

Research Article**Study of Unnatural Female Deaths in Southern Marathwada Region of India****Manoj Bhausaheb Parchake^{1*}, R. V. Kachare², Swapnil A Khade³, Girish Tasgaonkar⁴, Rajesh Sukhadeve⁵, Sachin Giri⁶**^{1,4}Assistant Professor, Department of Forensic Medicine, Seth Gordhandas Sunderdas Medical College & King Edward Memorial Hospital, Parel, Mumbai-400012, Maharashtra, India²Professor and Head, Department of Forensic Medicine, SRT Rural Government Medical College, Ambajogai-431517, Maharashtra, India³Assistant Professor, Department of Forensic Medicine, K G Somaiya Medical College, Mumbai-400022, Maharashtra, India⁵Professor (Addl), Department of Forensic Medicine, Seth Gordhandas Sunderdas Medical College & King Edward Memorial Hospital, Parel, Mumbai-400012, Maharashtra, India⁶Assistant Professor, Department of Forensic Medicine, Indira Gandhi Government Medical College, Nagpur-440001, Maharashtra, India***Corresponding author**

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Abstract: Death is unnatural when caused prematurely against the order of nature by injury, position or other means of violence. In India there is noticeable increase in unnatural death of female. Aim of our study is to find out most common age group, marital status, socio-economic status, religion, region, education, occupation, cause of death and manner of death in unnatural female death. A total number of 392 cases of unnatural female deaths were distinguished during study period. Most of the unnatural female deaths were seen in younger age group 21-30 years (44.39%), rural (76.78%) and educated upto high school (38.52%). The majority of females were Hindu (80.30%), married (81.12%) and housewives (50.76%) of low socioeconomic status (55.35%). Most common cause of deaths was burns (61.99%) followed by poisoning (17.09%). Majority of deaths was accidental (62.75) in nature.**Keywords:** Unnatural, female, death, Marathwada, India, younger, burns, accidental.

INTRODUCTION

India is the fourth most dangerous country for females, as per a gender poll that gauged awareness of threats ranging from domestic abuse and economic discrimination to foeticide and other crimes against females. The review was carry out by the UK-based Thompson Reuters Foundation [1]. Death is unnatural when caused prematurely against the order of nature by injury, position or other means of violence [2]. In India there is noticeable increase in unnatural death of female. National Crime Record Bureau, India reports have shown gradual increase in unnatural female death in India from 1967 to 2011. Although the cases of unnatural death excluding homicide of male were more as compare to female, but it is observed that females constitute higher percentage (66.4%) fire related deaths in 2011, much more than male which itself is a big issue [3].

Crime Rate Analysis against woman in India shows clearly sharp increase in crime rate, 8.8% in 2007 and 9.4% in 2011, which is a serious matter from safety and security point of Indian woman. These are

mainly due to increase number of dowry deaths, torture to women, sexual offences [4]. Some female fall prey even before they are born, when expectant parents abort their daughters, hoping for son instead.

Dowry might have started as an innocent custom, a symbol of love from parents to their daughters on the eve of her marriage. The purpose of this practice was probably meant to help new couples start their life in comfort. But it has, in recent years, grown into a social evil with many instances of bride-burning and suicides. These are symptoms of social corruption [5].

This type of study was not conducted in this region. Thus, to known the nature, extent and the magnitude of unnatural female death in Southern Marathwada region, this study was conducted.

MATERIALS AND METHODS

A prospective study of unnatural death in female with special emphasis on dowry death was carried out in Government Medical College and

General Hospital, which is situated in Southern Marathwada region of India from 1st December 2010 to 30th November 2012. A total 392 cases of unnatural female deaths were studied out of 985 autopsy conducted during the study period. Data was collected from detailed examination of the deceased brought for postmortem examination during the study period, inquest papers and police documents, hospital records, postmortem reports, history from relatives, dying declaration and photographs. Statistical analysis of data was done and presented as results and observations in tabular form, graphs and charts. The bodies were dissected by Robert Virshows Technique. All the body cavities were dissected, cranium, thoracic and abdominal cavities in that order and organs were examined grossly both in situ and after taking out of the body.

