RESEARCH REPORT

Description of cases of parasuicides reported at University Teaching Hospital, Lusaka. Zambia: preliminary findings

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Parasuicide has become a public health problem of importance. A sample size of 207 case records of patients was estimated considering a prevalence of 16+5% obtained in the project area, z=1.96 and margin of error of 5%. The case records were conveniently sampled. A total of 141 (68.1%) out of 207 records were reviewed of which 53.2% were for males. About a third of the cases were in the age group 20-24 years (35.0%), employed (33.1%) and students (28.8%). Most of the cases were married (47.9%), lived with their families (95.0%) and attained secondary level of education (79.9%). The most common reasons for parasuicide were domestic dispute, alcohol-related and psychiatric condition in that order. The most common methods used in parasuicide were organophosphate poisoning, drug overdose and acid poisoning. The common reasons and methods for parasuicide obtained in the current study may be considered in the care of parasuicides. Further studies should be conducted to establish factors associated with parasuicide.

Introduction

Suicide and parasuicide rates are important markers of the mental health of a population. Suicide is an act of deliberately killing oneself [1]. Meanwhile, parasuicides is an apparent attempt at suicide without the actual intention of killing oneself [2]. While suicide is a worldwide problem affecting all age groups, it mostly affects persons aged 70 years or older and persons in the 15-29 years age group in which it is the second leading cause of death [3]. Persons who commit an act of parasuicide tend to repeat the act. A study carried out in Canary Islands, Spain in the year 2006 showed that previous parasuicide is highly predictive of future parasuicide. As the study revealed, 24.9 percent of parasuicidal persons in Tenerife of which 106 persons (6.3%) repeated at least one parasuicide act in the five-year period analysed. In another town named Gran Canaria 21 percent had committed previous

parasuicide of which 143 persons (8.8%) repeated at least one parasuicide in the three-year period analysed [4].

About half of all people who kill themselves have a history of deliberate self-harm. Hawton et.al report that an episode of parasuicide occurs within a year before death in 20-25% [5]. In 2013, it was observed that parasuicides rates in Europe in the previous 50 years had been on the increase. [6]. Michel et al [7] reported average suicide rates for persons aged 15 years or older of 140:100 000 and 193:100 000 for males and females, respectively, in Europe. Contrary to the general finding by Madu and Matla [8] that

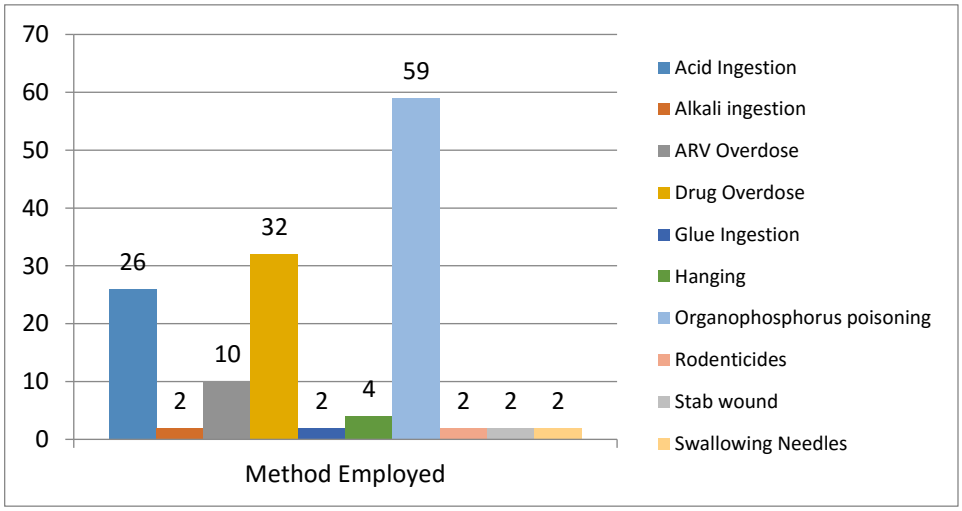

Figure 1 Methods used in parasuicides

more females than males attempt suicide in Africa, except in Nigeria, Egypt, Ethiopia and Uganda.

There is scarcity of information on parasuicide in Africa and Zambia in particular. Mars et al [9] in their review reported that data on suicide attempt was only available from 11 countries and Zambia was not among them. Suicide attempt incidence rates for the 7 countries varied from 0.1 per 100000 in Ghana to 100 per 100000 in Namibia; lifetime prevalence from 0.7% in Nigeria to 6.0% in Liberia. The objective of the current was to contribute to the body of knowledge by describing socio-demographic factors, reasons for parasuicide and method used in attempting suicide among cases of parasuicide attending the University Teaching Hospital in Lusaka, Zambia.

Methods

Case records of patients reporting to the University Teaching Hospital (UTH) for parasuicide between from January2014 to July 2015 were reviewed.

A sample size of 207 was estimated using a formula: $n=z^2*p(100-p)/m^2$ considering a prevalence of 16±5% obtained in the project area, z=1.96 and margin of error of 5%. The case records were conveniently sampled.

The following variables were collected and data entered in an Excel spreadsheet:

patient's ID, address, date for suicide committed, age, gender, marital status, education level, occupation, living with family or not, method employed, reason for such attempts and number of attempts. All the data was handled confidentially and safely stored in a locked filing cabinet. Data analysis was conducted using SPSS® version 16.0.

