

A 2 YEAR (2019-2020) ANALYSIS OF SUICIDE REPORTS IN THE NIGERIAN MEDIA

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Abstract: Suicide is increasingly becoming a public health concern. Reporting and portrayal of suicide in media may largely contribute to this. Gaining an insight into the pattern and possible risk factors may help in the design of effective preventive measures. The aim of the study was to generate a 2-year data of suicide reportage in media in Nigeria. This was a retrospective purposive Content analysis of all media suicide reportage in Nigeria between January 2019 - December 2020. Data was entered into an excel spread sheet. Duplication was avoided. The statistical package for social sciences, version 22 was used for analysis. Frequencies and percentages of relevant variables were generated. Chi square and Fisher's exact test was used to assess associations. Significant value was set at $p < 0.05$. One hundred and eighteen suicide deaths were identified. Mean age was 30.65+ 12.66 with highest rate among age 20-39 years (51.7%). Majority were males (73.7%). Commonest method used was pesticide ingestion (56.8%) followed by hanging (27.1%). Identifiable associated factors included financial challenges, academic challenges, and relational problems. Pesticide use was commoner among younger age group ($p < 0.001$) and female sex ($p < 0.024$). The common use of organophosphates which is used in pesticides may be due to the fact that it is a common household tool used to control insects and rodents in many low- and middle-income countries. It is easy to access and affordable, these coupled with social media reportage makes it a ready tool especially for those already contemplating suicide. The study highlights the current reality of suicides in Nigeria. It brings to the fore, the need for proper surveillance to drive a contextualized approach to suicide prevention.

Keywords: suicide, media, reportage, Nigeria

Introduction

Suicide is the act of killing oneself, deliberately initiated and performed by the person concerned, in the full knowledge or expectation of its total outcome (WHO, 2001). Suicide and suicidal behaviours are serious public health concern. Almost a million people die from suicide yearly (WHO, 2009). The global mortality rate of suicide is 11.4 per 100,000 with an average of one death every 40 secs (WHO, 2009). Suicide rates have increased by about 60% in the last 45 years (Bertolote *et al*, 2003). Suicide was the third leading cause of death in 15-19-year-olds for both males and females, with the number of deaths relatively similar between both sexes in this age group. For the female gender, suicide has been reported to be the second leading cause of death in 15-19-year-old (maternal conditions being

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the number one leading cause of death in this group) and for the males, it is the third leading cause of death (after road injury and interpersonal violence) in this age group (WHO, 2009). It is also among the leading causes of death amongst those aged 15-44 years. These statistics do not include those who did not complete suicide. Suicide attempts have however been estimated to be up to 30 times more frequent (Bachmann, 2018). Suicide is the most important cause of violent death accounting for 49% of cases followed by Homicide with about 32%, with conflicts and wars making the rest 19% (WHO, 2002). About 79% of suicides are said to occur in low- and middle-income countries (LMICs) (WHO, 2009), and ironically, they've only contributed 8% of the available information on suicide (Olibamoyo *et al.*, 2021). The rate of suicide in Nigeria was estimated at 17.3/100 000 population, this was reported to be among the highest rates in Africa (Olibamoyo *et al.*, 2021).

Risk factors for suicide include psychological distress, abuse, separation from biological parents, domestic conflicts, childhood adversity, exposure to bullying and violence, dysfunctional families, substance abuse especially in youths, and poverty/economic insecurity/unemployment (Uwakwe *et al.*, 2011, Randall *et al.* 2014). New patterns of risk factors have emerged in recent times and HIV/AIDs have emerged as additional risk factors, and significantly, mental health problems especially depression have been associated with suicide (Uwakwe *et al.*, 2011, Chikezie *et al.*, 2012).

Suicide is highly stigmatized and this influences help seeking behaviours and public attitude towards suicidal behaviour. It is still criminalized in Nigeria. A failed attempt attracts a year imprisonment according to the Nigerian constitution (Ekpendu, 2020). Suicide deaths are likely not reported or at most reported as accidents because families often do not disclose the true cause of death due to fear of harassment by law enforcing agents and also fear of stigmatization. Suicidal behaviour in most African countries still carries negative cultural and religious sanctions (Mars *et al.*, 2014). The threat of punishment for a failed attempt, in addition to the stigma of mental ill health also prevents those with mental health problems from seeking the needed help.