RESULTS

From the Table 1, it can be noted that maximum number of deaths were observed in age group 21-30 years i.e.174 (44.39%) cases followed by 31-40 years i.e.81 (20.66%) cases and 11-20 years 78 (19.90%) cases. If we combine 11-20, 21-30, 31-40 years of age group then we observed 84.95% of deaths occurred in 11-40 years of age group which is highly significant. These three decade of life are most active period of life. From Fig. 1 it can be noted that maximum number of deaths were observed in rural areas 301 (76.78%) and least observed in urban areas 88 (22.45%). In three cases place of residency was unknown. It can be easily seen from Fig. 2 that 50.76% victims were housewives while rest all categories constitutes remaining half, females from labourer category constituted second major group of victims i.e. 27.55 followed by student 13.77%. It can be easily

evident that unnatural deaths are less in professional females. From Table 2 it seen that maximum number of death occurred in married 318 (81.12%) as compared to unmarried (17.86%) and minimum number of death occurred in widow 01 (0.26%). In three cases marital status was unknown. From the Fig. 3 it can be clearly evident that maximum number of deaths were observed in high school 151 (38.52%) and minimum number of deaths occurred in victims having professional degree. It can be easily seen from table that as education increases incidence of unnatural death decreases. From the Table 3 we can conclude that maximum number of deaths occurred in class four 217 (55.35%) and minimum number of deaths occurred in class one 05 (1.27%). In three cases socioeconomic status cannot be determined as they remain unknown throughout the study period. From Fig. 4 it can be seen that maximum number of deaths occurred in Hindu 315 (80.36%) followed by Muslim 38 (9.69%) and Buddhist 36 (9.18%). Religion of three female victims cannot be determined during study period. Statistics regarding the religion wise population from our region is not available at present. From the Table 4 it can be shown that maximum number of deaths occurred in joint family 227 (70.67%) followed by nuclear family 112 (28.57%). Minimum number of deaths occurred in unknown cases 03 (0.76%) as three were unknown cases. From Fig. 5 it was observed that 62.75% of deaths were accidental in nature followed by 30.61% suicidal and 6.64% homicidal deaths. Fig. 6 shows that burns (61.99%) was the most commonest cause of death followed by poisoning (17.09%) and mechanical trauma 9.69%. we reported 25 deaths due to violent asphyxia, 13 deaths due to snake bite and 6 deaths due to electrocution.

Table 1: Distribution of Female victims according to age

Sl. No.	Age group (yrs)	No. of victims	Percentage
1.	< 1 year	002	0.51
2.	1 to 10	010	2.55
3.	11 to 20	078	19.90
4.	21 to 30	174	44.39
5.	31 to 40	081	20.66
6.	41 to 50	021	5.36
7.	51 to 60	010	2.55
8.	61 to 70	011	2.81
9.	> 70	005	1.27
Total		392	100

