

The Trends and Demographics of Suicide Hanging Deaths at Sir Salimullah Medical College in Dhaka During The COVID-19 Pandemic

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ABSTRACT: Background: The COVID-19 epidemic is still causing major public health issues as well as problems with finances, society, and psychology. Many people committed suicide during the pandemic because to various circumstances, including financial difficulties, stress, and loneliness. When it came to suicide, hanging was the most popular method. **Objective:** The goal of the current study was to draw attention to the trends and demographics of suicide hanging deaths during the COVID-19 pandemic. **Method and Materials:** A two-year retrospective study of deaths due to hanging from January 2020 to December 2021 was conducted by the Department of Forensic Medicine & Toxicology at the Sir Salimullah Medical College in Dhaka, Bangladesh. Post-mortem records and police inquest results were reviewed. Examining the various death profiles of hanging and comparing the findings with earlier studies were the goals of the current study. **Result:** The majority of the cases in our study were between the ages of 21 and 30, and 50.6% of them were female. Married people made up the majority of the cases (59.6%). For ligature, orna was the most popular option (59%) followed by rope (16.9%) and gamcha (11.2%). The majority of instances, or 14% of the total, were noted on July 25. **Conclusion:** Suicide by hanging during COVID pandemic is still one of the leading causes of death; depression, sadness, rage, poverty, family strife, mental illness, physical assault, and unemployment are some of the contributing factors. This problem should be addressed by the government and non-governmental groups by emphasizing stress management and offering suitable mental health education.

Keywords: Suicide, Elderly Deaths, Cause of Death, Socio-Economic Status, Physical Illness, Mental Illness.



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INTRODUCTION

The majority of the population became sick during the pandemic, and the corona virus disease 2019 (COVID) caused major public health problems.¹ Lockdowns were implemented in the majority of nations worldwide to stop the virus's spread and transmission. This caused a tremendous deal of suffering for the populace and had a significant effect on their social lives, financial situation, and psychological makeup. Numerous studies showed that loneliness, stress, and financial difficulties were associated with a higher risk of suicide. Although treating COVID-19 patients was the health care system's main priority, psychological concerns were not appropriately addressed or discussed. It is the outcome of intricate interactions between

environmental, psychological, genetic, biological, and sociological elements.¹ Due to the pandemic, many middle-aged earning members lost their jobs, found themselves in dire straits with no other option, and turned to suicide as the only way to deal with their issues.² There is a suicide death every 40 seconds. Along with gunshots and pesticide poisoning, hanging is one of the three most popular suicide techniques in the world.³ Suicidal rates increased during the COVID-19 pandemic, as documented in previous studies.^{4, 5} But for the industrialized countries as well, this was said to be absurd.⁶

MATERIALS AND METHODS

Study Design

This retrospective research was conducted between January 2020 and December 2021 and includes the 178 hanging cases that were autopsied in the mortuary of Sir Salimullah Medical College Hospital in Dhaka. The data is taken from inquest and post-mortem reports. The study was carried out in terms of the cause of death, post-mortem results, ligature findings, and the distribution of age and sex, month, occupation after the data was assessed. Details

about the crime scene were included in the police inquest report. After the collected data was compiled on a master chart, Microsoft Excel was utilized for analysis.

RESULTS

Age and sex distribution of hanging cases: Of the 178 hanging instances, 90 (50.6%) were female and 88 (49.4%) were male, suggesting that women made up the majority of the victims. These figures are displayed in Figure 1 below

