



SUICIDES IN FEMALES OF SOUTHERN MARATHWADA REGION OF INDIA

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Article Received on 17/03/2015

Article Revised on 08/04/2015

Article Accepted on 29/04/2015

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ABSTRACT

Suicidal (Latin suicidium, from Sui caedere, "to kill oneself) death is one type of violent death which is caused by a deliberate act of the descendent with intending to kill himself. In every 40 seconds one person commits suicide in the world. Aim of our study is to find out most common age group, marital status, socio-economic status, religion, occupation, cause of death and reason for suicide of females. A total number of 120 cases of female suicidal deaths was noted in our study. A good number of suicidal deaths was seen in younger age

group (57.49%). The majority of females were Hindu (85%), married (85%) and housewives (57.86%) of low socioeconomic status (50%). Most common method of deaths was burns (47.50%) followed by poisoning (37.18%). Most common reason for suicide was dowry (40%) in married females while academic failure (67.12%) in unmarried females.

KEY WORDS: Suicides, female, dowry, burns, India.

INTRODUCTION

In India female is considering as mirror image of god as she give birth to child, care and serve to everybody in terms of daughter, sister, and daughter in law and mother.^[1] Suicidal (Latin suicidium, from Sui caedere, "to kill oneself) death is one type of violent death which is caused by a deliberate act of the decedent with intending to kill himself.^[2] Worldwide 800000 people commit suicide and one person commit suicide every fourty second (Time), out of which 135000(17%) are residents of India.^[3] Suicide is the leading cause of death among teenagers and adults under 35 year^[4] of age, ranked in top thirteen causes of death for individual of all ages worldwide by world health organization^[5] and national safety council rates it sixth in the USA.^[6] Suicide is second leading causes of death in age group 15-29 years globally.^[7]

National crime records bureau (NCRB) statistics shows that there is an increased (22.7%) in number of suicides in India during the decade 2002-2012. Suicide rate of 2002 in India was 10.5 and in 2012 suicide rate was 11.2. There was one suicide took place in every six second (Time) in housewife of India in 2012. Maharashtra state recorded second highest suicidal rate 11.2 after Tamil Nadu state.^[8] Most common reason for such death is demanding of dowries by their husband or in-laws, in such mode that bride commit suicide by burning, poisoning, hanging and by other ways.

In this study we would like to find out reason for increases in females suicides. There was no such type of study was conducted in this region hence we had carried out this study.

MATERIAL AND METHODS

The prospective study was carried out in the department of forensic medicine and toxicology at Government Medical College Latur from January 2011 to December 2012. During this period total number of 120 cases of female suicidal deaths were distinguished.

Information about the age, religion, marital status, socioeconomic, occupation, education, residence, type of family, cause of death, manner of death, reason for suicides taken from relatives, inquest, hospital records, postmortem reports, toxicological analysis reports. Cases of suicides were chosen on the basis of police inquests, autopsy reports and toxicological analysis for the cause of death. Statistic analysis was done by SPSS program version 15.