Of the 183 WHO member states for which suicide estimates were made in 2016, only 80 had good quality vital registration data that could be used. That of the other 102 states which accounted for about 64% of global suicides were based on modelling methods. Underreporting and misclassification are very common due to the sensitivity. As at 2013 only 28 countries had a national suicide prevention strategy (WHO, 2014).

Nigeria being one of the 70 least developed countries of the world does not have a vital suicide registration system due to lack of means/will collect data. Nigeria doesn't routinely collect death records and has no system of reporting suicide deaths. It lacks systematic data collection due to lack of research infrastructure, poor funding, limited death register, lack of expert suicide research, inadequate multicentre collaborations, and lack of standardized research designs and instruments (Makinde *et al.*, 2020, worldpopulationreview.com). Majority of data currently available are based on few psychological autopsy reports, police reports and individual centre studies. Suicidal behaviour was thought to be rare in Africa in the past. However, with increased psychosocial stresses associated with conflict, socioeconomic difficulties, and disease outbreaks like the COVID-19 pandemic, the burden of suicide has increased (Banerjee *et al.*, 2021).

Suicide prevention was an integral part of the 66th WHA mental health action plan with a goal of reducing suicide rates by 10% by 2020 (Saxena *et al.*, 2013). As majority of suicides occur in LMICs,

good quality vital registration data are urgently needed to aid the development of an evidence-based suicide prevention strategy.

The aim of this study was to generate a preliminary data of suicides in Nigeria. It is hope that the data generated would provide a case for improved funding and provision of a proper surveillance system and good quality vital registration of all suicides. This would help in planning and evaluation of prevention strategies which is urgently needed.

Materials and Methods

This is a descriptive purposive retrospective study involving collection of all media suicide reportage over two years (2019-2020). All possible information that could be gathered from publicly available online sources where gathered and data on age, location, sex, method used, circumstances around the death/ stressors, occupation, and presence of a suicide note or communication of intent and last act were entered into excel spread sheet. Triangulation and fact checking was done to establish reliability and validity of each report before data entry. Data was sorted carefully to avoid duplication. Media in this research refers to print media, broadcast media (T.V, radio, mainstream, and online news media). Excluded were suicide bombing or attacks and uncompleted suicides or suicide attempts.

Data analysis: The data was entered into excel spread sheet and analysed using SPSS version 22. Descriptive statistics such as Frequency tables were generated, and inferential statistics made. Level of significance was set at p value <0.05,

Ethical issues: This study was performed in accordance with ethical standards laid down in 1964 declaration of Helsinki. This, being a retrospective study, made no direct use of human subjects. It made use of data already existing records in the public space and effort was made to ensure that data cannot be linked to subject identifiers.

Results

A total of 118 deaths were reported within the 2year period 2019-2020. Age range was 9 – 65 years. Mean age was 30.65 + 12.66. The highest rate of death from suicide was found among age group 20-39 years with 61 (51.7%) deaths, this was followed by 40- 59 years with 25 (21.2%) deaths. There were seventeen (14.4%) cases of suicide amongst those within the aged 20 and below, with a reported case of suicide in a 9year old child. Nine cases were reported amongst those within age range sixty and above. Ages of six of the reported cases were not available.

In total, eighty-seven (73.7%) were males while the remaining 31 (26.3%) wereç females. Majority were from Southwest 46 (39.0%) and North Central region 30 (25.4%). Northeast had the least reported frequency of deaths from suicide? Highest number of cases were reported amongst artisans and semi-skilled workers 43 (36.4%) followed by students 33 (28.0%). Among the suicide cases were security personnel 4 (3.39%), Businessmen 4 (3.39%) and medical practitioners 2 (0.11%). Thirty-three (28.0%) of the suicides were reported to have left suicide note. Overall, 60 cases were reported in 2019 and 58 cases were reported in 2020. Table 1.