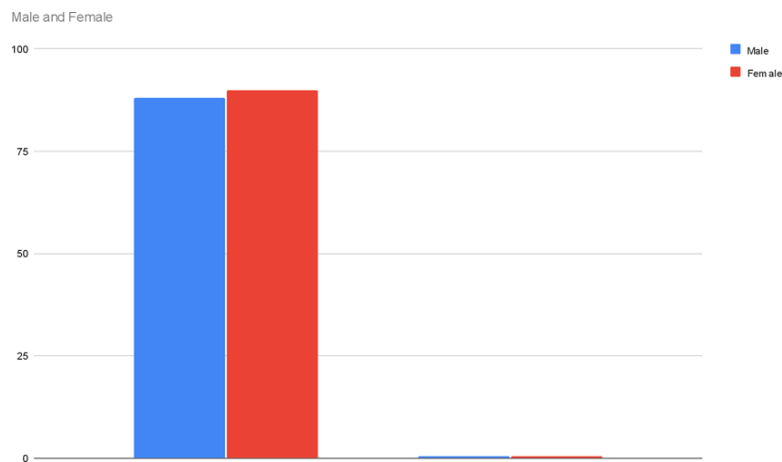


Figure 1: Distribution of Participants Stratified by Sex

In our observation, we found the majority of people were Muslim 163 (91.6%) whereas 15 (8.4%)

were Hindu. No evidence was found in Buddhist and Christian. These are shown in figure 2.

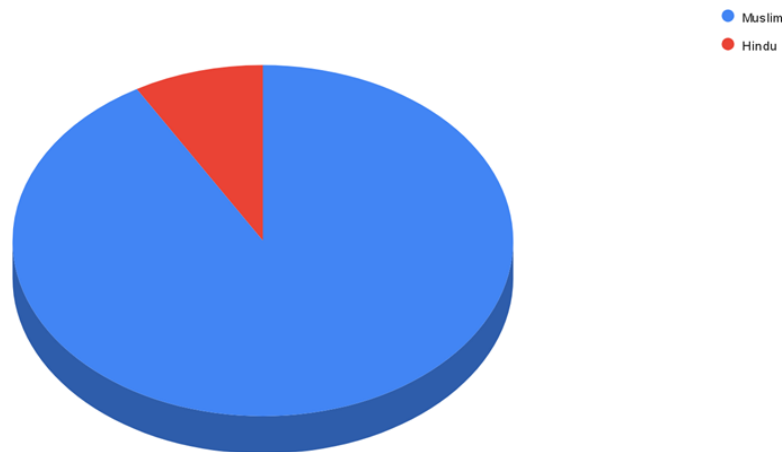


Figure 2: Religion Wise Distribution

As seen in Figure 3, 40.4% of the population was single, while 59.6% of the population was married which is presented below in figure 3.