RESULTS

Distribution of suicidal deaths during the period 2011 to December 2012, table no.1 shows that the most common age of suicidal deaths was the third decade (21-30 years) 57.49% and followed by the second decade (20%) least suicidal deaths was found in the fifth decade(41-50 years) (3.33%). If we combine the deaths in a second and third decade then it will be 77% deaths. According to figure No.1 which shows distribution of cases according to their place of residency, shows that 75% suicidal deaths were belongs to rural region and 25% belongs to urban region. Figure no.2 shows distribution of cases of their marital status, 85% cases was married and 15% was unmarried. Figure No.3 shows that most common suicidal deaths were noted in housewife (57.86) followed by labourer (35.83%) and least number of deaths was found in professionals (7.50%). Table No.2 shows that most of the females were educated up to high school (36.66%) followed by illiterate (26.67%), primary school (26.67%) and least common deaths was found in graduate and professionals (7.50%). Table No.3 shows that maximum number of suicidal deaths was found in class four (50%) followed by class five (29.16%), and least number of suicidal deaths was found in class one (2.50%). Figure No.4 which shows that most of the suicidal deaths was Hindu (85%) followed by Buddhist (8.33%) and least found in Muslim (6.37%) by religion. Figure No.5 shows that most common cause of death in female suicidal deaths was burns (47.50%) followed by poisoning (34.18) and least number of deaths was found in head injury (0.86%). Table No.4 shows that most common reason was dowry (40%) followed by ill-treatment by in-laws (18.33%) and least number of deaths was found in death due to financial problems. Table No.5 shows that in the married females most common reason for the suicide were dowry (47.05%) followed by ill-treatment by in-laws (21.56%) and least common reason was love affair(0%) and academic failure (0%). In unmarried females most common reason for suicide was academic failure (61.12%) followed by love affair (27.77%). Table No.6 shows that in married most of the females were belonging to third decade 21-30 years (65.68%) followed by fourth decade 31-40 years (15.68%) and least common age group was fifth decade (3.94%) and more than 51 year (4.90%). In unmarried females most common age group was second decade 11-20 years (77.77%) followed by third decade (11.13%) while no case of suicidal deaths was seen in the age group of fourth decade 31-40 years and fifth decade 41-50 years.

Table No.1 Distribution of cases according to age of victims.

Age In Years	Number Of Cases	Percentage
11-20	24	20.00
21-30	69	57.49
31-40	17	14.18
41-50	04	3.33
> 51	06	5.00
Total	120	100%

Table no.2 Education wise distribution.

Educational Qualifications	Number Of Cases	Percentage
Illiterate	26	26.67
Primary School	26	26.67
Middle School	15	12.50
High School	44	36.66
Graduate and professional degree	09	07.50
Total	120	100

Table no.3 Distribution of victims according to socioeconomic status.

Per Capita Income As Per Prasad (1961)	Socioeconomic Class Updated As Per Index for (September 2012)	Socioeconomic Status	Number Of Cases
100 & Above	3317 and above	Class I	03 (2.50)
50-99	1658-3316	Class II	07 (5.84)
30-49	995-1657	Class III	15 (12.50)
15-29	497-994	Class IV	60 (50.00)
Below 15	Below 496	Class V	35 (29.16)
Total			120 (100)

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

Table no.4 Distribution of victims according to reason for suicide.

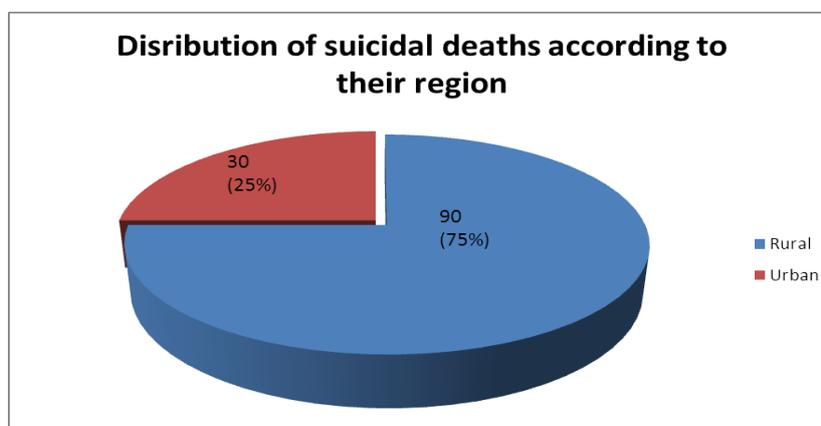
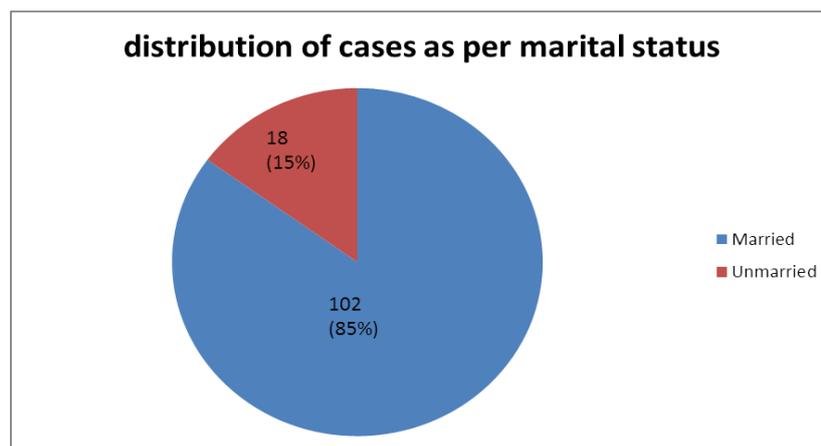
Reason For Suicide	Number Of Cases	Percentage
Dowry	48	40.00
Ill-treatment by in-laws	22	18.33
Rash and negligent husband	21	17.50
Love affair	05	4.16
Financial problem	03	2.50
Academic failure	11	19.15
Mental stress due to unknown reason	10	9.16
Total	120	100