Table 1: Socio-demographic characteristics and writing of suicide note

Variable	Frequency (n)	Percent (%)
Age		
< 20	17	14.4
20 – 39	61	51.7
40 – 59	25	21.2
≥ 60	9	7.6
Not available	6	5.1
Mean ± SD	30.65 ± 12.66	
Range	9 – 65	
Sex		
Male	87	73.7
Female	31	26.3
Location		
North Central	30	25.4
North East	2	1.7
North West	6	5.1
South East	11	9.3
South South	19	16.1
South West	46	39.0
Not available	4	3.4
Occupation		
Employed	18	15.3
Self-employed	19	16.1
Unemployed	5	4.2
Student	33	28.0
Others	43	36.4
Suicide note		
Yes	33	28.0
No	85	72.0
Year		
2019	60	50.8
2020	58	49.2

Figure 1 shows the commonest method used was ingestion of pesticides, with more than half 67(56.8%) employing this method followed by hanging 32 (27.1%) and others (such as throwing self in front of moving vehicle or drowning amongst others) 19(16.1%).

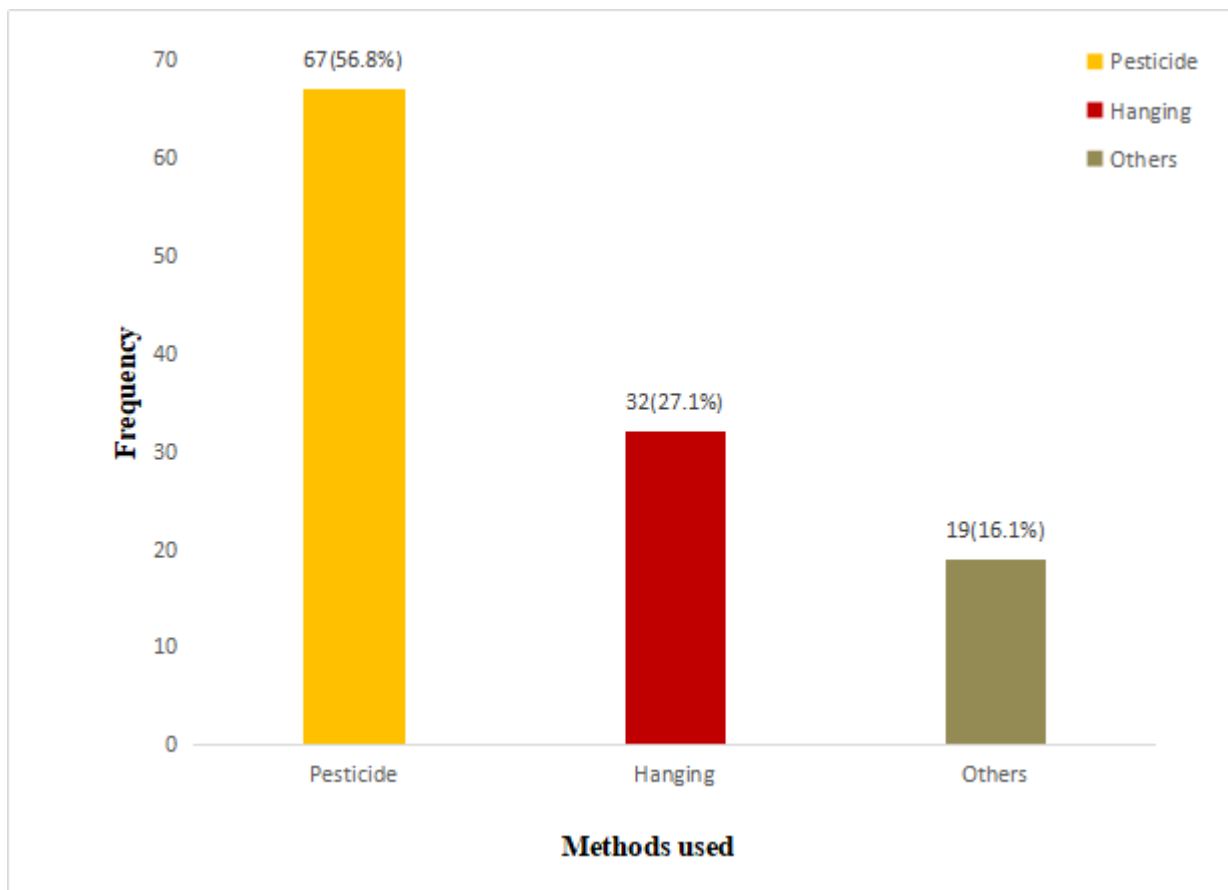


Figure 1: Methods of Suicide used

Fifteen (12.7 %) of the cases had a known diagnosis of depression at the time they committed suicide. Identified related problems or risk factors for suicide included financial challenges, academic challenges, marital /relationship problems, previous attempts, and associated medical illnesses. Four of the cases were associated with homicide.

Table 2 shows the total and gender specific crude suicide rates per 100,000 for year 2019 and 2020.

Year	Total number of suicide	Male suicides	Female suicides	Total suicide rate	Suicide rate – males	Suicide rate – females
2019	60	47	13	0.029	0.046	0.013
2020	58	40	18	0.028	0.038	0.017

Table 3: Sex distribution of the age, suicidal behaviour (suicide note), methods used and the year

Variable	Sex		Total N (%)	χ^2	p value
	Male n (%)	Female n (%)			
Age					
< 20	6 (7.3)	11 (36.7)	17 (15.2)	15.772F	0.001*
20 – 39	46 (56.1)	15 (50.0)	61 (54.5)		
40 – 59	23 (28.0)	2 (6.7)	25 (22.3)		
≥ 60	7 (8.5)	2 (6.7)	9 (8.0)		

Mean ± SD	35.43±13.74	23.00±8.20		4.030	<0.001*
Suicide note					
Yes	23 (26.4)	10 (32.3)	33 (28.0)	0.384F	0.535