Table 1 Socio-demographic characteristics for cases of parasuicides ([a]no information on 1 case, [b]no information on 2 cases)

Factor	n (%)
Age (years)[a]	
<20	29 (20.7)
20-24	49 (35.0)
25-29	34 (24.3)
30+	28 (20.0)
Gender	
Male	75 (53.2)
Female	66 (46.8)
Marital status[a]	
In relationship	20 (14.3)
Married	67 (47.9)
Unmarried	53 (37.9)
Education[b]	
Primary	18 (12.9)
Secondary	111 (79.9)
Tertiary	10 (7.2)
Occupation[b]	
Employed	46 (33.1)
Home maker	14 (10.1)
Not employed	30 (21.6)
Self employed	9 (6.5)
Student	40 (28.8)
Living with family	
Yes	134 (95.0)
No	7 (5.0)

Results

A total of 141 (68.1%) out of 207 records were reviewed of which 53.2% were for males. About a third of the cases were in the age group 20-24 years (35.0%), employed (33.1%) and students (28.8%). Most of the cases were married (47.9%), lived with their families (95.0%) and attained secondary level of education (79.9%). These results are shown in Table 1.

Reasons for parasuicide are shown in Table 2. The most common reason for parasuicide was domestic dispute (77.0%) seconded by alcohol-related (10.4%) and psychiatric condition (5.9%). Figure 1 shows the methods that were used in parasuicide. The most common methods used in parasuicide were organophosphate poisoning (42%), drug overdose (23%) and acid poisoning (18%).

Discussion

The current study showed that most cases of parasuicide were married, lived with their

families, attained secondary level of education, aged 20-24 years, employed or were students. The most common reason for parasuicide was domestic dispute and most common method used for parasuicide was organophosphate poisoning.

Table 2 Reasons for parasuicide (Total =135)

Reasons for parasuicide[c]	
Alcohol related	14 (10.4)
Chronic disease- rvd r	2 (1.5)
Dispute with friends	1 (0.7)
Domestic dispute	104 (77.0)
Infidelity	1 (0.7)
Psychiatric condition	8 (5.9)
Sexual abuse	2 (1.5)
Work stress	3 (2.2)

[c] No information on 6 cases

Being married was common in the present study among persons who committed parasuicide, suggesting that it may be a risk factor for the action. However, it remains to be established if it is a risk factor as observed by Shahid and Hyder [10]. However, Welch [11] reported to the contrary that being single or divorced was a risk factor for parasuicide in the general population. Further studies are needed to establish if being married being common in the current study among the parasuicides is indeed a risk factor by conducting analytical studies.

Although most parasuicides in the current study lived with their families, further studies need to be conducted to establish is living with family is associated with parasuicide. A study conducted in Bristol in the United Kingdom found no significant association between living alone and parasuicide [12].

Most of the cases in the current study had attained secondary level of education, contrary to the majority of parasuicides in Dar es Salaam, Tanzania, who had primary level of education [13].

The most frequent age group for parasuicide in the current study was the 20-24 years, suggesting that young age may be a risk factor for deliberate self-harm as reported by Shahid and Hyder [10]. Ndosi and Waziri [13] also reported that parasuicides were mostly young adults. Young age was also reported to be a risk factor for parasuicide in the general population by Welch [11].

The majority of cases were employed. Being employed may not directly be linked to parasuicide. To the contrary, lack of employment may induce stress in the unemployed and result in the act of parasuicide.

The finding in the current study that students were also overrepresented in the current study may suggest that being a student is associated with parasuicide. A study to establish what stresses students may shade some light on the association of being a student and parasuicide. Among the factors to be considered are academic pressures as well as interpersonal relationships.

The most frequently reported precipitating factor in the current study was domestic violence, a finding similar to that reported elsewhere of family problems and disputes [14,15].

The most common methods used in parasuicide in the present study were organophosphate poisoning at 59%, drug overdose (32%) and acid poisoning (26%) in that order (figure 1). In Greek medical ward, the most frequently methods were ingested drugs (psychopharmaceuticals and analgesics/anti-rheumatics) and pesticides among patients coming from rural areas [14], similar to the finding by Ndosi and Waziri [13] who reported that most of the parasuicides ingested overdose of medicaments, including chloroquine Morgan et al [12] finding concurs with this finding that drug overdose occurred in most of all cases. Organophosphate insecticides second to benzodiazepines were also common methods used in deliberate self-harm in Pakistan [16]. The method used may depend on its availability in the area, suggesting that developed countries may have similar agents used in parasuicide and similarly, agents that may be used in parasuicide in developing countries may be similar. Since developing countries are agriculture oriented, agents used in parasuicide in these countries are agents that are used in production of crops or rearing of livestock. Prevention interventions should be tailored with availability of agents in the general population in mind.

As is the case with retrospective studies, the current study faced a number of limitations. The first being that of missing data in the records. The findings in the study may not be generalizable to population. Persons who attend health facilities tend to be different from those who do not with respect socio-demographic characteristics. More importantly, the frequency of the factors in the study does not imply that the factors may be associated with the outcome. The factors in question may equally be common in parasuicides and non-parasuicides, thus, such factors cannot be associated with the outcome. The sample size was not achieved

and the findings may change with an increased sample size.

In conclusion, the common reasons and methods for parasuicide obtained in the current study may be considered in the care of parasuicides. Further studies should be conducted to establish factors associated with parasuicide.

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