

Medico-legal Issues and Socio-demographic Profile of Suicidal Deaths in People of Dhaka City-A Study of 827 Cases

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Abstract

Introduction: There are two manners of death: Natural- where death is entirely caused by disease or ageing process, where poison or trauma does not take part to cause it and Unnatural- where death is sudden, suspicious, unexpected, litigious, unexplained and unattended either due to poison or trauma. Accident, homicide and suicide are the three unnatural manners of death. Death due to intentional injuries such as homicide or suicide and unintentional injuries of accidental manner, such as in transportation injury or industrial or machinery mishaps constitute unnatural deaths. Suicidal deaths are the acts or an instance of taking one's own life voluntarily and intentionally especially by a person of years of discretion and of sound mind.

Objective: To ascertain the medico-legal issues and socio-demographic profile of suicidal death cases occurred in Dhaka City.

Materials and Methods: A record based cross sectional study of postmortems was performed at the mortuary of the Forensic Medicine Department of Dhaka Medical College (DMC) from August 2009 to July 2010. A total of 3,337 cases brought to DMC mortuary from the south-eastern part of Dhaka district during this period were included in this study and thereafter 827 suicidal deaths were considered for this study.

Results: A total of 3,337 unnatural deaths (accidents, suicide and homicide) were reported at the mortuary of the Forensic Medicine Department of Dhaka Medical College (DMC) during the period of August 2009 to July 2010. This study revealed that 827(24.78%) individual committed suicide out of 3337 cases. There was a predominance of Muslims 779(94.19%), males 481(58.16%) over females 346(41.84%) in committing suicide. Majority of the victims belonged to the age group of 21-30 years in both sexes. Out of these suicidal cases, 318(38.45%) victims committed suicide by hanging. The other methods used for suicide were Organophosphorus compound poisoning (OPC) by 238(28.79%) victims, poisoning from other substances like

Opiates, Ethanol, Methanol, Rodenticide, Barbiturate etc by 267 (32.28%); 3(0.36%) cases were identified as burn and 1 (0.12%) by firearm.

Conclusion: Suicide is the second most common manner of unnatural death flanked by accident and homicide. Suicide is one of the most multifaceted and media-sensitive phenomena. Suicide by hanging is an increasingly common method. All stakeholders such as government along with private agencies, non-government organizations, public health departments, social workers, community, religious leaders and media can take a leading step to prevent suicide.

Key-words: Manners of death, Unnatural deaths, Suicidal deaths, Homicidal deaths, Accidental deaths.

Introduction

After an autopsy, forensic pathologists provide valuable information about the manner of death. There are two manners of death: Natural- where death is entirely caused by disease or ageing process, where poison or trauma does not take part to cause it and Unnatural- where death is sudden, suspicious unexpected, litigious, unexplained and unattended where poisons or trauma takes part to cause it. Accident, homicide and suicide are the unnatural manners of death. Unnatural deaths are caused due to intentional injuries such as homicide or suicide and by unintentional injury such as accidental deaths, like transportation injury or industrial or machinery mishaps. Suicidal deaths are the acts or an instance of taking one's own life voluntarily and intentionally especially by a person of years of discretion and of sound mind. Islam, Judaism and Christianity condemn suicide and consider it as a sin¹. Thousands of The Liberation Tigers of Tamil Eelam (LTTE) fighters in Sri Lanka have committed suicide by swallowing cyanide or blowing themselves up as human bombs for political cause². According to The World Health Organization (WHO), about one million people commit suicide worldwide each year which represents a global mortality rate of 16 people per 100,000 or one death every 40 seconds.

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It is predicted that by 2020 the rate of death will increase to double. Suicide is now the third leading causes of death among the ages of 15-44 years in both sexes. Of all suicides worldwide, nearly 30% occur in India and China³. Eastern Europe has the highest and the Eastern Mediterranean Region and Central Asia republics have the lowest suicide rates as reported in both sexes³.

In the USA, the Centre of Disease Control and Prevention reports that the overall suicide is the eleventh leading cause of death for all US Americans and the third leading cause of death for young people aged 15-24 years. Each year, 44,000 Americans die by suicide. There are 13.8 deaths by suicide per 100,000 persons each year⁴. More years of life are lost to suicide than to any other single cause except heart disease and cancer⁵. Asia accounts for 60% of suicides worldwide and at least 60 million people are affected by suicide or attempted suicide in Asia each year^{6,7}.

After road accidents in men and maternity related complications in women, suicide is the second leading cause of death among young adults in India⁸. The rate of suicides is sharply increasing in Bangladesh. According to a data from Police Headquarters, in 2017 a total of 11,095 people committed suicide in Bangladesh and on an average 30 people kill themselves every day⁹. According to the Human Rights Commission of Pakistan^{10,11}, there were 2040 suicides in the year 2007, 2528 in 2008 and more than 1600 in 2009. The figure in 2008 constitutes a suicide rate of nearly two persons per 100 000.

Materials and Methods

A record based cross-sectional study of postmortems was conducted at the mortuary of the Forensic Medicine Department of Dhaka Medical College (DMC). Most of the victims were brought to DMC morgue from the south-eastern part of Dhaka District. All postmortems, comprising a total of 3,337, performed during the period from August 2009 to July 2010 were included in this study. From these total postmortems, 827 suicidal deaths were considered. Data were collected from postmortem registers and reports, death certificates in case of hospital deaths, inquest reports accompanying the dead bodies using a pre-designed schedule. All the data were collected and analyzed statistically.