No	64 (73.6)	21 (67.7)	85 (72.0)		
Methods used					
Hanging	27 (31.0)	5 (16.1)	32 (27.1)	7.459	0.024*
Pesticide	43 (49.4)	24 (77.4)	67 (56.8)		
Others	17 (19.5)	2 (6.5)	19 (16.1)		
Year					
2019	47 (54.0)	13 (41.9)	60 (50.8)	1.336	0.248
2020	40 (46.0)	18 (58.1)	58 (49.2)		

χ²: Chi square test; t: Independent Samples T test; F: Fisher's exact test

The relationship between gender and age was significant as females that committed suicide were generally younger than males (p value= 0.001). The mean age was 35.43 +/- 13.74 years for males and 23 +/- 8.20 years for females. There was a significant difference between method of suicide deaths and gender (p value= 0.024). Females, 24 (77.4%) were more likely to use pesticides compared to males 43 (49.4%) although pesticide use was found to be common amongst both groups. Between both genders, males were more likely to use hanging 27 (31.0%) compared with 5(16.1%) females. Table 3

Younger age groups were more likely to leave a suicide note. Those aged 20 years and below were more likely to leave a suicide note 7(41.2%), followed by those within 20- 39-year range 19 (31.1%). Females 10 (32.3%) were also more likely to leave suicide note compared to males 23 (26.4%). Amongst different methods of suicide death, those who ingested pesticides were most likely to leave suicide note 25(37.3%). Out of the 6 cases that were reported in the Northwest geopolitical zone, 2 (33.3%) left suicide note and in South south region 6 (31.6%) left suicide note. Table 4.

Table 4: Suicidal behaviour (suicide note) and socio-demographic characteristics

Variable	Suicide notes			χ ²	p-value
	Yes n (%)	No n (%)	Total N		
Age					
< 20	7 (41.2)	10 (58.8)	17	5.477F	0.136
20 – 39	19 (31.1)	42 (68.9)	61		
40 – 59	6 (24.0)	19 (76.0)	25		
≥ 60	0 (0.0)	9 (100.0)	9		
Sex					
Male	23 (26.4)	64 (73.6)	87	0.384	0.535
Female	10 (32.3)	21 (67.7)	31		
Method					
Hanging	5 (15.6)	27 (84.4)	32	6.724	0.035*
Pesticide	25 (37.3)	42 (62.7)	67		
Others	3 (15.8)	16 (84.2)	19		