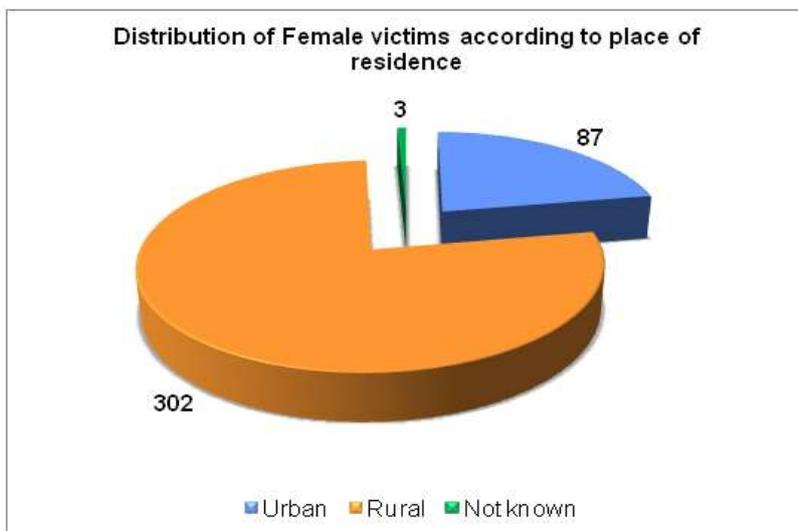


Fig. 1: Showing distribution of female victims according to place of residence

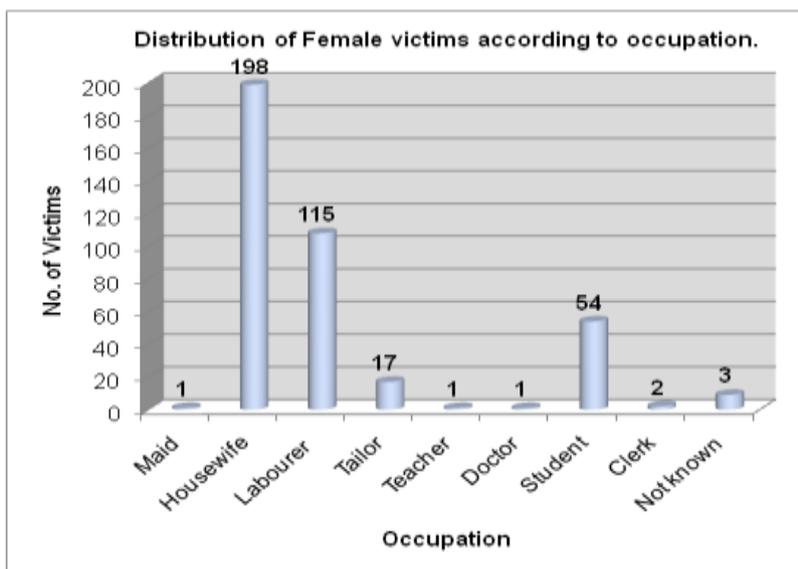


Fig. 2: Showing distribution of female victims according to occupation

Table 2: Distribution of female victims according to marital status

Sl. No.	Marital status	No. of victims	Percentage
1.	Married	318	81.12
2.	Unmarried	70	17.86
3.	Widow	01	0.26
4.	Not known (unknown)	03	0.76
Total		392	100

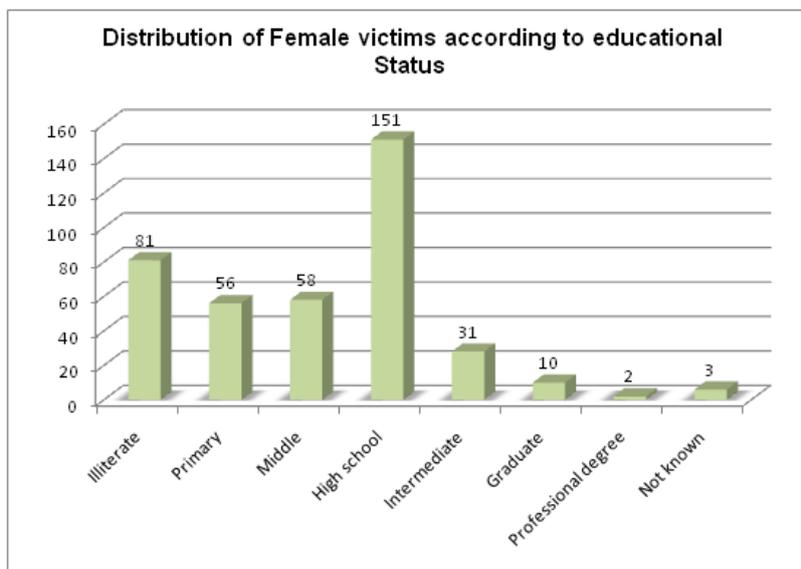


Fig. 3: showing distribution of female victims according to educational status

Table 3: Distribution of unnatural deaths according to socioeconomic status

Per Capita Income As Per Prasad (1961)	Socioeconomic Class Updated As Per Index for (September 2012)	Socioeconomic status	No. of victims (%)
100 & Above	3317 & Above	Class I	05 (1.27)
50-99	1658-3316	Class II	26 (6.63)
30-49	995-1657	Class III	53 (13.52)
15-29	497-994	Class IV	217(55.35)
Below 15	Below 496	Class V	88 (22.47)
Not known			03 (0.76)
Total			392 (100)

[Note-According to B.G.Prasad socioeconomic scale in above table is classified (AICPI for September 2012 is 673)]