Table no.5 Distribution of cases according to marital status and reason for suicide.

Reason For Suicide	Married (%)	Unmarried (%)	Total (%)
Dowry	48 (47.05)	00 (00)	48 (40.00)
Ill-treatment by in-laws	22 (21.56)	00 (00)	22 (18.33)
Rash and negligent husband	21 (20.58)	00 (00)	21 (17.50)
Love affair	00 (00)	05 (27.77)	05 (4.16)
Financial problem	03 (2.94)	00 (00)	03 (2.50)
Academic failure	00 (00)	11 (61.12)	11 (19.15)
Mental stress due to unknown reason	08 (7.87)	02 (11.11)	10 (9.16)
Total	102	18	120

Table no 6.Distribution of cases according to age and marital status.

Age In Years	Married	Unmarried	Total
11-20	10 (9.80)	14 (77.77)	24 (20.00)
21-30	67 (65.68)	02 (11.13)	69 (57.49)
31-40	16 (15.68)	01 (5.55)	17 (14.18)
41-50	04 (3.94)	00 (00)	04 (3.33)
> 51	05 (4.90)	01 (5.55)	06 (5.00)
Total	102	18	120 (100)

**Figure no. 1 showing distribution of cases according to region.****Figure no.2 showing distribution of suicidal deaths according to marital status**

