tribes or ethnicities (37.3%). There are smaller percentages of

respondents from other tribes, such as Hausa (9.3%), Yoruba (2.7%), Ikwerre (10.7%), Ogoni (1.3%), and Kalabari (1.3%). There are also other relatively fewer respondents in the other tribe categories

The highest level of education for the majority of respondents is tertiary (58.7%), followed by secondary education (33.3%). A small percentage of respondents have primary education (4.0%), and an even smaller percentage have no education (4.0%).

**Table 1** Socio-Demographic and Prevalence analysis of people with mental illness

S/N	Variables	Sub-variables	Frequency (Percentage)
	Age (Years) of the respondent	10-20yrs	7(9.3%)
		21-30yrs	33(44%)
		31-40yrs	24(32%)
		41-50yrs	7(9.3%)
		51-60yrs	2(2.7%)
		>60yrs	2(2.7%)
	Gender	Male	61 (81%)
		Female	14(19%)
	Tribe (Ethnicity)	Igbo	28(37.3%)
		Hausa	7(9.3%)
		Yoruba	2(2.7%)
		Ikwerre	8(10.7%)
		Ogoni	1(1.3)
		Kalabari	1(1.3%)
		Others	28(37.3%)
	Highest Level of Educational	Primary	3 (4.0%)
		Secondary	25 (33.3%)
		Tertiary	44(58.7%)
		None	3 (4.0%)
	Marital status	Single	57 (76.0%)
		Married	14 (18.7%)
		Divorced	1 (1.32%)
		Separated	2 (2.7%)
		Widowed	01(1.3%)
	Religion	Christianity	70 (93.3%)
		Islam	4(5.3%)
		Traditional	1 (1.3%)
		None	0 (0%)
	Employment Status	Unemployed	27 (36.0%)
		Student	14(18.7%)
		Apprentice	3 (4.0%)

		Self-employed	25 (33.3%)
		Employed by govt	3 (4.0%)
		Employed by Private	2 (2.7%)
	Occupation	Unskilled Occupation	21 (22.6%)
		Skilled Occupation	23(24.7%)
		Professional Occupation	23 (24.7%)
		No Response	*26 (28.0%)
	Average Monthly Income level	0-50,000 Naira	55 (73.4%)
		51-100,000Naira	17(24.7%)
		101-200,000Naira	2 (2.7%)
		201-500,000 Naira above	0 (0%)

In terms of marital status, the majority of respondents are single (76.0%), followed by those who are married (18.7%). There are smaller percentages of respondents who are divorced (1.3%), separated (2.7%), or widowed (1.3%). The majority of respondents identify as Christian (93.3%), with a smaller percentage identifying as Muslim (5.3%) or traditional (1.3%). There are no respondents who identify as having no religion.

With regard to employment status, the largest percentage of respondents are unemployed (36.0%), followed by those who are self-employed (33.3%), students (18.7%), or employed by the government (4.0%). A small percentage of respondents are employed by the private sector (2.7%), or are apprentices (4.0%).

The table also includes information on occupation, with the largest percentage of respondents in unskilled occupations (22.6%), followed by those in skilled occupations (24.7%) or professional occupations (24.7%). There is also a large percentage of respondents with no response in this category (28.0%).

Finally, the table includes data on average monthly income level, with the majority of respondents earning between 0 and 50,000 Naira (73.4%), followed by those earning between 51,000 and 100,000 Naira (24.7%). There is a small percentage of respondents earning between 101,000 and 200,000 Naira (2.7%), and no respondents earning above 500,000 Naira.

**Table 2** Mental illness and Suicide History Analysis

Variables	Sub-variables	Frequency (Percentage)
Dissatisfied With Life Because of Illness	Yes	28(34.7%)
	No	42(56%)
	No response	5(9.4%)
Dissatisfied With Living	Yes	22(29.3%)
	No	48(64%)
	No response	5(6.4%)
Suicidal Thoughts	Yes	19(25.3%)
	No	50(66.7%)
	No response	6(8%)
Attempted Suicide	Yes	7(9.3%)
	No	33(44.0%)
	No response	35(46.7%)

Table 2 presents information on mental illness and suicide history; it can be seen that 56% of persons with mental illness are satisfied with their life while 34.7% are dissatisfied with life because of their mental illness. Additionally, individuals that are satisfied with living had a high percentage rate of 64% compared to 29.3% of persons that are dissatisfied with living. Suicidal thought was found to be low among persons with mental illness with 25.3% responding “Yes” and 66.7% responding “No”. The result also indicates that 9.3% of the respondents have attempted suicide, while 44% never attempted suicide.

