

MORTUARY PROFILE FOR UNNATURAL DEATHS AT FORENSIC MEDICINE DEPARTMENT OF DHAKA MEDICAL COLLEGE

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Abstract

Death is unnatural when caused prematurely against the order of nature by injury, position or other means of violence. Data on unnatural deaths may reflect the law and order situation in a particular area of jurisdiction. This study is concerned with pattern of unnatural deaths in Dhaka Medical College mortuary during 1996. We found 1725 (97%) cases of unnatural deaths by analyzing 1772 cases of deaths. Data gives 18.37% increment in unnatural deaths 77.28% was males and 22.71% females. The frequency pattern of unnatural deaths were 68.92% RTAs, 11.69% homicide, 08.00% suicide and 2.80 natural. Burn, electrocution and others comprise the rest 11.565 unnatural deaths. Males suffer 3.4X more unnatural deaths than females. But RTAs males were 5.31X, in homicide 11.40X, in suicide 1.70X respectively than females. In hanging, female were predominant (1.72X of male deaths). 21-40 years is the age group showing peak frequencies on different types of unnatural deaths though hanging showed peak on 11-20 years. Besides, 95.47% of the unnatural deaths were the Muslims, 4.25% were Hindu and .14% was Christians. Firearms were used in 29.40% cases, blunt weapon in 38.46% cases and sharp cutting weapon in 31.60% cases of homicides respectively.

Key words: Unnatural Death, RTA, Homicide

Introduction :

Death is unnatural when caused prematurely against the order of nature due to injury, accident, poison or other means of violence. Many cultural and socio-economic factors of a country are usually related to the causation of unnatural deaths. Unnatural deaths happen almost everywhere in the world. Data on unnatural deaths in a particular geographic area can give the reflection of its law and order situation. A low value should be described in favour of peace, harmony and security to human life and property. Unnatural deaths are of accidental, homicidal and suicidal types. In 1967, International Classification of Diseases (ICD) introduced “undermined” types as to suicidal or accidental. The number of population living within the working jurisdiction of Forensic Medicine Department of Dhaka Medical College varies due to unknown number of strangers. Besides, some of the deceased were referred victims of violence of city hospitals or clinics from remote places. This study will

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meet up the need for the community interests as well as academic interests.

Data obtainable through this study on different variables might focus on specific problems and let the authority concerned aware for initiatives towards solutions of these problems. Besides these data might meet up the academic quests and of medical scientists and leave scopes for future study.

Materials & Methods :

We consulted 1772 autopsied of 2320 cases which were done in the mortuary of Forensic Medicine Department of Dhaka Medical College during 1996. So the study period is for one year.

The study people were all the deceased irrespective of race, religion and caste. A sample of 1772 cases of deaths was selected randomly. As Dhaka is the capital city accommodating nearly 1 crore of residents in it. So the mortuary of Forensic Medicine Department of Dhaka Medical College being situated in the metropolitan megacity of Dhaka is naturally proud of occupying the top position in the country due to many reasons. We adopted a retrospective approach for studying the unnatural deaths pattern. Autopsies in 1996 increased by 19.40% (377) than previous year (5.00%, 06.7%, 06.17% annual rise observed in 1993, 1994 & 1995 respectively) unnatural deaths seen in various studies. Studies seemed to be related to low socioeconomic level, sex, drinking inadequate safety protection while working and driving and inadequate law enforcement. We therefore selected variables like Age, Sex, Caste and Cause and manner of death considering the scope of observable data: 97% (1625) of the autopsies showed unnatural causes of deaths. 18.37%, 414 increment in unnatural deaths was detected in 1995 (06.17% in 1994). 1256, 77.28% unnatural deaths were males and 369, 22.71% were females. So males suffer unnatural deaths 3.4 times more than females. (From 1989 to 1994, the pattern of yearly increment were 03.13 Times, 03.13 Times, 03.02 Times 02.94 Times and 02.94 Times respectively). Males occurrence increased in 1996.

Results :

Data in different pattern were as follows :

Table-I : Table shows pattern of unnatural deaths in relation of frequency distribution and percentage of deaths.