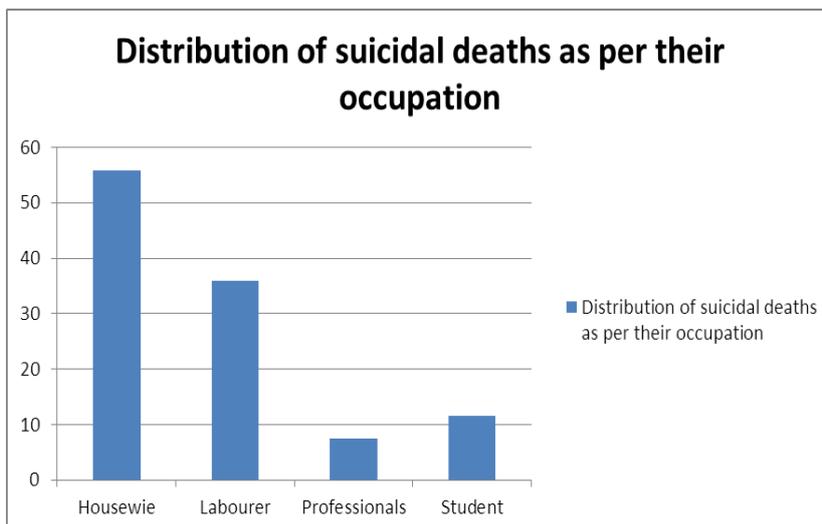


Figure no.3 showing distribution of cases according to their occupation

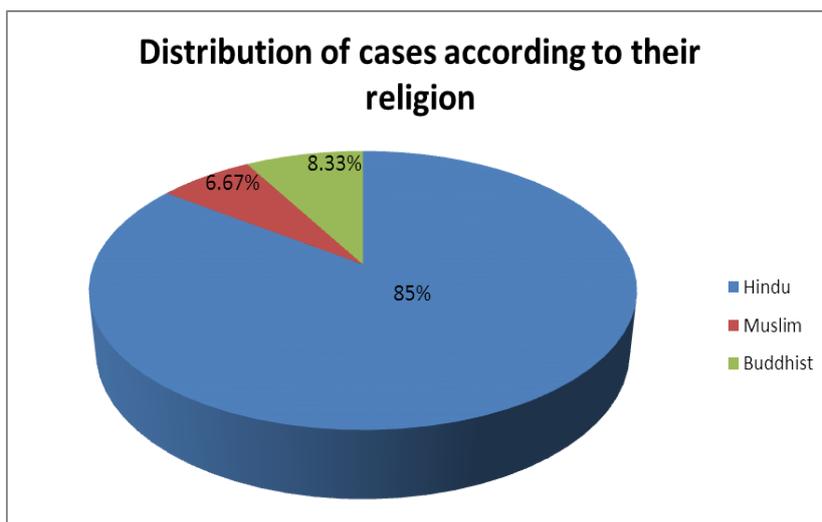


Figure no.4 showing distribution of cases according to religion.

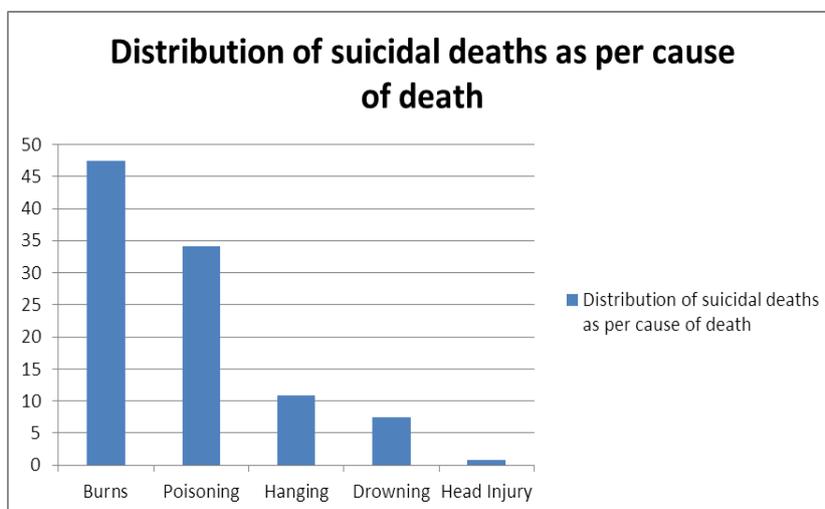


Figure no.5 showing distribution of suicidal deaths as per cause of death.

DISCUSSION

According to census 2011 of India, the population of Latur was 2254196 out of which 1181056 were females, sex ratio of 2001 was 928 and in 2011 it was 889 females per 1000 males. Total area of Latur district is about 7157 km.^[9] Latur belongs to Southern Marathwada region of India.

In the present study maximum number of cases belonged to 21-30 years (57.49%), followed by 11-20 years (20%), so almost about 77% belonged to second and third decade which belong to the youth age group. A study performed by Prajapati^[17] concluded that 62% of suicidal deaths in the young age group(second and third decade). Another study by Shinde^[16] in Aurangabad northern Marathwada region of Maharashtra state of India found that 20% of females belonged to the age group of third and second decade. These might be due to the fact that this is the age of marriage to most of the females and they fall prey to “Dowry” in the initial period of their marriage. Also this is age group in which most of the females are under stress such as family quarrel, examination, job and love affairs. If we observe as the age increases there is a decrease to incidence of suicides, this might be due to the fact that as the age increases they became more mature and responsible. Similarly a study in Lucknow region^[18] concluded that most common age group appeared to be age range of 20-63 years which is the age of youth and age of reproduction. Another study by Mandar^[19] 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. As per NCRB^[8] most common female suicidal deaths in India was observed in age group of 15-29 years (44.03%). Our study is contradictory to Dedic.^[21], he found that there was increase to prevalence of suicides as age increases, with the most common age group involved was more than 60 years.