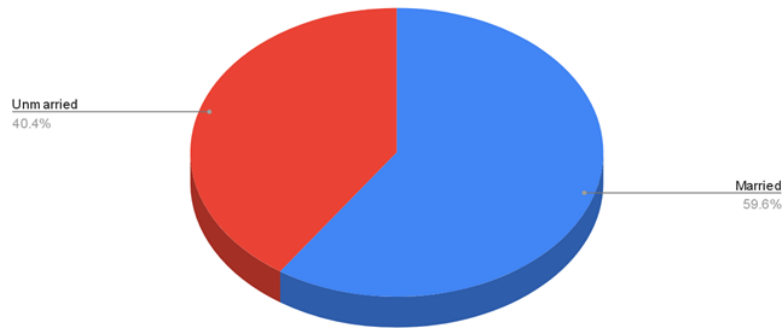


Figure 3: Marital Status

Table 1: Age Distribution

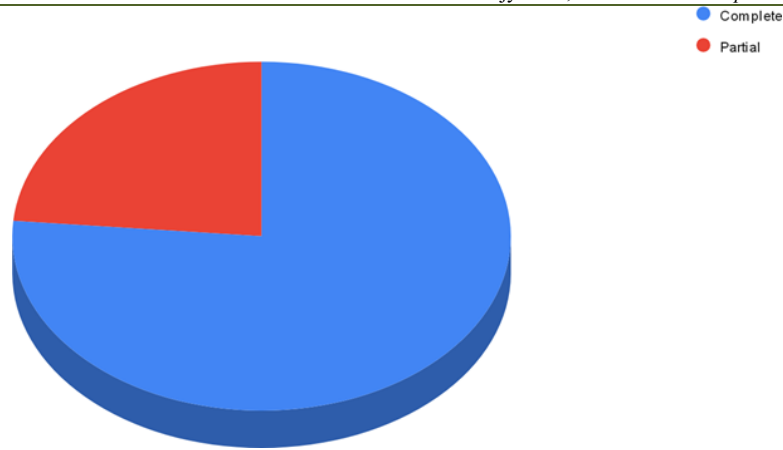
Age (Year's)	Number	Percentage (%)
0-10	1	0.6
11-20	44	24.7
21-30	84	47.2
31-40	24	13.5
41-50	18	10.1
51-60	4	2.2
61-70	2	1.1
71-80	1	0.6

The housewives accounted for the largest percentage of cases in this study (31.5%). The painters had the fewest cases (0.6%). Table 1 made reference to these statistics.

Table 2: Occupation Wise Distribution

Occupation	Number	Percentage (%)
Housewife	56	31.5
Student	39	22
Unemployed	27	15.1
Private Service	17	9.6
Labour	16	9
Farmer	4	2.2
Driver	4	2.2
Business	4	2.2
Rickshaw puller	4	2.2
Servant	3	1.7
Grill mechanic	3	1.7
Painter	1	0.6

During observation of a variety of hangings, we found complete hanging was 76.4% of cases and partial hanging cases was 23.6%, which are mentioned in Figure 4 and given below.

**Figure 4: Type of Hanging**

According to Table 4, the most commonly used ligature material for hanging among the cases was orna accounting for 59% of cases, followed by rope at 16.9% and gamcha at 11.2%.

Table 3: Ligature Material

Ligature	Number	Percentage (%)
Orna	105	59
Rope	30	16.9
Gamcha	20	11.2
Sharee	8	4.5
Belt	4	2.2
Lungi	3	1.7
Curtain	2	1.1
Wire	2	1.1
Shoelaces	2	1.1
Muffler	1	0.6
Bed sheet	1	0.6

Among the 178 cases highest number of cases were filed in South Keraniganj thana 30 (16.8%) followed by Keraniganj model (16.3%) then Jatrabari (11.8%). Minimum cases were found in Sabujbag, Jajra, Saidabad, Sutrapur, Kolatia (0.6%). These were plotted in table 4 below.

Table 4: Prevalence of Hanging in a Territory Hospital Among the Dhaka South Police Stations Based on Reported Cases

Thana	Number	Percentage (%)
South Keraniganj	30	16.8
Keraniganj Model	29	16.3
Jatrabari	21	11.8
Kamrangir Char	20	11.2
Nobabgonj	15	8.3
Kodomtoli	10	5.6
Kotowali	9	5
Bongshal	8	4.5
Hazaribag	6	3.4
Lalbag	6	3.4
Demra	6	3.4
Wari	5	2.8
Chawkbazar	3	1.7

Dohar	2	1.1
Shampur	2	1.1
Sobujbag		
Jajira		
Syedabad	1	0.6
Sutrapur		
Kolatia		
Gandaria		

Maximum cases were observed due to Depression 52(29.2%) followed by Quarrel 50(28%). This data was given below on table 5.

Table 5: Observed Causes of Suicide

Cause	Number	Percentage (%)
Depression	52	29.2
Quarrel	50	28
Anger	37	20.8
Mental illness	21	11.9
Chronic Illness	7	3.9
Addicted	7	3.9
Physical Assault	4	2.3

Majority of the cases were noticed in month of July (14%) but in month of December (1.1%) which was minimal. The month wise distribution of our cases was given in Table 7 below-

Table 6: Month Wise Distribution

Month	Number	Percentage
January	17	9.6%
February	22	12.4%
March	13	7.3%
April	11	6.2%
May	15	8.4%
June	11	6.2%
July	25	14%
August	18	10.1%
September	17	9.6%
October	20	11.2%
November	7	3.9%
December	2	1.1%