Sl. No.	Unnatural deaths	Total frequencies (n)	Percentages
1	RTAs	1115	68.92
2	Homicide	190	11.69
3	Suicide	130	08.00
4	Natural	47	02.80
5	Burn	69	04.13
6	Electrocution	31	01.85
7	Others	90	05.58

* Includes drowning, fall from height and negative autopsies.

In 1996, 68.92% deaths resulted due to RTAs. Data showed relatively a higher value than 1995 (66.06%). Increased RTA frequencies might in turn have contributed to the raised value of unnatural deaths (1625, 18.37%). In our study, identity known population was detected to be 1361, 80.44% and the unknown, was 320, 18.90%.

We classified the death pattern according to the sex distributions as follows :

Table-II : Showing pattern of unnatural deaths in relation to Sex distribution and their ratios.

Sl. Nos.	Traits	Males	Females	Ratios
1	Unnatural deaths	77.27%, (1256)	22.72%, (369)	03.40:1
2	RTAs	84.45%, (956)	15.85%, (180)	05.31:1
3	Homicide	09.85%, (160)	00.86%, (14)	11.40:1
4	Suicide	04.18%, (68)	03.51%, (57)	01.70:1
	a. Poisoning	68.25%, (43)	31.18%, (20)	025.15:1
	b. Hanging	36.73%, (18)	63.27%, (31)	01:1.71
5	Unnatural deaths in 21-40 yrs.	65.94%, (573)	33.03%, (296)	01.94:1

In a city of Taiwan, unnatural deaths excluding RTAs found mostly among people of low socioeconomic status aged 50-60 yeas with less than college education. But our data showed peak distribution on 21-40 years age group. Let us analyze our data on unnatural deaths according to the different arbitrary groups of ages.

Table-III : Showing highest frequencies of unnatural deaths at 21-30 year age group or at 21-40 year group when divided into broader groups of (0-20), (21-40) and (41+) year.

Age Groups	Unnatural deaths n=1625	RTAs n=1115	Homicide n=190	Suicide n=130
00-10	123 (07.57%)	094, (08.42%)	09, (04.74%)	02 (01.54%)
11-20	308, (18.85%)	149, (13.39%)	41, (21.50%)	33, (25.39%)
21-30	548, (33.72%)	331 (29.72%)	86, (54.26%)	38, (29.23%)
31-40	298. (18.76%)	240, (21.60%)	29, (15.26%)	22, (16.92%)
41-50	176.(10.83%)	140, (12.58%)	14, (07.37%)	15, (11.54%)
50+	170 (10.46%)	155, (13.89%)	11 (05.79%)	07.05.38

Similar results obtained by some other investigators in the same age group of different field of investigations. 21-40 year age group showed 846, 52.92% unnatural deaths. In all four variables like unnatural deaths, RTAs, Homicides and Suicides, the same 21-40 year age group people showed the highest frequency distribution. Data of Hanging showed somewhat

different but medicolegally interesting relationships with age grouping. Frequencies were lower at the extremes of age.

Table-IV

Age groups (year)	Hanging (n=49)	Percentages	Cumulative total
00-10	1	02.04	02.04
11-20	22	44.90	46.94
21-30	12	24.49	71.43
31-40	8	16.33	87.76
41-50	4	08.16	95.92
50+	2	04.08	100.00

Hanging is almost rare in 50+ year age group We have found meaningful data on the ethnic distribution of unnatural deaths. Of total unnatural deaths 1392,95.47% were Muslims, 04.25%, 62 were Hindu and the remaining 00.14%, 4 were Christians.

Discussions :

Large number of autopsies (2320) was done in Dhaka Medical College mortuary during 1996. This figure would perhaps been raised during the subsequent years (1997-2000). Persons who bore academic responsibilities too usually did autopsies. With 19.40% annual increment, almost 4715 autopsies would have to be done this year (1999) i.e. 13 autopsies in day on the average are to be done by a person.

Errors are very likely in such a condition. Our suggestion would be to do autopsy at multiple centers and to avoid unnecessary cases. Limited autopsies may be permitted on request of the near relatives of the deceased.