Our study demonstrated that most of the females were from rural regions (85%) and 15% were from urban region. Similarly Pawar C K^[20] concluded that most of the female's suicide was belonging to rural (55%) region. A possible explanation for our results may be due to our hospital is a tertiary care centre and maximum patients were from a rural region. While contradicting to study by Prajapati P^[17] found that most of these females suicides were belonging to urban region (68.84%).

Married females (85%) outnumbered the unmarried females (15%) in our study. Similarly Shinde^[16] found that most of these female's suicide was married (68.14%). Another study by

Pawar^[20] concluded that most of these female's suicide was married (71%) and Zine^[14] also concluded that married females (91%) outnumbered unmarried females. As per NCRB^[8] of India 67.92% married females were died due to suicide. This might be due to the fact that married females were in various stress such as negligent husbands, family quarrel and dowry related problems.

Also survey by Geeta^[12], our study concluded that maximum number of females suicidal deaths was seen in housewives (57.86%). Identical findings noted by Prajapati^[17] most of the females were housewives (71.74%). As per NCRB^[8] India most of the suicidal deaths were from housewives (53.80%). A possible explanation for our results may be due to lack of professional education in females.

In our study most of the females were educated up to high school (36.66%) followed by illiterate (26.67%), primary school (26.67%) and only (7.50%) female was found studied up to graduate and professionals courses. This might be due to the fact that parents are not supporting in the education of thier girls. According to Prajapati^[17] found that most of the female suicides were educated upto secondary school(30.44%), 25.36% up to higher secondary and graduation (25.36%). This might be due to change life style, socio-economic conditions and population, affected in the region of south Gujarat. Study by Geeta^[12] found that the majority of female suicides were the illiterate who is contradicting to our study.

Our study shows that most of the female was from class four (50%) followed by class five (29.16%) and merely (2.50%) were from class one (2.50%). Similar findings were noted by Geeta^[12] that most of females were belonging to the class four. This might be due to economic instability leading to torture and demanding dowry to women resulting in succumbing to the pressure she commits suicide. Our study is contrast to Prajapati P^[17] in his study he found that most female suicide was belonging to the class 2 (40.58%) followed by 39.96% and 13.04% cases in class 3 and class 4 respectively. This might be due to change in life style and economic growth in the region of south Gujarat.

In our study most of the female suicidal deaths were Hindu (80%) followed by Buddhist (8.33%) and least found in Muslim (6.37%). Similarly Zine^[14] noted that 65% of suicidal deaths in females was Hindu by religion followed by Buddhist (21.19%) and only 10% were Muslim. Same findings noted by Prajapati^[17] that most of these female suicidal deaths were seen in Hindu religion (89.86%) followed by Muslim (9.42%). This might be due to

extensively prevalent dowry system in Hindu religion. We believed that marital or family and dowry problems were less in Muslim due to easy ritual and carry out “Maher/dower” instead of evil practice “dowry”.

