

Pattern of Suicidal Deaths in Cases Coming to a Tertiary Center in Bangladesh

Dr. Tasnuva Andalib Mahbub^{1*}, Dr. Md. Rakibul Hasan², Prof. Dr. Abdul Wakil³, Dr. Mst. Mostana Nazma Begum⁴, Dr. Md. Nazibullah⁵, Dr. Nazmun Nahar Nahida⁶

¹Assistant Professor and Head, Department of Forensic Medicine, United Medical College, Dhaka, Bangladesh

²Assistant Professor, Department of Forensic Medicine, Parkview Medical College & Hospital, Sylhet, Bangladesh

³Professor and Head, Department of Physiology, Principal, United Medical College, Dhaka, Bangladesh

⁴Assistant Professor, Department of Physiology, TMSS Medical College & Rafatullah Community Hospital, Bogura, Bangladesh

⁵Associate Professor & Head, Department of Orthopedic, TMSS Medical College & Rafatullah Community Hospital, Bogura, Bangladesh

⁶Assistant Professor, Department of Forensic Medicine, Monno Medical College & Hospital, Dhaka, Bangladesh

DOI: [10.36347/sjams.2023.v11i06.025](https://doi.org/10.36347/sjams.2023.v11i06.025)

| Received: 28.04.2023 | Accepted: 06.06.2023 | Published: 16.06.2023

*Corresponding author: Dr. Tasnuva Andalib Mahbub

Assistant Professor and Head, Department of Forensic Medicine, United Medical College, Dhaka, Bangladesh

Abstract

Original Research Article

Background: Suicide is the leading cause of death worldwide & it is a type of criminal offense in Bangladesh. There is a link between a person's mental health and social status, and it reflects the pattern of suicidal deaths in a given community. Many cultural and socioeconomic factors, as well as quality of life, all contribute to suicide. Suicidal deaths occur almost everywhere on the planet. **Aim of the study:** The current study was carried out to determine the causes of suicidal deaths and the various factors associated with them. **Methods:** The current study is a hospital-based retrospective cross-sectional study in which 350 cases were autopsied between January 2018 to December 2019. Out of the 350 unnatural death cases autopsied, 120 were suicides, accounting for 34.2% of all cases. This study was carried out at Sher-e-Bangla Medical College, Barisal, Bangladesh. The information for each case was entered into a proforma (questionnaire). All collected data was entered into a Microsoft Excel Work Sheet and analyzed in SPSS 11.5 using descriptive statistics. **Results:** Males and females in the age range of 11 to 30 made up the majority of cases (53.3%). Most of the deaths were due to poisoning (58.33%), which was followed by hanging (34.17%). Burn (6.67%) and cut throat (0.83%) were the two methods that a very small number of populations chose to use. When they were brought to the hospital, 90% of cases were already dead. **Conclusion:** In suicide cases, treatment is of very little use. Therefore, the only factor that can significantly lower the number of suicides is prevention. Government agencies' efforts, suitable counseling services for stressed-out people, a healthy lifestyle adoption, and a decrease in the open sale of poisonous materials will all help to lower the number of suicide cases in society.

Keywords: Suicidal deaths, Autopsy, Poisoning, Hanging.

Copyright © 2023 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Suicide is frequently linked to self-destruction. It is broadly defined as the ruin or harm suffered by an individual or society as a result of their own actions [1]. When a person attempts suicide and commits any act that aids in the commission of the offense, he or she is punished by simple imprisonment for a term not exceeding one year, a fine, or both [2]. Shooting, hanging, and stabbing are 'hard' suicide methods that are typically used by men; however, poisoning and drowning are 'soft' suicide methods that are typically used by women [3]. Suicide victims may injure themselves in a variety of ways. Suicide is becoming more common in this country on a daily basis [4] as a

result of high birth rates, mortality and morbidity rates, and a faster population growth rate [5]. Suicide is no longer a crime in many developed countries, but it remains so in many developing countries [6]. Higher population pressures have a direct impact on countries' economic growth, education, unemployment, and poverty [4]. A man's mortality rate decreases under certain conditions, such as social and economic insecurity, social stigma, and so on. Suicide causes are not only associated with the victims, but also with other factors. Religious and social factors continue to influence suicide diagnosis and registration [7]. Families do not disclose the true nature of the act for fear of police harassment and/or social stigma. Instead,