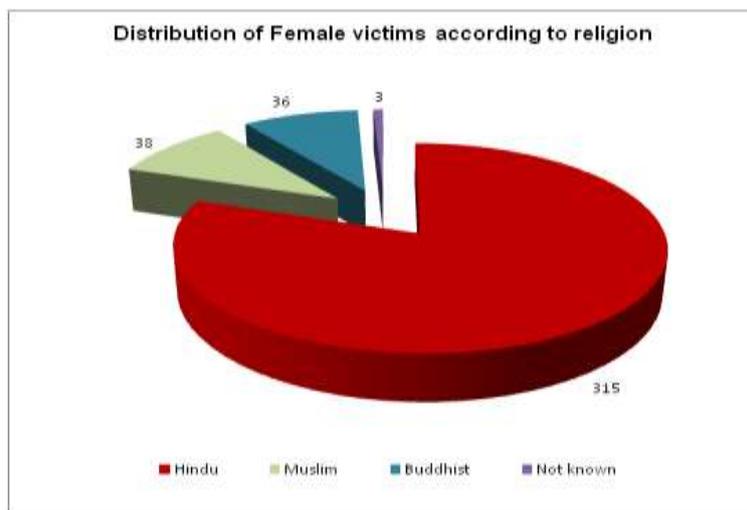


Fig. 4: Showing distribution of female victims according to religion

Table 4: Distribution of Female victims according to type of family

Sl. No.	Type of Family	No. of victims	Percentage
1.	Nuclear	112	28.57
2.	Joint	277	70.67
3.	Not known (unknown)	03	0.76
Total		392	100

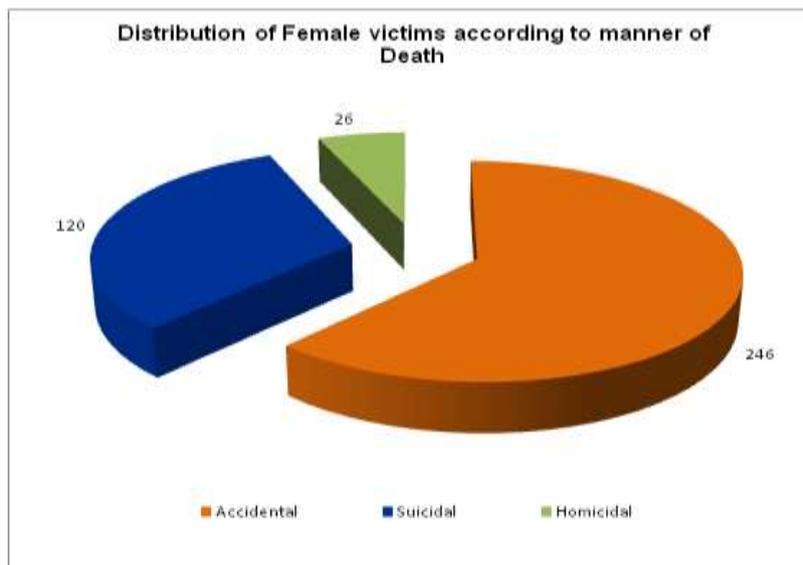


Fig. 5: Showing distribution of female victims according to manner of death

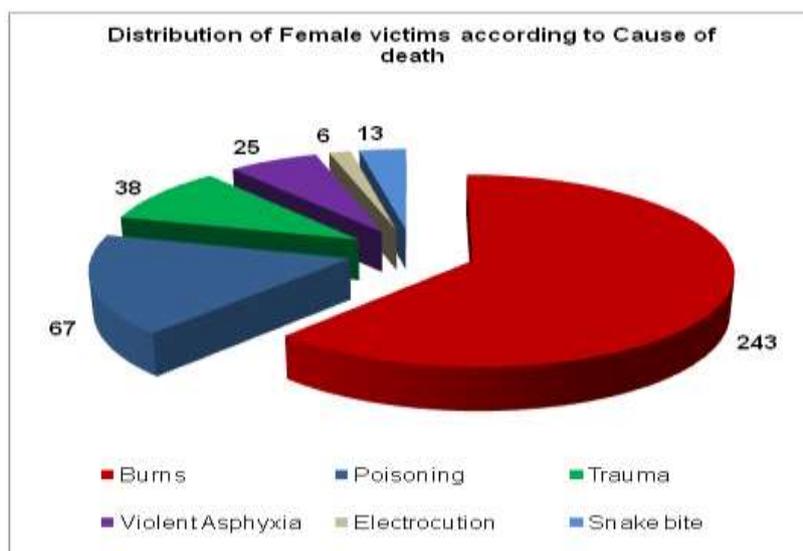


Fig. 6: Showing distribution of female victims according to cause of death

DISCUSSION

Unnatural death is one of the indicators of the level of social, physical and mental health. Responsibility for prevention of violence in our society does not rest only on the law enforcement personnel. Public health, government services, nongovernmental organization and other human services agency must assist on preventing unnatural deaths and crime against women.