Results

A total of 3,337 medico-legal autopsies were performed. In the study period, 1740(52.15%) subjects died of accidents, 827(24.78%) cases committed suicide, 642(19.24%) cases were homicide, 94(2.82%) cases were undetermined and 34(1.01%) cases were of natural deaths (Table-I).

Table-I: Distributions of victims according to manners of death (n=3,337)

Manners of Death	Frequency	%
Accidental deaths	1740	52.15
Suicidal deaths	827	24.78
Homicidal deaths	642	19.24
Undetermined cases	94	2.82
Natural deaths	34	1.01
Total	3,337	100

Table-II: Distribution of suicidal victims by age groups and sex (n=827)

Age in years	Male	Female
1-10	4 (0.83%)	0 (0.00%)
11-20	139 (28.90%)	112 (32.45%)
21-30	198 (41.16%)	134 (38.62%)
31-40	73 (15.18%)	39 (11.23%)
> 40	67 (13.93%)	61 (17.70%)
Total	481 (100%)	346 (100%)

Table-III: Distribution of victims by religion (n=827)

Religious beliefs	Frequency	%
Muslims	779	94.19
Hindu	40	4.84
Christian	7	0.85
Buddhist	1	0.12
Total	827	100

Table-IV: Distribution of victims by methods adopted to commit suicide (n=827)

Methods applied	Frequency	%
Hanging	318	38.45
OPC poisoning	238	28.79
Other poisons (Opiates, Ethanol, Methanol, Barbiturate)	267	32.28
Burn	3	0.36
Firearm injury	1	0.12
Total	827	100

Suicidal deaths constituted 827(24.78%) cases of all the autopsies during the study period of August 2009 to July 2010. There was a predominance of males 481(58.16%) over females 346(41.84%) in committing suicide (Table-II). Maximum cases from both sexes were in the age group of 21-30 years (Table-II). Among suicide victims, muslims are more affected groups than any other religions (Table-III). Out of these, 318(38.45%) victims committed suicide by hanging. Besides hanging, suicide committed by other methods were 238(28.79%) cases by Organophosphorus compound poisoning (OPC), 267(32.28%) by others poisoning like Opiates, Ethanol, Methanol, Rodenticide, Barbiturate etc, 3(0.36%) cases were identified burn and 1(0.12%) was by firearm injury (Table-IV).

Discussion

According to the latest data published in 2017 by the World Health Organization, suicidal deaths in Bangladesh have reached 8,879 or 1.13% of total deaths¹². Suicidal deaths account second leading cause of death after road traffic accidents. This may be due to poverty and financial worries, domestic troubles, disappointment in love, frustrations in life due to various reasons, lack of job opportunities, incurable disease or mental illness, dowry and ill-treating by the husband or in-laws. Teenagers usually can commit suicide due to failure at examinations.

This study found 24.78% suicidal deaths of all autopsies which is similar to other studies^{13,14} and mentioned 26.15% and 38.55% respectively; but it is in contrast to few studies¹⁵⁻¹⁷ in which they showed 46.9%, 44.04% and less than 10% of the autopsies respectively. This study showed a marked preponderance of males 58.16% over females 41.84% which is similar to different studies^{16,18-21}.

Majority of the victims (41.16%) were found in the age group of 21-30 years in this study. Similar results are seen in other studies^{19,22,23} but dissimilar with a study²⁴ where they showed suicide was found to be the leading cause of death in the age group of 10-19 years which results in great economic and social losses to the family and community.

In the present study, Muslims were the more affected (94.19%) than Hindu (4.84%) or any other religions because Bangladesh is a Muslim majority country. This study findings contradicts with another study¹⁶ where majority was Hindus (94.05%) followed by 5.40% Muslims and similar findings are obtained in Kadu SS²⁵ where 87% were Hindus followed by Muslims 7.6%, because the study place in India is Hindu majority.

Hanging is a leading method of suicide well evident in many other studies^{20,26-28}. This is in agreement with the findings of the current study. But according to other studies^{16,24} most common method adapted to end life was poisoning followed by hanging.

The present study showed that the most common method adapted to commit suicide was hanging in 38.45% followed by OPC poisoning in 28.79%. Though other poisons like Opiates, Ethanol, Methanol, Barbiturate have been used by 32.28% to terminate their lives, but this may be a doubtful by diagnostic manner. It may go in favour of accidental death as these are the substance of abusers. Method to ending life will depend upon the circumstances and ease of availability of the material for suicide.

Conclusion

Statistics about suicide are difficult to assemble and may be inaccurate because of the sensitivity of the issue. Suicide is the second commonest manner of unnatural death flanked by accident and homicide. It is one of the most media-sensitive of phenomena. Suicide by hanging is an increasingly common method. Teen deaths for any reason are tragic losses of life and potential loss for the society. All stakeholders such as government along with private agencies, non-government organizations, public health departments, social workers, community, religious leaders and media can take a leading step to prevent suicide. Further research is needed to formulate effective suicide prevention strategies or programs.

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