

Suicide in Warri, Delta State, Nigeria: An Autopsy Study

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Abstract

Background: Suicide is a neglected public health problem in our environment. **Objective:** To determine the epidemiologic pattern of suicide cases with respect to sex, age, method, and place. **Design:** This is a 14½-year descriptive retrospective study of suicide cases reported to the coroner of Delta State, arising from Warri and its environs and subjected to postmortem examination by the authors. **Materials and Methods:** Information on age, sex, place of death, and method used was extracted and analyzed using Microsoft Office Excel 2007. **Results:** A total of 21 confirmed cases of suicide were analyzed consisting of 16 (76%) males and 5 (24%) females. The age range of the victims is from 9 to 65 years, with 15 (71.4%) of cases in the 2nd to 4th decades. Hanging, poisoning, and firearm were the methods used in 17 (80.95%), 3 (14.29%), and 1 (4.8%) of the cases, respectively. The scene of the suicide included the deceased's home, bush, workplace, and police custody in 16 (76.2%), 2 (9.5%), 2 (9.5%), and 1 (4.8%) of the cases, respectively. **Conclusion:** The study showed that suicide is a relatively rare problem, affecting mainly young males. The preferred place is usually the victim's homes. Hanging is the preferred method by males. There is a need to improve the welfare and mental health care of young people in the society as well as restrict the sales of poisoning through government policy in the country.

Keywords: Autopsy, hanging, suicide

INTRODUCTION

The epidemiologic pattern of violent death was first reported by Reza *et al.* in 1990, with an estimated incidence of 1,851,000(35.3/100,000) deaths globally. These deaths represented 3.7% of all deaths in the world in that year, attributed to suicide, homicide and war, with suicide being the leading cause.^[1]

Suicide is derived from the Latin word *sui caedere* (meaning to kill oneself).^[2] It has been defined by the World Health Organization as “the act of killing oneself, deliberately initiated and performed by the person concerned in the full knowledge or expectation of its fatal outcome.”^[3]

Across the globe, suicide is among the top ten causes of mortality in every country and one of the three top killers of youths in the age group of 15–34 years.^[4] The incidence of attempted suicide is 20 times as common as completed suicide,^[3] and it has been predicted that by 2020, 153 million people will die of suicide, representing one in every 20 deaths.^[5]

Globally, the rate of suicide shows a great variation, with countries such as Lithuania and Russia federation having a

rate of about 30 deaths/100,000 (high rate), while countries such as Lesotho, Cameroon, and India have intermediate rate of 10–29/100,000. Countries such as Nigeria, Congo, Mexico, and Nepal have a rate of <10/100,000. According to this report, Nigeria has a suicide mortality rate of 9.5/100,000.^[6]

Depression, alcohol abuse, antisocial behavior, mental illness, sexual and physical abuse, poor peer relationship, suicidal behavior among peers, family discord, family history of suicide, broken homes, and social contagion are the predominant risk factors.^[7]

There is a paucity of data on this subject in Nigeria, with most of them being autopsy based. This is the earliest of such study in Delta State of Nigeria and throws light on sex, age, place and method of execution.

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MATERIALS AND METHODS

In line with the Nigerian coroner's law,^[8] all suspected suicide deaths must be reported to the coroner, who subsequently authorizes the pathologist to carry out a medicolegal examination on the deceased.

A total of 21 suicide cases were subjected to postmortem examination by the authors from January 1, 2003 to June 30, 2017. These cases were confirmed to be suicide from information gathered from the scene of crime, investigating police officer, eye witness as well as findings on postmortem examination.

Information extracted for this study includes the age, sex, method of execution of suicide, and the place where the suicide took place. This information was subsequently analyzed using the calculation tool and pivot tables of Microsoft Office Excel 2007 and presented in Tables 1-4.

Exclusion criteria

All cases of incomplete suicide or uncertain cause of death are excluded from the study.

RESULTS

The study shows that only 21 cases of the medicolegal deaths in the series of autopsies in this region were confirmed to be suicide cases. Sixteen of these victims were male while five were female, representing 76% and 24% of the cases, respectively.

The age distribution of the victims is shown in Table 2. In each of the 2nd, 3rd, and 4th decades, five cases of suicide were observed. Two cases were seen in each of the 5th and 7th decades while a single case each was observed in both the 1st and 6th decades.

Hanging was observed as the method executing suicide in 17 (81%) cases with a male-to-female ratio of 7.5:1. The use of chemical poison accounted for 3 (14.3%) cases, two of which were female. Firearm was used in 1 (4.8%) case.

The scene of the suicide is shown in Table 4. Sixteen (76.2%) of the cases occurred in the deceased's home. Two (9.5%) cases each were recorded in the bush and the workplace of the diseased, respectively, while 1 (4.8%) case was recorded in police custody.