Citation: Tasnuva Andalib Mahbub, Md. Rakibul Hasan, Abdul Wakil, Mst. Mostana Nazma Begum, Md. Nazibullah, Nazmun Nahar Nahida. Pattern of Suicidal Deaths in Cases Coming to a Tertiary Center in Bangladesh. Sch J App Med Sci, 2023 Jun 11(6): 1137-1140.

it is attributed to an accident or, in some cases, homicide [5]. The stigma of mental illness and seeking psychiatric help exacerbates the problem, leading to under reporting of suicides, which may range from 30% to 100% [5]. Suicide has always been a topic of interest among researchers because there are numerous factors that have been linked to suicide. This phenomenon is thought to be caused by social disorganization, a poor family support system, economic imbalance, war, population explosion, and scientific and technological advancement. Despite the taboos and shame associated with suicide, nearly half a billion people are reported to be taking their own lives. Different papers now publish the incidence of suicide with importance, even though many cases are not reported due to social stigma, fear, and family prestige. In fact, the number of suicidal deaths is much higher than the number of cases recorded by authorities. As a result, a retrospective demographic and medico-legal study was conducted to determine the actual number of people committing suicide, the methods used to commit suicide, and the various legal aspects of it. This study focuses on suicide in relation to various parameters such as age, gender, religion, area, days, month, duration of survival, methods used to commit suicide, and so on. The study will aid in identifying high-risk individuals and preventing suicide deaths.

METHODOLOGY

The current study is a hospital-based retrospective cross-sectional study in which 350 cases were autopsied between January 2018 to December 2019. Out of the 350 unnatural death cases autopsied, 120 were suicides, accounting for 34.2% of all cases. This study was carried out at Sher-e-Bangla Medical College, Barisal, Bangladesh. Cases in which there is no obvious history of suicide. The following sources provided detailed information about the cases: 1. The police recognizance, 2. Post-mortem entry register, 3. Post-mortem findings from the post-mortem report. The

information for each case was entered into a proforma (questionnaire). All collected data was entered into a Microsoft Excel Work Sheet and analyzed in SPSS 11.5 using descriptive statistics.

RESULT

In total, 350 cases underwent autopsies between January 2018 to December 2019. 120 of the 350 unnatural deaths that were autopsied, or 34.2% of all cases, were suicides. Therefore, we can conclude that one of the most frequent causes of unnatural deaths in this region is suicide. The results are shown in the following table. Table 1 shows that age ranges of victims. Present study constituted 120 cases of age range minimum 10 years to maximum 84 years. The average age was 32.81 years old, with a standard deviation of 15.05. Maximum victims (28.3%) belonged to age group 21-30 yrs followed by age group 11-20 yrs (25%) and 31-40yrs (20%). Thus, it is observed that about three fourth of victims (73.3%) were aged between 11-40 years followed by those (17.5%) in the age group of 41-60years. However, victims above 71 years and below 10 years have lesser prevalence being 2.5% and 0% respectively. As a result, it was discovered that both males and females commit suicide at a young age (Table 2). Out of the total 120 suicide cases autopsied included in the present study, little more than half (54.2%) victims were females as compared to males (45.8%). More than 2/3rd (73.33%) of the total victims of suicide were married (Table 3) followed by unmarried (26.67%). Female victims were more married (76.92%) in comparison to male counterparts (69.1%). In present study (Table 4) poisoning (58.33%) and hanging (34.17%) were found to be commonest cause of death constituting more than 92.5% of total suicide cases. Burn was found to be third most common cause constituting 6.67% and a single case was found to be cut throat (0.83%). In (Table 5) we see that condition of victims alive (10%) & dead (90%).

Table-1: Age range of the victims

Age Range (years)	Frequency	Percent
≤10	0	0
11-20	30	25
21-30	34	28.3
31-40	24	20
41-50	12	10
51-60	9	7.5
61-70	8	6.7
71-84	3	2.5
Total	120	100

Table-2: Sex of the victims

Sex	Frequency	Percent
Female	65	54.2
Male	55	45.8
Total	120	100

Table-3: Marital status of victims

Sex	Marital status	
	Married	Unmarried
Female	50 (76.92%)	15 (23.07%)
Male	38 (69.1%)	17 (30.9%)
Total	88 (73.33%)	32 (26.67%)

Table-4: Cause of death of victims

Cause of death	Frequency	Percent
Burn	8	6.67
Cut throat	1	0.83
Hanging	41	34.17
Poisoning	70	58.33
Total	120	100