“An increment of 18.37% in unnatural deaths during 1996”; should it mean a poor law and order situation in the area of jurisdiction?

Besides, the reasons for the high presentations of autopsies in Dhaka Medical College mortuary should be sought as per following interpretations:

1. Increased number of RTA deaths (68.92%) with increased male (5.31 times) occurrences. So males’ vulnerability can contribute to the raised figure to certain extent.
2. Convvenience of vehicular availability at DMCH led injury victims to come straight to this hospital and to seek treatment. Those unfortunates succumbed to injuries were sent to mortuary. These comprise a number of strangers as because 320, 18.9% unknown people were there.
3. Population growth rate might have contributed.

In RTAs males are dying 3.5 times more than females most probably due to males involvement in out door business. The road traffic victims could be pedestrians or even occupants of the vehicles. In a city of Taiwan, RTAs deaths were 3.2 times higher among males than among females and 26.8 percent were associated with alcohol consumption. We have not data on how many of the occupants were drivers. Whether alcohol or drug consumption affected their skills or not!

In Homicide males were 11.40 times higher than females whereas in suicide the occurrences in males were just 1.17 times than females. Factors precipitating suicide may vary on time, place, education, socioeconomic status, cultural behavior, personal & psychological factors etc. Let us see the data in a city of an Asian country where 30.9% of male and 75% of female excluding RTAs are committing suicides. Considering merely hanging cases independently, we obtained medicolegally significant information on these. Women were the majority in hanging (31.63.27%, n=49). Hanging is done largely (22.44.90%, n=49) by the 11-20 years age group people. Hanging as we think was not accepted as a method of choice or due to awareness of the people. It is rather adopted due to availability of materials. It is seen in this study that males predominate in poisoning and females in hanging. So on being failed to find poison or no other convenient methods, females might have chosen hanging.

This argument is supportive with the pattern of results of a clinical study of poisoning in RPMC where male-female ratio observed 1.5:1 which means females occurrence happened to be more due to availability. Most of the women were rural to whom collection of poison was not difficult at all. Both in suicide and hanging where older males are choosing hangings more increasingly due to changes in outlook. Hanging in UK as a suicide method has been historically unpopular because of the dishonorable repute associated with its judicial execution. The use of polyethylene bag methods for suicides are also increasing among women in UK.

Analyzing the types of weapons of homicide, we found terrible increased use of firearms and explosives (29.40%) unnatural deaths. These huge numbers of deaths by firearms should deserve the attention of law enforcing authority. The use of firearms and explosives reached almost close to blunt (38.46%) or sharp cutting weapons (31.60%). Criminals of other areas might choose sharp cutting objects as the main weapon of homicides. So this leaves scopes for thinking as to that exist behind the choice weapons. We also found people of Hindu (04.25%, 62) and Christian (00.14%, 4) castes were suffering less unnatural deaths than Muslims (95.47%, 1392).

In respect of total unnatural deaths, homicides, suicides and RTAs, we found that 21-40 year age groups are the most vulnerable one. Again in (21-40) year age group people die

natural deaths suddenly and unexpectedly out of coronary diseases which comprise 35-50% of the total cardiovascular causes. We observed that many investigators gave similar data as us on 21-40 year age group with no, or insufficient interpretations.

In a clinical study on trauma victims in orthopedic department of Rangpur Medical College, authors observed the most vulnerability with 21-30 year carried out in DMCH revealed the highest frequencies in the 10-30 year (61.59.80%). Why nature is so cruel on this group? It is true that (21-40) year is the most active period of human life. We considered general population data on 21-40 year, growth rate, CDR and life expectancy to find out reasonable interpretations. 57% population exists in 15-59 year age group. So it would not be unreasonable to think of the number of existing general population itself to be higher in 21-40 year age group than all other groups thus reflecting numerically increased value in all types of studies.

All different studies showing peak frequencies in 21-40 years group were carried out in medical colleges where merely deceased / diseased were gathered, which did not represent the distribution of the general population at large. The indices would happen to be very vital if it could generalize the population in a study area. But yet, information so far obtained by analyzing the death profile would benefit medicolegal practitioners and medical scientists as well.

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