Occupation					
Employed	5 (27.8)	13 (72.2)	18	11.286	0.024*
Self-employed	8 (42.1)	11 (57.9)	19		
Unemployed	3 (60.0)	2 (40.0)	5		
Student	12 (36.4)	21 (63.6)	33		
Others	5 (11.6)	38 (88.4)	43		
Location					
North Central	7 (23.3)	23 (76.7)	30	1.289F	0.966
North East	0 (0.0)	2 (100.0)	2		
North West	2 (33.3)	4 (66.7)	6		
South East	3 (27.3)	8 (72.7)	11		
South South	6 (31.6)	13 (68.4)	19		
South West	12 (26.1)	34 (73.9)	46		
Year					
2019	22 (36.7)	38 (63.3)	60	4.587	0.032*
2020	11 (19.0)	47 (81.0)	58		

χ^2 : Chi square test; F: Fisher's exact test; **: Analysis of Variance (ANOVA)

Hanging was the commonest method employed by those in the older age groups, as more than half (56.0%) of those aged between 40-59 years used this method as well as 4(44.4%) of those aged 60years and above. On the contrary, majority of those in the younger age groups, <20years, 15(88.2%) and 20 – 39 years, 40(65.6%) were more likely to commit suicide by ingesting pesticide.

Students were more likely to use pesticide 27 (81.8%), this was significant when compared with other occupational groups $p= 0.025$. The South west 28(60.9%) and North central 18(60.0%) had the highest reported cases of suicide death by ingestion of pesticides. Suicide death was similar across 2019 and 2020. Table 5.

Table 5: Methods used and socio-demographic characteristics

Variable	Method used			Total N	χ^2	p-value
	Hanging n (%)	Pesticide n (%)	Others n (%)			
Age						
< 20	2 (11.8)	15 (88.2)	0 (0.0)	17	24.903F	<0.001*
20 – 39	11 (18.0)	40 (65.6)	10 (16.4)	61		
40 – 59	14 (56.0)	7 (28.0)	4 (16.4)	25		
≥ 60	4 (44.4)	2 (22.2)	3 (33.3)	9		
Mean \pm SD	39.70 \pm 14.62a	25.93 \pm 9.00b	43.00 \pm 16.04a		14.374	<0.001*
Sex						
Male	27 (31.0)	43 (49.4)	17 (19.5)	87	7.459	0.024*
Female	5 (16.1)	24 (77.4)	2 (6.5)	31		
Occupation						
Employed	5 (27.8)	7 (38.9)	6 (33.3)	18	16.231F	0.025*
Self-employed	6 (31.6)	11 (57.9)	2 (10.5)	19		

Unemployed	1 (20.0)	3 (60.0)	1 (20.0)	5		
Student	4 (12.1)	27 (81.8)	2 (6.1)	33		
Others	16 (37.2)	19 (44.2)	8 (18.6)	43		
Location						
North Central	9 (30.0)	18 (60.0)	3 (10.0)	30	8.659F	0.535
North East	1 (50.0)	0 (0.0)	1 (50.0)	2		
North West	1 (16.7)	3 (50.0)	2 (33.3)	6		
South East	5 (45.5)	4 (36.4)	2 (18.2)	11		
South South	5 (26.3)	10 (52.6)	4 (21.1)	19		
South West	11 (23.9)	28 (60.9)	7 (15.2)	46		
Year						
2019	16 (26.7)	33 (55.0)	11 (18.3)	60	0.455	0.797
2020	16 (27.6)	34 (58.6)	8 (13.8)	58		

χ^2 : Chi square test; F: Fisher's exact test; **: Analysis of Variance (ANOVA)

NB: Different alphabets indicate significant difference between the mean age while mean age with similar alphabet indicates no significant difference using LSD (Least Significant Difference) post hoc test

Discussion

The aim of this study was to obtain preliminary data of suicide death recorded in the online media (mainstream and social media) within a 2year period (2019 and 2020) so as to provide a better understanding in terms of prevalence, socio-demographic and behavioural patterns of suicide deaths in Nigeria.