Table-5: Condition of victims

Condition of victims	Frequency	Percent	Percent
Alive	12	10	10
Dead	108	90	90
Total	120	100	100

DISCUSSION

In total, 350 cases underwent autopsies between January 2018 to December 2019. 120 of the 350 unnatural deaths that were autopsied, or 34.2% of all cases, were suicides. Therefore, we can conclude that one of the most frequent causes of unnatural deaths in this region is suicide. The results are shown in the following table. Table 1 shows that age ranges of victims. Present study constituted 120 cases of age range minimum 10 years to maximum 84 years. The average age was 32.81 years old, with a standard deviation of 15.05. Maximum victims (28.3%) belonged to age group 21-30 yrs followed by age group 11-20 yrs (25%) and 31-40yrs (20%). Thus, it is observed that about three fourth of victims (73.3%) were aged between 11-40 years followed by those (17.5%) in the age group of 41-60years. However, victims aged 71 and under have a lower prevalence of 2.5% and 0%, respectively. As a result, it was discovered that both males and females commit suicide at a young age. The results of Rahim M *et al.*, Sharma BR *et al.*, Srivastava AK *et al.*, Dash SK [8], and Kafley *et al.*, [8] were all in agreement with this finding. In a similar vein, Satyavathi *et al.*, [9] and Shah [10], in their series, discovered that the age group of 20-29 years had the highest number of fatal suicides. Ramadwar *et al.*, [11] discovered in their study that the age groups 15 to 24 years had the highest incidence of fatal suicide cases (19.6%), followed by the 25 to 44 years group (19.4%). The adolescent age group had the highest number of suicide cases, according to Gupta [12]. Adolescents and young adults have a high incidence of suicide, a phenomenon that can be explained by their emotional instability and impulsivity. Their love of experimenting with drugs of addiction might make this worse. The fact that young adults and adults predominate may be because of the stress of adjusting to life's expectations at this age, as well as the

sociological and psychological issues that drive people to poison their victims. It is observed that there is only a very slight sex-based disparity in the number of victims, with females slightly outnumbering males. According to Prasad *et al.*, and Kafley *et al.*, [13] and other sources. Table 2 Out of the total 120 suicide cases autopsied included in the present study, little more than half (54.2%) victims were females as compared to males (45.8%). Shah, Satyavathi *et al.*, [12] and Singh *et al.*, [14] reported higher suicide rates among females (1:1.9, 1:1.06, and 1:1.14) in their studies. However, in the majority of the world's nations, more men than women commit suicide on a yearly basis. The global male to female ratio is thought to be 3:1. The high rate of female suicide in this region can be attributed to the fact that many men work outside the country to support their families, leaving women to manage households and deal with stress. Because of their almost complete reliance on their husbands and in-laws, women are sometimes tortured to the point of suicide. More than 2/3rd (73.33%) of the total victims of suicide were married (Table 3) followed by unmarried (26.67%). Female victims were more married (76.92%) in comparison to male counterparts (69.1%). According to India's Police Research Bureau, of the 76 suicide cases, 43 involved married people and 33 involved single people. Most victims were found to be married, according to Dash SK *et al.*, In Nagpur, Ramadwar *et al.*, study found that there were significantly more married people (5:1) among suicide victims than there were single people. According to Mukherjee [15] of Calcutta, the ratio of married to single suicide victims was 3.2:1. Although it is challenging to make a judgment, it's possible that married people experience greater stress when trying to support their families on a limited budget. Divorce and separation cases made up 2% of the total cases in this group. Although the sample size is too small to draw any conclusions, it may be because this group does not receive much social

