



Suicide Attempt Among Adolescents in Lubumbashi

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ABSTRACT

Suicide attempts and suicides are a major public health problem worldwide, in sub-Saharan Africa and particularly in Lubumbashi. The purpose of this study was to estimate the overall prevalence of suicide attempts among the adolescents (under 20-year-old) in Lubumbashi. Our research method was a descriptive cross-sectional design. The population of this study was all registered cases of adolescent with suicide attempt referred to the emergency department of Maris Stella medical center in the city of Lubumbashi between February and October 2021. 158 cases of attempted suicide as well as suicide were recorded. From this total population, a sample of 93 cases was selected according to our inclusion criteria. Our study found that 58.8% of suicide cases were adolescent less than 20-year-old age, and the average age was 17 years 2 months, the lower age limit was 14 years; There was a clear female predominance with 74 girls (79.5%) for 19 boys (20.5%) regardless of age; ingesting chemicals was the most used method of attempted suicide and suicide, with quinine at the forefront (65.6%); Psychological and social problems were the main motivations for the suicidal attempt in boys, social problems predominate in girls with 68.5%; sentimental aspects were at the forefront of the causes of suicide with an estimate of 44.5% followed by family conflicts with 35.1%. The mortality rate was estimated at 10% in both sexes and death occurred in 7 out of 9 cases, or 77.7%, at home before being seen in hospital. In conclusion, overall, the prevalence of suicide attempt among adolescents under 20-year-old of age is high with predominance in girls.

Keywords : suicide, suicide attempt, adolescent, Lubumbashi

Introduction

Suicide is a major social and public health problem and has a global mortality rate of 16/100,000 (Wasserman, 2009).

In adolescence, the suicide process can be very short: a few hours. Psychologically the teenager is impulsive, unstable, emotional. He is constantly unbalanced, in a state of conflict. He experiments before thinking. This is why the period of adolescence is more likely to generate suicidal behavior. Studies have revealed a very high vulnerability for suicide attempts between the ages of 15 and 19 (WHO, 2004). The earlier the suicide attempt is made, the greater the risk of suicide. Suicide is the second highest mortality rate among 15–24-year-olds. 75% of cases are recorded in low and middle-income countries (WHO, 2014) with significant decreased rates in most western countries.

Research performed in different African countries (Omigbodun, 2008; Joe, 2008; Muula, 2007) revealed that suicide behaviour is common, but there is a variation across countries. For example, among school students, suicidal ideation lies on the frequencies between 23.1% in Botswana, 27.1% in Kenya, 11.2% in Tanzania, 31.9% in Zambia and in 19.6% in Uganda (Swahn, et al., 2010). These results could be influenced by high prevalence of mental illness, secondary to long armed conflict and economic challenges as justified in a survey conducted in Uganda (Ovuga, 2005). However, South Africa has the eight highest rates of suicide in the world, precipitated by psycho-social challenges, such as untreated mental illness, substance abuse, trauma, rape, and mental health disorder (Malan, 2014).

Suicide research in the African context, (particularly in the Democratic republic of Congo where little is known about the prevalence of suicide behaviors) is limited by a lack of systematic data collection.

Despite that multiple studies have confirmed that Suicide is a psychosocial problem in the Democratic of Congo, there are no relevant studies to date that have investigated the prevalence of suicide attempt and suicide in Lubumbashi.

Methodology

A cross-sectional design was used for our study; the research was carried out over a period of 9 months, i.e. from February to October 2021, in the emergency department of the Maris Stella Medical Center in Lubumbashi.

A sample of 93 patients meeting our inclusion criteria (such as being registered in the Maris Stela Medical Center database between February and October 2021, having been diagnosed with suicide attempt or suicide at the time of admission by a doctor and being under 20 years old) were selected.

Six parameters were analyzed: frequency of attempted suicide and suicide cases, age, gender, the method used for attempted suicide and suicide, motivation for the suicidal act and evolution.

An authorization for collection of the data were obtained from the manager and the legal department of the medical center and we complied with all the ethical issues.