Suicidal behaviour is said to vary with age group, sex gender and region (Demir, 2018a). Our study found a mean age of 30.65, this was similar to that found by Oyetunji *et al* (2020) with a mean age of 36.33 years. We also found the highest rate of suicide in the age range 20-39years. This finding is not far from findings in similar studies (Olibamoyo *et al*, 2021, Demir, 2018a). Olibamoyo *et al* (2021), found the highest prevalence in the age range 18-29years and these decreased as age increased. Youths are more likely to engage with social media so are more prone to being influenced by media suicide reportage. They are also more prone to being affected by socio economic factors such as academic pressures, financial difficulties, relationship problems and family strife, and are also more likely to engage in risky behaviours such as substance use (Olibamoyo *et al*, 2021).

This study revealed that men were more likely to die by suicide than women. This finding is in keeping with previous studies (Olibamoyo *et al*, 2021, Oyetunji *et al*, 2021). A study done by Oyetunji *et. al* (2021), which also found a predominance of male suicide death, posited that a reason may be due to the fact that males were less likely to seek and accept help for mental health problems. Men are also most times at the receiving end of financial hardships as society more often than not places on them the responsibility of taking care of others. However, females were more likely to engage in less violent suicidal behaviour.

In this study, the most reported method of suicide death was ingestion of organophosphate compounds such as Sniper and DD-force both being dichloros-based compounds used in killing pests and herbs.

This pattern was consistent across both genders as the use of organophosphate based pesticides was the commonest method of suicide death for both males and females, 49.4% and 77.4% respectively. In more recent times, the popularity of Sniper as a handy household tool to control nuisances of insects, rodents, and even herbs may be positively correlated to its easy accessibility and availability (Akinremi, 2019). The generally affordable cost may also not be disregarded as well as the sensationalism from media when such death occurs from its use. On one of the popular online marketing stores, 3 pieces of 100ml Sniper is sold for 1,950 naira, each 100ml bottle averaging 650 naira. This is comparable with equivalent volume of other dichlorvos-based pesticides which cost between 800 to 2,500 naira (www.yaoota.com). A good number of households now keep these chemicals for easy usage each time the need arises. This finding is also supported by studies that reported the emerging trend of pesticide poisoning in Low- and Middle-Income Countries, LMICs (Jors *et al*, 2008).

This study was carried out at a time when social media has become a major source of information gathering and dissemination, thus recent surge in social media reportage could have contributed to the high prevalence of pesticide use as a method of suicide and compounded by the easy availability of Sniper and other pesticides (Adesugba, 2021).

Methods of suicide reportage may also be correlated to suicidal behaviour and intents, thus still affecting the increased prevalence of pesticide use. Some who may be going through distressing mental and physical health problems, serious socio-economic and or marital challenges may have at one point or another sorted for opportunity to take their own lives but lacked the 'motivation' or 'push' to act it out (Wasserman *et al*, 2021). Sensational reportage of suicide deaths from pesticide ingestion may 'inspire' them to eventually carrying out or completing the act using similar method (Williams, 2002).

A previous study by Oyetunji *et al* (2021), done by collecting and analysing data from 10 Nigerian newspapers between 2010 and 2019, showed that hanging was the most prevalent method of suicide death. Albeit, there is a significant disparity between the commonest methods of suicide death, and the recent surge in social media reportage of suicide from pesticide ingestion may have strongly influenced this disparity (Umar *et al*, 2020).

Thus, a government policy that regulates importation, distribution and sales of various branded pesticides may help reduce overall rate of suicide, though, this alone may not be enough. In a study done in Sri Lanka on Impact of pesticide regulation on suicide, restrictions on the importation and sales of different WHO classes of toxic pesticides in 1995 and 1998 coincided with reductions in suicide of all ages and both men and women (Gunnel *et al*, 2007). Another study done across 14 countries found restrictions to use of hazardous pesticides was a potentially cost-effective way of reducing the suicide deaths and the burden attributed to pesticide ingestion compared to other mental health interventions (Lee *et al*, 2021).