support, and as a result, more of their life events result in suicide. Therefore, poisoning is more common among married people, which may be because of the increased socioeconomic and physical burden that comes with marriage and childbirth. In present study (Table 4) poisoning (58.33%) and hanging (34.17%) were found to be commonest cause of death constituting more than 92.5% of total suicide cases. Burn was found to be third most common cause constituting 6.67% and a single case was found to be cut throat (0.83%). In (Table 5) we see that condition of victims alive (10%) & dead (90%). Poisoning is one of the most common methods of suicide because it is easy to obtain and people believe it will be less painful. Autopsies were performed on three Indian women, all of whom had suffered burn injuries. This result was in line with NCBI statistics [16], which showed that poison consumption (34.8%), hanging (32.2%), burns (8.8%), and drowning (6.7%) were the most common methods of suicide. The convenience of poison materials made poisoning a popular method of suicide. However, Rahim *et al.*, Sharma *et al.*, and other researchers had found in their study that hanging was the most common cause of death, which was slightly different from the findings of the current study. Sharma BR *et al.*, reported that 8 females preferred self-immolation (burns) as a means of suicide. The pattern of suicides reported from 35 cities, as per NCBI statistics [16], revealed that hanging (45.7%), poisoning (21.3%), and burns (13.2% of cases), were the most common methods used by suicide victims in the cities. According to our study, 87% of hanging cases occurred in urban areas while 76.32% of poisoning cases happened in rural areas. The vast majority of cases were dead when they were discovered [17]. This might be because someone who commits suicide makes sure he dies as a result of his actions [18, 19].

Limitation of the study:

This study had a single focal point and small sample sizes. Additionally, the study was completed in a very condensed amount of time. Therefore, it's possible that the study's findings don't accurately capture the overall situation in the nation.

CONCLUSION & RECOMMENDATION

According to the study, young adults who are the most productive segment of society commit suicide by ingesting poison, hanging themselves, or setting themselves on fire. Treatment plays a very small part in saving the life of such a person, so attention must be paid to the sociological and psychological causes of poisoning, which account for the majority of cases. The majority of victims are poisoned, then hanged. Therefore, a policy must be created to limit the poison's easy access in society. It is necessary to provide the populace with appropriate counseling to help them cope

with stressful situations and to create appropriate employment opportunities for them in order to reduce poverty.

REFERENCES

- Bernard, K. Self inflicted injuries, forensic pathology, 2nd edition, USA, Oxford university New York, page range: 227-232.
- Simpson, Firearm and Punctured Injury, Forensic Medicine, 12th edition, London, Arnold, odder head line group, page: 62-67.
- Wani, R. A., Parray, F. Q., Bhat, N. A., Wani, M. A., Bhat, T. H., & Farzana, F. (2006). Nontraumatic terminal ileal perforation. *World Journal of emergency surgery*, 1, 1-4.
- Faiz, M. A. (2007). Baseline survey on cases of poisoning and its outcome, reported on behalf of poison information center, Dhaka medical college, Dhaka, Bangladesh, 1-31.
- World Health Organization. (2001). The World Health Report 2001. Mental Health: New Understanding, New Hope. Geneva: WHO.
- Khan, M. M., & Prince, M. (2003). Beyond rates: the tragedy of suicide in Pakistan. *Tropical doctor*, 33(2), 67-69.
- Department of Health. National Suicide Prevention Strategy for England. London: DoH, 2002.
- Sathyavathi, K., & Murthi Rao, D. L. N. (1961). A study of suicide in Bangalore. *Transactions of All India Institute of Mental Health*, 2, 1-19.
- Shah, J. H. (1961). Suicide in Saurashtra. *Indian Journal of Social Work*, 21, 167.
- Kafle, K. K., Nepal, M. K., Sharma, S. R., & Pokharel, R. P. (1989). Poisoning cases at TUTH. *Journal of Institute of Medicine*, 2, 293-301.
- Shah, J. H. (1961). Suicide in Saurashtra. *Indian Journal of Social Work*, 21, 167.
- Gupta, S. (1984). Study of suicides in medicolegal autopsies. Banaras Hindu University, India.
- Kafle, K. K., & Gyawali, K. K. (1992). Organophosphorus-commonest poisoning agent. *Journal of Institute of Medicine*, 14, 228-233.
- Singh, K., Jain, N. R., & Khullar, B. M. (1971). A Study of suicide in Delhi State. *J ind Med Assoc*, 57(11), 412-418.
- Mukherjee, J. B. (1972). Study of suicide in coroner's Calcutta for 5 Years. *The Clinician*, 36(6).
- Accidental and Suicidal deaths in India. National Crime Bureau of India, India. 2008.
- Pradhan, S. (2000). Attempted suicide a study of socio demographic variable methods employed and associated mental disorders. *TUTH, India*.
- Dubey, D., & Tripathi, C. B. (1999). Suicide-A sociological study in Varanasi Area.
- Thakuria, P. K., & Barbhuiyan, S. I. (2014). A study of suicidal cases in medicolegal autopsy. *Dysphrenia*, 5(1), 62.