Results

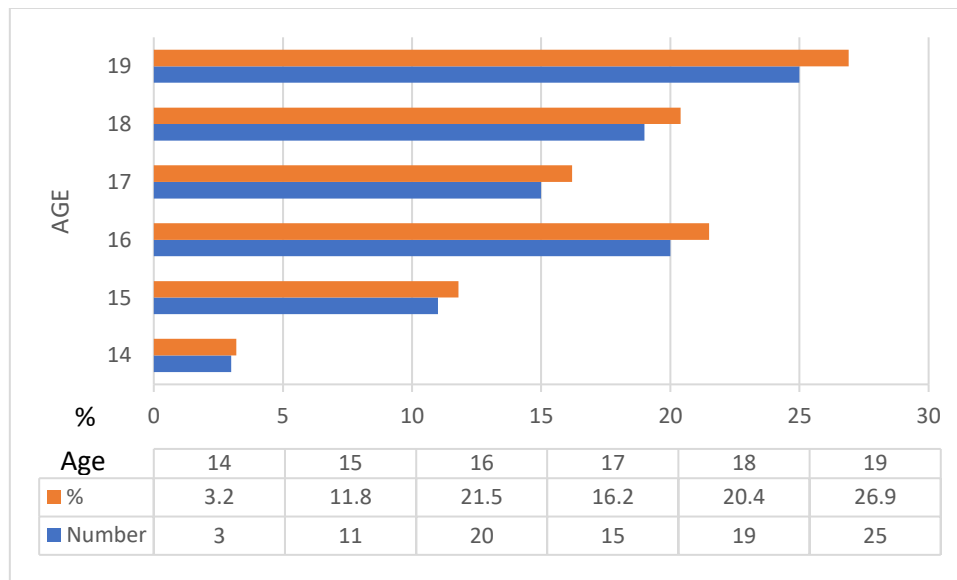
1. Frequency

In our period of the research, 36,532 patients were admitted to the emergency department for various reasons. Among these patients, 158 were reported for suicide attempts or suicides, 93 patients out of this group were under 20 years of age, or 58.8% of all cases recorded for suicide attempts and suicides and these patients were included in our study as participants.

2. Age

Following the distribution of cases of attempted suicide and suicide, the lower age limit recorded was 14 years, and the estimated average age was 17 years 2 Months (Figure 1).

Figure 1: distribution of cases of attempted suicide and suicide by age.



3. Gender

No cases of suicide are recorded in the age group of 14-15 years of boys; however, the analysis revealed a high prevalence of suicide attempts and suicides in both sexes at the age of 19 years, i.e. 76% for girls and 24% for boys. There was a clear female predominance with 74 girls (79.5%) for 19 boys (20.5%) for attempted suicide and suicide regardless of age (table 1).

Table 1: Distribution of attempted suicide and suicide by gender

| Age | Nb | F | M | *F/P (%) |
|-------|----|----|----|----------|
| 14 | 3 | 3 | 0 | 100 |
| 15 | 11 | 11 | 0 | 100 |
| 16 | 20 | 17 | 3 | 85 |
| 17 | 15 | 10 | 5 | 66,5 |
| 18 | 19 | 14 | 5 | 73,6 |
| 19 | 25 | 19 | 6 | 76 |
| Total | 93 | 74 | 19 | 79,5 |

*(F/P): female predominance

4. The methods and/or means used

The list of use method for attempting suicide or suicide is very long (table 2). Other products were utilized, such as Deltavagin (a medicine prescribed to ladies for vaginal infection), bleach (a chemical used to make clothes white or to thoroughly clean objects and kill germs), insecticides (chemicals used to control insects by killing them or preventing them from engaging in undesirable or destructive behaviors), 3.2% of cases used unidentified methods, ingestion of petrol (a liquid used as a fuel for motor vehicle) recorded 1.1% and 3.2% for ingesting sulfuric acid (a highly reactive chemical an can cause damage even to metals).Ingestion of cleaning agents, and Potassium permanganate (a powerful oxidizing agent and used a fixative, disinfectant, and as a reagent in organic synthesis) were also found in 6.5% of cases for the first and 2.1% for the last one. Most method for attempting suicide and suicide were found to be ingestion of pharmaceutical drugs such as quinine (a cinchona alkaloid, with exclusively schizonticidal antimalarial activity. It is indicated in the treatment of malaria access) with an estimated rate of 65.6% of the cases, followed by 10.8 of cases who have used Aspirin (also known as acetylsalicylic acid which is a medicine used for pain, fever, and inflammation) (10.8%). in fact, the most popular method used by attempted suicide and suicide cases was by Chemical poisoning.

