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RESEARCH ARTICLE

PATTERN OF UNNATURAL DEATH IN FEMALES IN VARANASI REGION- A RETROSPECTIVE STUDY

¹Dr. Mayank Gupta, ^{*}²Dr. Awdhesh Kumar and ¹Dr. Manoj Kumar Pathak

¹Department of Forensic Medicine and Toxicology, Institute of Medical Sciences,
Banaras Hindu University, Varanasi, India

²Department of Forensic Medicine and Toxicology, SS Subharti Medical College, Dehradun, India

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ABSTRACT

Death may be natural (resulting from disease) or unnatural deliberate action of other (homicide), intentionally self inflicted (suicide), result of an environmental influence (accident). Female deaths due to unnatural causes, especially in the first few years of their married life, have been observed in Indian society for the last few decades. Present study is carried out at forensic medicine department, Institute of Medical Sciences, Banaras Hindu University, Varanasi. Relevant information and subjective data like age, sex, habitat, and manner of death of various causes of death victims have been collected from medico legal autopsy register. Data are analyzed retrospective for periods of two and half years from January 2012 to July 2014. The aim of this study is to find out the pattern of unnatural deaths in female and the various factors associated with such deaths in Varanasi region and to find remedial measures to bring down the incidence. Burn 834(51.74%) contribute most common cause and 21 to 40 year found to be the most common age group affected 880(54.60%). Female residing in rural area 1385(86.92%) and religion Hindu 1452(90.07%) were way more affected. Together, the two age groups i.e. 13-20 years & 21-40 years, constitutes an alarming 74.25% of the total female cases. Such unnatural death can be prevented by education, awareness, change in attitude and mindset of society etc.

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INTRODUCTION

Death may be natural (resulting from disease) or unnatural deliberate action of other (homicide), intentionally self inflicted (suicide), result of an environmental influence (accident) (Gautam Biswas, 2013). There are several causes of unnatural deaths, and these deaths may be the result of unintentional or intentional injuries. According to the National Crime Reports Bureau (NCRB) 2013 report, 5.7 lakh people died of unnatural reasons such as murder, natural disaster, accident, and suicide in India. There has been a steady increase in the number of road traffic accidents, while accidental burns, poisoning, drowning, electrocution, and fall from heights are also on the rise. (Santhosh *et al.*, 2011) Female deaths due to unnatural causes, especially in the first few years of their married life, have been observed in Indian society for the last few decades. (Tapse *et al.*, 2012) The magnitude of deaths due to burns is so large as India is the only country in the world where fire is classified among the fifteen leading causes of

death in 1998 standing fourteenth in the list (Batra, 2003). The most obvious reason behind such deaths are unending demands of dowry (cash/kinds) by their husbands &/or in laws, for which they sometimes kill or torture the bride in such a way that she commits suicide (Nandy, 2000). Beside this, family quarrels due to ill-treatment by in-laws, rash & negligent behaviour or extra marital affairs of husband and maladjustment & infertility in wives are other reasons behind such deaths. Burning is the most common cause of such deaths. Hanging, poisoning, strangulation or jumping from the terrace is also used by few to end the lives (Srivastava and Arora, 2007).

Aim of the Study

Aims of present study are to find out:

- The aim of this study is to find out the pattern of unnatural deaths in female and the various factors associated with such deaths in Varanasi region.
- Find the remedial measures that can bring down the incidence.

***Corresponding author: Dr. Awdhesh Kumar**

Department of Forensic Medicine and Toxicology, SS Subharti
Medical College, Dehradun, India

MATERIALS AND METHODS

Present study is carried out at forensic medicine department, Institute of Medical Sciences, Banaras Hindu University, Varanasi. Relevant information and subjective data like age, sex, habitat, and manner of death of various causes of death victims have been collected from medico legal autopsy register. Data are analyzed retrospective for periods of two and half years from January 2012 to July 2014. Cases were included in group of various cause of death on the basis of confirmation by investigating officer and corroborative finding at medico legal examination.

RESULTS AND OBSERVATIONS

Table 1: Shows distribution of manner of unnatural death pattern in females. Burn 834(51.74%) contribute most common cause followed by road traffic injury 253(15.70%), Poisoning 127(7.88%), Hanging 107(6.64%) etc. Table 2: Shows age wise distribution of unnatural death. 21 to 40 year found to be the most common age group affected 880(54.60%) followed by 0 to 20 year 408(25.31%) and females of age more than 81 year were least affected.

Table 3: Habitat wise distribution of unnatural death shows that the death amongst the female residing in rural area 1385(86.92%) outnumbered the urban 109(6.76%). Table 4: According to religion, Hindu 1452 (90.07%) were way more affected than Muslim 43(2.67%) and Christian 1(0.06%). Table 5: For the better analysis of the manners of unnatural deaths in younger age groups, we have further subdivided the age group 0-20 years in three sub groups viz. Infant, 1-12 years and 13-20 years (i.e. Teenagers). Death of females in 13-20 Years of age 317(77.69%) constitute the largest chunk in the age group 0-20 years and 19.67% of the total autopsied female cases, i.e. only second to the most affected age group (21-40 years).