**Table 3** Suicide Demographic Analysis

Variable	Sub Variable	Frequency(Percentage)
Age	10-20yrs	8(25%)
	21-30yrs	6(18.8%)
	31-40yrs	16(50%)
	No response	2(6.3%)
Sex	Male	26(81.3%)
	Female	6(18.8%)
Tribe	Yoruba	2(6.3%)
	Hausa	3(9.4%)
	Igbo	11(34.4%)
	Ikwerre	5(15.5%)
	Ogoni	1(3.1%)
	Others	10(31.3%)
Level of education	Secondary	9(28.1%)
	Tertiary	22(68.8%)
	No response	1(3.1%)
Marital Status	Single	25(78.1%)
	Married	5(15.6%)
	Separated	1(3.1%)
	Divorced	1(3.1%)
Religion	Christianity	31(96.9%)
	Islam	1(3.1%)
Employment	Unemployed	14(43.8%)
	Student	4(12.5%)
	Self employed	13(40.6%)
	Employed by Government	1(3.1%)
Occupation Income	Below 10,000	8(25.0%)
	>10,000	7(21.9%)
	30,000	1(3.1%)
	30,000-50,000	3(9.4%)
	>50,000	5(15.6%)
	100,000	5(15.6%)
	>100,000	1(3.1%)
	No response	2(6.3%)

Table 3 presents data on demographic characteristics of a group of individuals who have suicidal tendency, ideations or have attempted suicide. The table includes information on the age, sex, tribe, level of education, marital status, religion, employment, and income of these individuals.

According to the table, the majority of the individuals who have suicidal tendency, ideations or have attempted suicide in the group are male (81.3%) and are between the ages of 21 and 40 (50% are between 31 and 40, and 18.8% are between 21 and 30). The group is also fairly evenly distributed among different tribes, with the largest percentages being Yoruba (34.4%), Igbo (34.4%), and Ikwerre (15.5%). The table also shows that the majority of the individuals who have suicidal tendency, ideations or have attempted suicide in the group have a tertiary level of education (68.8%), are single (78.1%), and are Christian (96.9%). A significant number of individuals in the group are unemployed (43.8%) or self-employed (40.6%), and a small percentage (3.1%) are employed by the government. The income level of the group is fairly evenly distributed, with the largest percentage (25.0%) earning below 10,000 and a smaller percentage (21.9%) earning between 10,000 and 30,000. Overall, the results in this table suggest that the group of individuals who have attempted suicide is diverse in terms of their demographic characteristics.

**Table 4** Methods employed in suicide attempt

Method	Frequency	Percentage (%)
Injection of poison / overdose	4	57.1
Stabbing	2	28.6
Jumping into river	1	14.3

Table 4 shows methods commonly employed in suicide attempts in this study. Of the 7 respondents who admitted attempted suicide behavior, 4 (57.1%) either injected poison including chemicals, insecticides or took overdose of drugs or potentially legal substances.

#### 4. Discussion

This was a descriptive cross-sectional study conducted among patients at the Neuropsychiatric Outpatient Clinic of the University of Port Harcourt Teaching Hospital. A structured questionnaire covering socio-demographic characteristics and other factors was self-administered via a systematic random sampling method to patients diagnosed with a variety of psychiatric disorders at the out-patient clinic. Suicide Behavior Pattern of the mentally ill individuals was determined.

The results revealed that people aged 26 to 30 are more likely to suffer from mental illness. The findings support Ahmed *et al.* (2020) analysis of “the epidemic of COVID-19 in China and related psychological disorders,” in which the researchers discovered that those between the ages of 20 and 40 are more likely to suffer from mental illnesses. This assertion is also consistent with the findings of a study by Foster *et al.* (2020), “Mental health matters: A cross-sectional study of mental health nurses’ health-related quality of life and work-related stressors,” which discovered that people aged 21 to 26 are more vulnerable to mental health problems including suicide behaviour.

According to the demographic data collected, those who attend postsecondary schools are more likely to suffer from mental illness. College students are more likely to develop mental illnesses, according to Abu *et al.* (2019) and Hakimi *et al.* (2018), because they are experiencing their first real relationships, freedom, stress, and responsibility. Secondary school students are ranked second among those who develop mental illnesses in the same way. According to Hakimi *et al.* (2018) and Abu *et al.* (2018), secondary school students are more likely to experience mental illness than university students because of transitional periods, substance use, parental pressure, culture shock, and loss of past support.

Furthermore, the descriptive analysis in this study revealed that unemployment contributes to mental illness. Numerous studies have found that stress caused by unemployment has long-term physiological health effects and can negatively affect people’s mental health, including depression, anxiety, and low self-esteem (Peláez-Fernández *et al.*, 2021; Merakou *et al.*, 2019). Furthermore, the descriptive analysis revealed a strong link between substance abuse and suicide. For example, this study found that people who use psychoactive substances like cannabis and have been raped are more likely to commit suicide. This finding supports the findings of Gobbi *et al.*, [15] and Carvalho *et al.*, [16] which found that the use of cannabis is associated with suicidal tendency in young people. This study also found that

stigmatizing people with mental illnesses and refusing to acknowledge their existence increased people's vulnerability to committing suicide.

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## 5. Conclusion

This study concluded that Suicide behaviour was common among those with mental illness and unemployment, substance abuse, male gender, higher level of education, stigmatization, poor premorbid history, adverse childhood experience were among the factors that could affect suicide behaviour. It is therefore important to provide adequate attention and care to the mentally ill to help reduce the prevalence of suicidal behaviour among them.

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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

The authors declare no conflict of interest.

### *Statement of ethical approval*

Ethical approval was obtained from the research ethical committee of the University of Port Harcourt Teaching Hospital.

### *Statement of informed consent*

Informed consent was obtained from participants of the study. Also, subjects who declined participating in the research were not denied their treatment care right.

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