Table 2: Methods / means used for attempted suicide and suicide.

| Method / Mean used | Number | % |
|------------------------|-----------|------------|
| Aspirin | 10 | 10.8 % |
| Cleaning agents | 6 | 6.5 % |
| Deltavagin | 1 | 1.1 % |
| Household Bleach | 2 | 2.1 % |
| Insecticides | 4 | 4.3 % |
| Non identified | 3 | 3.2 % |
| Petrol | 1 | 1.1 % |
| Potassium permanganate | 2 | 2.1 % |
| Quinine | 61 | 65.6 % |
| Sulfuric acid | 3 | 3.2 % |
| Total | 93 | 100 |

5. Reasons for suicide attempts and suicides

Psychological and social problems constitute the main motivation for the suicidal attempt and suicide in boys (table 3), social problems predominate with 13 out of 19 cases (i.e. 68.5%) in girls, sentimental aspects were at the forefront of the causes of suicide attempts and suicide with 33 cases out of 74 (44.5%) followed by family conflicts: 26 cases out of 74 (35.1%).

Table 3: Distribution of the cases of suicide by the motivation and gender

| Causes | Type of motivation | F | M | Total |
|-------------------|--------------------|-----------|----------|----------------|
| Romantic conflict | jealousy | 9 | 2 | 35 (37,6 %) |
| | Unwanted pregnancy | 24 | | |
| | | 33 | 2 | |
| Family conflict | Father | 3 | 2 | 30 (32,3 %) |
| | Mother | 5 | | |
| | Stepmother | 11 | 2 | |
| | Siblings | 4 | | |
| | Other parents | 3 | | |
| | | 26 | 4 | |
| Social issues | School Faillure | 9 | 4 | 28 |
| | Abandomnent | 6 | 9 | |

| | | | | |
|--------------|--|-----------|-----------|-----------------------------|
| | | 15 | 13 | (30,1 %) |
| Total | | 74 | 19 | 93 (100 %) |

6. Evolution

There were 9 cases of death out of 93, or approximately 10 suicide attempts. Of these deaths, 7 occurred before admission to hospital. These were 7 girls out of 74 (9.4%) and 2 boys out of 19 (10.5%).

Discussion

Our work reveals that suicide attempts and suicide, by the frequency, constitute a concern in urban areas. However, this situation is in fact more serious than we think because not all cases of suicide attempts reach the hospital.

Around 0.6% of adolescents in France are victims of suicide attempt or suicide each year; these suicide attempts and suicides represent 10% of calls for accidental pathology (Gaillard and Herve, 1988 & Pichot and Jallas, 1985).

Most authors agree that suicide attempts and suicide, whatever the means used, mainly concern girls: 70% for Gaillard (1988), 77% for Mathieu (1988), 80% in our study. This female predominance is therefore constant, regardless of age.

Drug poisonings are, in high-income countries, the main modes of suicide attempts and suicide with a prevalence of 80%. The drugs ingested are those usually found in the suicide's home: these are mainly neuroleptics, sedatives, and antidepressants. This poisoning is multi-drug in more than half of cases (Gaillard et al., 1988). In our experience, quinine remains the most used drug. It is most often used alone. In Zimbabwe, the use of poison comes second, regardless of age and gender (Cester and Wilson, 1990). Among the other methods collected in the literature, we note with frequency traumatic self-aggressive acts, by hanging reported in Zimbabwe (Cester & Wilson, 1990), by firearm notably in the USA and Canada (Gaillard and Herve, 1988) or by defenestration.