In 2011, Latur district had population of 2,455,543 of which male and female were 1,276,262 and 1,179,281 respectively. Our district population constituted 2.19 % of total Maharashtra population. Average literacy rate of our district in 2011 were 79.03 compared to 71.54 of 2001. Gender wise, male and female literacy rate were 87.42 and 70.02 respectively. With regards to sex ratio in our district, it stood at 924

per 1000 male compared to 2001 census figure of 935 [6].

In present study most commonly involved age group was 21-30 years 174 (44.39%) followed by 31 to 40 years 81 (20.66%) which constituted 65.05% female deaths in 3rd and 4th decade of life. Similar study in Aurangabad northern Marathwada region of Maharashtra by Zine K U *et al.* [12], found that most common age group involved was third decade 41.3%. Another study by Pawar CK *et al.* [18] states that 68% unnatural deaths belong to 18 to 30 years. Study in northern India by Sharma B R *et al.* [8] noted that higher incidence of unnatural female deaths were in the age group of 21 - 25 years 27.22%. Another study by Srivastava AK and Arora P [9] in Delhi found that maximum number of cases belongs to 21-22 years 33.57%. As per Dere RC and Rajoo KM [15] most common age group involved was 25-29 years (24.53%)

followed by 20-24 (21.93%). This may be due to the fact that the common age of marriage is 18-25 years and involvement of dowry related problems in newly married females occurs in initial few years of married life. Also this is the most active period of life where the females are more concern with kitchen and more prone to accidents. Another study carried out in Bengaluru region, Mandar RS and Anand K [17] also observed that most common age group involved was third decade (54.66%) this might be due to the fact that this age forms most important and crucial form of life in women.

It was clearly noted that maximum number of deaths occurred in rural area 76.78% followed by urban 22.45%. This might be due to the fact that our hospital is a tertiary care centre having maximum catchment area of rural region. Similar findings were noted by Ghaffar Usama B *et al.* [11] and Vaghela Prithviraj *et al.* [16]. While contrast study by Chawla R *et al.* [13] reported that most of victims were from urban area (72%) this might be due to the fact that his study area was urban area and having more industry more developed as compared to our area.

It was observed that most of the victims were housewife (50.76%) followed by laborers category (29.08%). It has been observed that death in working females are less than the women staying at home. Reason may be, in this region commonly the age of marriage is 18 to 22. So the females are unable to complete their education and also due to the responsibilities of family, male predominance she remains as housewives. Similar study in Aurangabad northern Marathwada region of Maharashtra by Zine KU *et al.* [12] states that 59% unnatural deaths were seen housewives. This might be due to fact that females who are economically independent on their family are less affected by violence and dowry death as compared to dependant females i.e. housewives. Same was observed by Kulshreshtha P *et al.* [7], Singh H and Mittal S [10], Zine KU *et al.* [12] and Chawla R *et al.* [13].

Married females 81.12% outnumbered the unmarried females. Similar study in Aurangabad northern Marathwada region of Maharashtra by Zine KU *et al.* [12] states that 83.7% deaths were observed in married females. Another study by Pawar C K [18] states that married females 71% outnumbered unmarried females 27%. Also survey by Pathak A and Sharma S [14] states that 75.63% deaths were observed in married females. Same was noted by Dere RC and Rajoo KM [15], found that married females 83.22% outnumbered unmarried females 16.78%. This might be due to the fact that dowry related problems and family conflicts start after marriage and also females are usually more exposed to kitchen accidents after their marriage. In developing country like India, females are married earlier than the males in the family and are

more exposed to social and family stress much earlier than males.

It was seen that most of the females who died due to unnatural causes were educated only upto high school 38.52% and it is clearly observed that as educational status increases in females the death rate decreases. This might be due to the fact that professional females are economically independent on their other family members, are less affected by violence and dowry death as compared to less educated females who are dependent on their family. Similar study by Srivastava AK and Arora P [9] in Delhi states that most of the females were educated up to primary school this might be due to improvement in literacy rate in the region. Another study by Kulshreshtha P *et al.* [7] states that most of the females were illiterate. This might due to change in life style, socio-economic condition and population affected in the region and national capital. For the fact that the mostly affected were immigrants from neighboring states and belonged to low socio-economic strata and were major constituent from labourer class of the national capital, low literacy rate could have been evident. As per Zine KU *et al.* [12] 72.3% victims were educated less than metric reason for this may be dependence of less educated women on in-laws and husband and becoming victims against them.