This study also found that hanging was most common between the ages 40 and 59years 14(56.0%), with mean age at fourth decade, 39.70 years. Findings also showed that the method was more commonly used by male gender 27(31.0%) when compared with female gender 5(16.1%). This is in keeping with previous studies which also showed that the mean age of those who died by hanging was in the fourth decade in this environment, with an overwhelming male preponderance (Oyetunji *et al*,

2021, Faduyile *et al.*, 2019). These findings suggest that the male gender tends to use more physically aggressive methods to commit suicide compared to females who generally have predilection for use of poisonous substances like drugs, carbon monoxide and pesticides (Denning *et al.*, 2000).

The commonly identified risk factors for suicide in this study included, major depression and other psychiatric illnesses, previous suicide attempts, financial challenges, academic challenges, marital/relationship problems, and associated medical illnesses. The relationship between suicide and these factors may be more complex than direct, while socio-economic and marital problems may tilt an individual to a state of mental decompensation thus making them consider suicide as an option for easily ending their distressing problems. These problems may also link to suicide indirectly by precipitating mental and medical illnesses which in turn could put one at risk of suicide. In keeping with this finding, Mars *et al.*, in their review of literature on suicidal behaviour across African continent, reported interpersonal difficulties, mental and physical problems, socio-economic problems as major risk factors for suicide (Mar *et al.*, 2014).

This study found that older adults were more likely to kill self by hanging than ingestion of pesticides, while younger age groups had predilection for ingestion of pesticides. This is consistent with findings in previous similar study (Demir, 2018b). There could be a possible correlation with (i) increasing popularity of suicide reportage and (ii) media of reportage. Similar previous studies that were done prior to the recent popularity of Sniper and other insecticides as means of committing suicide found that hanging was the commonest method of suicide in this environment, for both male and female genders (Olibamoyo *et al.*, 2021, Oyetunji *et al.* 2021, Williams 2002). It is possible that the older generation were more exposed to hanging as a more lethal suicide method than the newly popularized use of Sniper which the younger generation is mostly exposed to through social media.

Other socio-demographic variables which significantly affected method of suicide in this study included occupational statuses, as students were most likely to commit suicide by ingesting pesticides, followed by artisans (farmers were included). Common risk factors identified amongst students who committed suicide by ingesting pesticides included problems with academics and relationships with partners. Considering that students and other younger adults form a chunk of social media users, it was possible that the increasing popularity of pesticides (mostly Sniper) use as an easy method of committing suicide had influenced their choice of method. In addition, the most commonly identified risk factor in artisans who committed suicide by ingesting pesticides in this study was financial difficulties (indebtedness, inability to cater for immediate family needs), and this was correlated to the easy accessibility of the organophosphate compounds as some already had them in their homes for the purpose of controlling domestic pests and weeds (Olibamoyo *et al.*, 2021, Oyetunji *et al.*, 2021).

On the overall, the use of pesticides as method of committing suicide has been mostly popularized by the style and mode of reportage by different news media and this has consequently affected prevalence of suicide death. Our finding is consistent with the study done by Stack which showed that the greater the amount of media reports on suicide, the greater the surge in suicide rate (Stack, 2003). Social learning was anticipated to have played a huge role, thus a government policy that modifies and regulates style of suicide reportage may help in stemming the tide of copycat suicide. Current guidelines on suicide reportage need to be updated to meet with current reality of social media that has taken over mainstream media. Also, there is a need to accentuate the importance of responsible media reporting of suicide. Emphasis should be placed on enlightening the populace about suicide and

mental illness, educate people about coping skills, and provide information on where to get support and treatment.

Limitation

Suicide is still highly stigmatized and criminalized hence its under reportage in Nigeria. This study was a cross sectional study with data obtained from online media outlets. Data obtained may not be totally reflective of actual prevalence across period for which data was obtained.

The study however fulfils its objective in that it gives an insight into current trends in suicide pattern within the period for which the data was obtained and makes a case for areas of intervention.

Conclusion

This study highlighted the current reality of suicides in Nigeria. It brings to the fore the urgent need for a proper surveillance system that would help drive planning and evaluation of suicide prevention strategies. Government and various stakeholders need to work together on updating our legislation by passing the mental health bill, decriminalizing suicide, encouraging responsible reportage and proper pesticide control as a means of reducing access to means of suicide.

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