The suicidal method varies according to sex: pharmaceutical products are used more in girls than in boys: 90% for Mathieu (1988), 77% for Gaillard (1988), 58% for David Cester (1990). However, when it comes to self-harm, the distribution varies by gender and occupation. In countries such as France, for hangings for example, we report an equal frequency in both sexes (Gaillard and Herve, 1988) while in Zimbabwe there is a clear male predominance with a rate of 75.8% (Cester and Wilson, 1990).

Family and psychological problems, emotional problems, academic difficulties constitute the main motives observed in our research; almost all authors share this assertion. An important place is given by certain studies to early schizophrenia with 15 to 30% of cases (Mathieu & Grivois, 1988).

Mortality remains quite high: 400 deaths per year, or 10% of the overall mortality of adolescents in France for example (Breton et al., 1990). It is higher in boys (1 case of successful suicide per 100 suicide attempts) than in girls (1 case of successful suicide per 150 suicide attempts). This mortality is linked to the method of suicide: 100% by hanging and firearm, 12.5% by defenestration, 0% by medication (Gaillard and Herve, 1988).

Conclusion

The problem of suicide does not have codified solutions due to its complexity. However, African countries are increasingly confronted with this phenomenon, due to rampant urbanization and the worsening socio-economic situation. Overall, the prevalence of suicide attempt and suicide among adolescents under 20-year-old of age is high with predominance in girls. Solving this problem requires specific reflection to provide a response adapted.

References

1. Breton M.P., Ducot B, Spira A, Levy E, Courtecuisse V. (1985). The adolescents suicide attempts. Epidemiological aspects. Arch. Fr. Pediatrician.42:255-9.
2. Cester D, Wilson C. (1990). Teenage suicide in Zimbabwe. Adolescence 1990 25 (100) 807-809.
3. Gaillard M, Herve C. (1988). Epidemiology, over a period of 8 years of suicide attempts in children, in Emergency Medicine. Ann. Pediatr. 35, 8, 572-576.
4. Joe, S., Stein, D., Seedat, S., Herman, A., & Williams, D. (2008). Prevalence and correlates of non-fatal suicidal behavior among South Africans. Br. J. Psychiatry, 192, pp. 310–311.
5. Kovess V., Choquet M. (1989). Suicide and suicidal ideation among adolescents. A Franco-Quebec comparison. Childhood Neuropsychiatry. 37 (5, 6) 293-250.

6. Malan. (2014). Concern over rate of teen depression and suicide. Retrieved from <http://mg.co.za/article/2014-09-10-concern-over-rate-of-teen-depression-and-suicide>
7. Mathieu P., Grivois H. (1988). Adolescence and suicide. *Medical Practice*. 3, 32-34.
8. Muula, A., Kazembe, L., Rudatsikira, E., & Siziya, S. (2007). Suicidal ideation and associated factors among in-school adolescents in Zambia. *Tanzania Health Res. Bull*, 9, pp. 202–206.
9. Omigbodun, O., Dogra, N., Esan, O., & Adedokun, B. (2008). Prevalence and correlates of suicidal behaviour among adolescents in Southwest Nigeria. *Int. J. Soc. Psychiatry*, 54, pp. 34–46.
10. Ovuga, E. B. (2005). Prevalence of suicide ideation in two districts of Uganda. *Res. Arch Suicide*, 9(4), 321-32.
11. Pichot F, Jallas. (1988). Suicidal behavior in adolescence. *Gazette Médicale*. 95, 20, 53-57.
12. Swahn, M. H. (2010). Pre-teen alcohol use initiation and suicide attempts among middle and high school students: findings from the 2006 Georgia Student Health Survey. *Addict Behavior*, 35(5), 452. doi: 10.1016/j.addbeh.2009.12.017
13. Wasserman, D. W. (2009). *Oxford textbook of suicidology and suicide prevention: a global perspective*. Oxford University Press.
14. WHO, W. H. (2014). suicide. Suicide Fact sheet N°398. Retrieved 07 07, 2015, from [Online] Available at: <http://www.who.int/mediacentre/factsheets/fs398/en/> Accessed on. 15/08/2017.