DISCUSSION

The Covid-19 pandemic is now not very active. But during its peak, it caused melancholy, worry, and dread of spreading to some of the world's largest subpopulations.⁷ In susceptible individuals, the Covid-19 infection's aftereffects were thought to result in a behavior that ended in suicide.⁸ Hanging is the commonest method performed to commit suicide.⁹ The victim's choice, the availability of equipment, and their awareness of the deadly implications all influence the suicide technique. Male

and female suicide methods vary in a number of ways.¹⁰ The grounds for selecting this method of suicide are (a) the ease with which ligature may be obtained; (b) the high success rate; (c) the various natural and artificial structures from which one might hang oneself; (d) seclusion; (e) painless and quick death; and (vi) bloodless death.¹¹ As a result, health organizations around the world began preparing to handle rumors such as "the dual pandemic of suicide and COVID-19"¹², suicide mortality and Covid-19 - perfect storm', and 'Covid-19 suicides – global

pandemic'.^{13, 14} In our study ratio of female cases was nearly equal to male (1:0.98). The increased rate of suicide amongst females during the Covid-19 period seen in this study.¹⁵ Only a small number of research indicated that the ratio of female to male cases was equal or marginally in favor of the female.¹⁶ Suicidal hanging was more prevalent among young women, making up half of the deaths of females in the third decade and then the second. Because women in this age bracket are more prone to experience stress both before and after marriage, there may be a higher risk of suicide. Women were more impacted by acute triggering events. Younger subjects had more acute triggering events before to death, but older patients had greater chronic stress.¹⁷ The findings of male preponderance among victims of suicide by hanging was also reported in some studies.^{18, 19} Males may have more stressful situations, financial difficulties, and an inability to deal with problems; they may conclude that suicide is the only way to escape this hopeless circumstance. Increased mortality was caused by default due to a disproportionate effect owing to inclusion of the non-standardized study population carrying underlying psychiatric disorders, thus leading to a selection bias.²⁰

According to this survey, the age group of 21 to 30 years old accounted for the greatest number of hanging suicide fatalities (47.2%), followed by the age group of 31 to 40 years old (13.5%). Overall, 21-40 years age group comprise highest number of cases (60.7%). Some research found that the middle age group (ages 21 to 40) had a high rate of hanging.^{21, 22} Given how hard the 21-40 age range is and how significant duties fall on the middle-aged population, a financial crisis brought on by unemployment may lead to suicide. Many middle-aged people lost their jobs during the COVID pandemic, and home isolation led to psychological and emotional problems that may have contributed to suicide. Orna accounted for 59% of the instances in the current survey, making it the most frequently utilized ligature material for hanging. Rope came in second at 16.9% and gamcha at 11.2%. For household tasks, rope is readily available and found in practically every home. The most widely utilized ligature material for people of all ages was rope.²³ The study found that housewives made up the biggest percentage of cases (31.5%), followed by students (22%). The least number of instances (0.6%) were among painters. According to WHO estimates, 77% of suicides in low- and middle-income nations

were the 17th highest cause of death globally in 2019 and accounted for 1.3% of all deaths (Suicide data – WHO, 2021). Most of the data were recorded in month of July. South African data indicates that hangings peaked in November and decreased in September.²⁴ Friends and family are crucial in preventing hanging suicide. Preventing suicide may be achieved by identifying behavioral changes early on, providing appropriate counseling, and seeking early psychiatric evaluation. Public health policies ought to be created that address issues such as the socioeconomic advancement of high-risk individuals, the application of employment laws, the expansion of access to psychiatric illness diagnosis, treatment, and follow-up, as well as initiatives to enhance coping and problem-solving abilities.

CONCLUSION

The current data focuses on the various facets of suicidal hanging in Bangladesh, where the majority of suicides by hanging in a banned place are performed by married women. In this survey, depression was the most common cause among Muslim women between the ages of 21 and 30. Housewives and students made up the majority of these individuals. The majority of the instances were discovered in July.

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