Table 1. Distribution of pattern of manner of unnatural death in female

Manner of Death	No. of Cases	Percentage of Total
Blunt Weapon	39	2.42
Burn	834	51.74
Disease	93	5.77
Drowning	35	2.17
Electrocution	6	0.37
Fall from Height	9	0.56
Firearm	2	0.12
Hanging	107	6.64
Hanging +Poisoning	1	0.06
Haemorrhage LSCS	1	0.06
Lightening	1	0.06
Neck Injury	1	0.06
Poisoning	127	7.88
PPH	1	0.06
RDS	3	0.19
Railway Track Accident	72	4.47
Road Traffic Accident	253	15.70
Sharp weapon	2	0.12
Smothering	5	0.31
Still birth	6	0.37
Strangulation	3	0.19
Unknown	11	0.68
Total	1612	100

Table 2. Distribution of unnatural death in female in different age groups

Age Group (in years)	No. of Cases	Percentage of total
Foetus	7	0.43
0-20	408	25.31
21-40	880	54.60
41-60	221	13.71
61-80	92	5.71
>80	4	0.25
Total	1612	100

Table 3. Distribution of unnatural death in female habitat wise

Habitat	No. of Cases	Percentage of total
Rural	1385	85.92
Urban	109	6.76
Unknown	118	7.32
Total	1612	100

Table 4. Distribution of unnatural death in female in different religions

Religion	No. of Cases	Percentage of total
Hindu	1452	90.07
Muslim	43	2.67
Christian	1	0.06
Unknown	116	7.20
Total	1612	100

Table 5. Distribution of unnatural death in female in different age subgroups

Sub Group (in years)	No. of Cases	Percentage of total
Infant	18	4.41
1-12	73	17.89
13-20	317	77.69
Total (0-20 years)	408	100

DISCUSSION

Unnatural death is one of the major indicators of the level of social and mental wellbeing. Responsibility for prevention of unnatural deaths in our society does not rest only on the law enforcement. Public health and other human service agencies must assist in preventing unnatural deaths as they have done to prevent other major causes of morbidity and mortality. Our study shows that the most common cause of unnatural death in female is burn 51.74% followed by road traffic accidents 15.70%, Poisoning 7.88%, Hanging 6.64% etc. In the study by Dere and Rajoo (2011) it was observed that 50% of the female victims died due to burn injuries and 16.45% died because of vehicular accidents. However, in other study, burn victims constituted only 8.1% of the cases and this could be attributed to nonexistence of a dowry system in Manipur, which is the root cause of bride burning in other parts of the country. (Meera *et al.*, 2015) Akhilesh Pathak *et al.* found out that burn 45 % and poisoning 17.08% were two leading causes of death in their study. (Pathak and Sharma, 2010)

According to age wise distribution of unnatural death that most dynamic age group 21 to 40 year were most common age group affected 54.60%. Public health departments, public authorities and other human service agencies also must assist with honest

effort in searching the primary cause of unnatural deaths and their prevention. Other study also find about similar result (Meera *et al.*, 2015). In other studies (Pathak and Sharma, 2010; Kulshrestha *et al.*, 2002; Sharma *et al.*, 2004; Sinha *et al.*, 2002; Sharma *et al.*, 2006; Ghaffar *et al.*, 2008) as well, most of the cases were between 21-40 years. Interestingly, these unnatural deaths among younger victims in their studies were attributed to dowry demands as well as kitchen accidents. Another important we did in our study is that for the better analysis of the manners of unnatural deaths in younger age groups, we further subdivided the age group 0-20 years in three sub groups viz. Infant, 1-12 years and 13-20 years (i.e. Teenagers). Out of the total cases of the age group 0-20 years, it is the teenager section (13-20 years of age) which is affected the most i.e. 77.69%. This teenager subgroup (13-20 years of age) also constitute 19.67% of the total female cases which is only second to the 21-40 year age group. Together, these two group i.e. 13-20 years & 21-40 years, constitutes an alarming 74.25% of the total female cases.

In our study habitat wise distribution of unnatural death shows that rural habitat outnumber 86.92% urban habitat 6.76%. This difference is due to more rural population in Varanasi area. In our study Hindu were major contribution 88.71% followed by Muslim 2.67% and Christian 0.06%. In two other studies, Hindus were more 82.91% & 65% than Muslims 12.71% & 10% respectively (Pathak and Sharma, 2010; Numan Hussaini *et al.*, 2015). This difference is due to difference in religions population in Varanasi area.

Conclusion

The development of any state or society is judged by condition of women and children of that region, it is also important in health information system which is needed for health planning and intervention strategies. Our study highlighted incidence of unnatural deaths among females of the Varanasi region most of whom are Hindus and belongs to age group of 21 -40 years. Accidental death is another important reason of unnatural deaths among the females residing in rural area and using the conventional methods for cooking. Such unnatural death can be prevented by education, awareness, change in attitude and mindset of society, also by legislation and most importantly women themselves can lower or prevent such incidences. Also, we found out an alarming high incidence of unnatural deaths in Teenage group females who are in the need of more social and legal support. The N.G.Os and Social Organizations can contribute their bit by building a satisfactory interpersonal relationship between the young and the elders in the society. Strict implementation of traffic rules regulation, with special attention to be paid to: Drunken drivers, Unskilled or semiskilled drivers, could curb down the incidences of road traffic accidents.

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Conflict of interest: Nil

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Ethical clearance

The present study was approved by "Institutional Ethical Committee" of Institute of Medical Sciences, Banaras Hindu University, Varanasi. All the information has been taken under consideration of medical ethical committee.

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