DISCUSSION

Our study has demonstrated that suicidal death is relatively rare in this region, accounting for only 2% of medicolegal deaths, and lagging behind homicide and accidental deaths as causes of unnatural death. This figure is, however, higher than 1.8%, 1.5%, 0.9%, 0.8%, 0.5%, and 0.3% reported, respectively, in Benin city,^[9] Abuja,^[10] Port Harcourt and Aba,^[11] River state,^[12] and Ibadan.^[13] In Benue^[14] and Jos,^[15] there was no case of suicide among the medicolegal autopsies studied. These facts strongly reflect the low rate of suicide in Nigeria. It is,

Table 1: Sex distribution of suicide cases in Delta State, Nigeria

Sex	Frequency (%)
Male	16 (76.2)
Female	5 (24.8)
Total	21 (100)

Table 2: Age distribution of suicide cases

Age group (years)	Frequency (%)
0-10	1 (4.8)
11-20	5 (23.8)
21-30	5 (23.8)
31-40	5 (23.8)
41-50	2 (9.5)
51-60	1 (4.8)
61-70	2 (9.5)
Total	21 (100)

Mean age: 32.14

Table 3: Instrument of suicide

Instrument used	Male	Female	Total	Frequency (%)
Gun	1	0	1	4.8
Chemical poisoning	1	2	3	14.3
Hanging	15	2	17	81.0
Total	17	4	21	100

Table 4: Where suicide was committed

Where suicide was committed	Frequency (%)
Police custody	1 (4.76)
Workplace	2 (9.52)
Bush	2 (9.52)
Home of the victim	16 (76.19)
Total	21 (100)

however, likely that suicide may be underreported because of the reluctance of medical examiner or coroner To classify such as suicide if the supporting data is not convincing.^[16] Secondly, because of the strong religious and cultural stigmatization of relatives of suicide victims, family members are better off if such deaths are concealed or reported to the police as nonsuicidal cases.^[17] Societies that are highly religious are generally known to have low suicide rate,^[18] and this may be the Nigerian situation. The male-to-female ratio of suicide victims is 3.2:1, an indication of male predominance. Male predominance has also reported in other Nigerian studies, with a male-to-female ratio of 7:1, 4.3:1, and 3.6 reported in Port Harcourt/Aba,^[11] Benin City, and Ile-Ife,^[19] respectively. Male predominance has been reported in Ghana,^[20] Ethiopia,^[21] Uganda,^[22] Japan, Korea, Australia, and the USA.^[23] Equal sex distribution has been reported in Nepal^[24] and Malawi.^[25] On the contrary, China is exceptional, with a higher rate among females, especially among rural women.^[26]

We think that the high male predominance in our study reflects his role, responsibility, and status in the African society and how his failure to carry out his responsibility may increase his risk of depression. Depression as a strong predisposition to suicide has already been established.^[17] It has also been proven that men tend to abuse alcohol and act more impulsively, both of which are associated with increased suicide risk.^[27] Females tend to use less violent methods of suicide than males, with a higher incidence of suicide attempts, but paradoxically lower rate of suicide mortality.^[28]

Our study shows that most cases are reported among young people, with 71.4% of cases spread out equally across the 2nd, 3rd, and 4th decades. A similar study by Ofia and Obiorah in Nigeria showed that suicide is rare after the age of 50 years, with 60% of cases recorded between the ages of 10–29 years.^[11] In Ile-Ife, 46% of the suicides were in the 3rd decade, which is in line with our report.^[19] The predominance of suicide mortality among the younger members of the society is also in agreement with the general global report. This may be as a result of frustration and depression arising from the economic, financial, marital, and domestic challenges. Aging comes with maturity and wisdom and ability to handle life's challenges using other options other than through suicide and hence the rarity of suicide in the later age group.

We observed three suicide patterns in this study in decreasing order of frequency, namely, by hanging, poisoning, and firearms. Ofia and Obiorah in Niger Delta region observed five patterns in decreasing order: hanging, drowning, poisoning, use of firearm, and stabbing in their study.^[11] On the contrary, the use of poisoning was the leading method in both Ile-Ife and Benin.^[9,19]

Across the globe, different patterns dominate depending on what is culturally acceptable or what is readily available to the perpetrator. In South Africa, Chile, Cuba, Estonia, and the United Kingdom, hanging is the most common method, while in the USA and Uruguay, firearm is the leading method. Pesticide use is the dominant pattern in El Salvador, Nicaragua, and Peru while fall is the most common method used in Hong Kong.^[29]

Gun restriction policy in Nigeria accounts for the rarity of gun-related suicide.^[30] In the USA, the reverse is the case and studies have shown a strong association between gun ownership and gun suicide.^[31] We encountered only a case of firearm-related suicide, by a young police officer who had ready access to a gun, a finding in support of the observation in the USA. The relatively high rate of hanging and poisoning as a method of suicide in our environment may be attributed to the readily available materials for hanging (rope, twine, belt, cloth, etc.) and poisoning (pesticides, herbicides, etc.) in our environment. Preference among females to use of poisons as a method of committing suicide is likely because it is less violent and less disfiguring.^[28] Lack of laboratory facilities for toxicological examination in our region is a major setback, as a result of which the exact type of toxins could not be investigated.

As seen in this study, the home of the victims is the most preferred option, accounting 16 of the cases. Such places such as toilet, kitchen, and bedroom provided perfect hideouts. Two cases were seen hanging on trees, probably because the homes are unlikely to provide such convenience. In one of the cases, the victim hung himself inside his shop, while in another, it was inside his office, both of which occurred at close of work. It is our general observation that these suicides are committed in privacy, so that the victims will not be interrupted until they complete their act.

CONCLUSION

The study showed that suicide is a relatively rare problem, affecting mainly young males. The preferred place is usually the victim's homes. Hanging is the preferred method by males. There is a need to improve the welfare and mental health care of young people in the society as well as restrict the sales of poisons through government policy in the country.

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Conflicts of interest

There are no conflicts of interest.

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