Maximum number of deaths were reported from class four category 55.35% followed by class five 22.47%. Reason may be lack of economic stability resulting in violence against women in the form of dowry victims. (Table No. 8). Similar study by Zine KU *et al.* [12] noted that maximum cases were from class 4 socioeconomic status 66.5% followed by class 5 (16%). Another study by Srivastava AK and Arora P [9] in Delhi states that most of the females were belonging to class 4 (55.25%) low socioeconomic status.

In our study Maximum numbers of cases were of Hindu religion 80.36%, followed by 9.69% Muslims and 9.18% Buddhist. Similar study by Zine KU *et al.* [12] noted that maximum cases were of Hindu religion 68.10%. Another study by Pathak A [14] states that most of the unnatural death was seen in Hindu religion 82.91%. Also survey by Mandar RS and Anand K [17] states that 92.10% unnatural deaths were seen in Hindu religion. This might be due to widely prevalent dowry system in Hindu religion. We believed that marital or family discards and dowry problems were less in Muslim due to simple rituals and practice "Maher/dower" instead of evil practice "dowry".

In our study most of females were from joint family (70.66%). This might be due to the fact that in this area joint families are still existing and comparatively more than nuclear family as it is a rural area. Females from joint family are more exposed to family conflict, physical and mental torture and

maladjustment in family and dependant on head of family and may be exposed to dowry related problems. Similar study in Aurangabad Northern Marathwada region of Maharashtra by Zine KU *et al.* [12] states that most common manner of deaths were accidental 40.40%. Also survey by Pathak A [14] states most common manner of death was accidental 56.46%. While contrast study by Kulshrestha P *et al.* [7] states that most of the females were from nuclear family that might be due to rapid urbanization, family shifting in urban areas in search of work and other issues and segregating them from joint family.

It was observed that most common cause of deaths were burns (61.99%), followed by poisoning (17.09%) and mechanical trauma 9.69%. We reported 25 deaths due to violent asphyxia, 13 deaths due to snake bite and 6 deaths due to electrocution. This might be due to maximum number of females in this study are young, married and housewife. Most of the time they were in kitchen and more in contact with fire. They caught fire while cooking on open unguarded flame such as Chulla, Kerosene Stove and Cooking gas. Wearing loose clothing like sari, highly inflammable synthetic garments which can catch the fire easily while cooking causing kitchen accidents. Kerosene oil, match sticks and other cooking material being easily available in house are usually preferred by Indian women to commit suicide. Also for the dowry related and other problems brides are burnt not only to hide the torture but also to destroy the circumstantial evidence. Similar study in Northern Aurangabad region by Zine KU *et al.* [12] states that most common cause of deaths was burns 49.40% followed by poisoning 15.70% and road traffic accident 12.10%. More incidences of burns in third decade might be due to dowry related problems. Another study by Pathak A and Sharma S [14] states that most common cause of death was burns 45% followed by injuries 20.20% and poisoning 17.08%. While contrast study by Mandar RS and Anand K [17] states that most common cause of death was hanging 71.80%, followed by poisoning 11.80% and burns 4.80%.

CONCLUSION

In our study most of unnatural female deaths were young adults, Hindu, housewives, married and belonging to rural areas. Most of the females were belonging to low socio-economic status, educated up to high school, joint family most common manner and cause of death was accidental and burns.

Proper education about precaution to be taken while cooking should be given through Books, T V channel, Radio to avoid accidental death while cooking. These deaths are preventable. People should be persuaded by audio-visual show such as columns in newspaper and various media, proclaiming dowry to be not only illegal and immoral but also uneconomical and hazardous in long run for the person who demands it.

Anti dowry campaigns should run through various nongovernmental organizations, academic and industrial organization with an aim to impress on the women in general to resist all pressings which simply turn them into chattels. Costly and ostentatious marriage rituals should be discouraged with economic ban on such marriage. Promotion of literacy among the women to make them independent free by providing job opportunities. Enact more stringent laws taking care of torture of housewives by their husband and in-law. Treating doctor should arrange or record dying declaration in dowry death cases particular when he is of the opinion that the life was fast ebbing out of dying women and there was no time to call the magistrate enacted in section 32(1) of Evidence Act. Autopsy surgeon should carefully handle death of newly young married as most of the cases presented as accidental death and later on turn to dowry death. In suspicious cases visit to crime scene should be done. Strengthening of Mahila court should be done. Anti dowry cell and women protection cell concepts shall be brought up more. Besides police personals these cell also comprises of social worker, psychiatrist, counselors and other trained staff with proper training in effective dealing with the crisis and also preventing and controlling such crimes.

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