Study by Prajapati^[17], Srivatava^[11], Pawar^[20], Kumar^[18], Sharma^[10] regarding cause of death were contradictory to our study. In our study most common cause of female suicidal deaths were burns (47.50%) followed by poisoning (34.18), hanging (10/86%), drowning (7.50%) and least number of deaths was found in head injury (0.86%). This might be due to the fact that there was wide use of kerosene to commit suicide by burning in this region. This is due to very easy availability of kerosene. Study by Sharma^[10] most common cause of female suicidal deaths was poisoning (48.49%) followed by burns (39.79%). This might be due to different agrochemicals especially aluminum phosphide marketed as tablets, has emerged as a dangerous weapon due to easy availability and no antidote. As per Kumar^[18] most common cause of death in female suicidal death was poison (48%), followed by hanging (24%) and burns (12%). Another study by Pawar^[20] found that most common cause of death in female suicidal deaths was poison (60%) followed by hanging (20%) and 10% each for burns and drowning. This might be due to the dowry was the most common factor of the deaths of married women. As per Prajapati^[17] most common cause of death in female suicidal death were poison (35.51%) followed by hanging (31.16%) and burns (27.54%). This might be due to easy accessibility of poison material, hence poisoning was preferred method. Also survey by Srivastava^[11] found that most common cause of death in females suicidal deaths was hanging (58.33%) followed by burning (23.67%) and poisoning (18.05%). Explanation for these may due to widely prevalent dowry system amongst Hindu of upper and middle class of northern India. For this they preferred hanging, burning or poisoning whatever available at that time. According to NCRB^[8] data onto India most common cause of deaths was hanging (37.90%), followed by poisoning (34.78%), burns (17.99%) and drowning (7.09%).

In our study most common reason for suicidal deaths were dowry (47.05%) followed by ill-treatment by in-laws (21.56%), academic failure (19.16%), rash and negligent husband (17.50%), mental stress (9.16%) and least common reason were love affair(4.16%) and financial problem (2.50%). Similar study by Zine^[14], he noted that most common reason for suicides in females was dowry (44.5%) followed by torture by in-laws (16.7%), rash negligent husband (10.2%) and alcoholism of husband (9.8%). Another study by Shinde^[16] in the Aurangabad in northern Marathwada region found that most common reason for suicides

was dowry (47.29%), followed by insanity (24.32%), chronic illness (6.75%), illicit relationship (6.75%) and least in academic failure (5.40%) and love affairs (0%). As per Srivastava^[11] almost similar study, found that most common reason for suicidal deaths in females was ill-treatment by in-laws(26.39%), followed by dowry (25%), rash and negligent husband (15.28%), and poverty (5.56%) and infertility in female (4.17%). According to NCRB^[8] India most common reason for female suicidal deaths was family problems (27.64%) followed by dowry (4.65 %%), love affairs (4.48%), failure in exam (2.66%) and least in ideological or hero-worship (0.1%). This might due to high prevalence of dowry system in this region, if they did not get the dowry then tortured and ill-treatment by in-laws get started. Unemployment, low education and economic dependence on their husband and in-laws were the other contributing factors.

Comparison of marital status and reason for suicide, our study reveals that in the married females most common reason for the suicide was dowry (47.05%) followed by ill-treatment by in-laws (21.56%), love affair(0%) and academic failure (0%). In unmarried females most common reason for suicide was academic failure (61.12%) followed by love affair (27.77%), financial problem (0%). This might be due to the fact that married females are more exposed to stress and in unmarried females parents imposed so much of stress to their children to score good marks, hence they commit suicide. Similar study by Shinde^[16], he found that most common reason for suicide in married females was dowry (47.29%) followed by insanity (22.97%) and chronic illness (6.75%). In unmarried females majority of reason for suicide was academic failure (5.40%) followed by illicit relation (4%). Quite similar study by Srivastava^[11] found that most reason for suicide in married females was ill-treatment by in laws (26%) followed by dowry (25%). This might be due to widely prevalent dowry system amongst Hindu of upper caste and middle caste of northern India, where the newly married females were tortured for cash/kinds in such way that no option was left except to end their unhappy married life.

Comparison of marital status and age in our study, we found that in married females, majority females were belonging to third decade 21-30 years (65.68%) followed by fourth decade 31-40 years (15.68%) and least common age group was fifth decade (3.94%) and more than 51 year (4.90%). This might be due to the fact that, in married females it is the most common age for marriage and demand of the dowry in the early period of their marriage In unmarried females most common age group was second decade 11-20 years (77.77%) followed by third

decade (11.13%) and least common age group involved was fourth decade 31-40 years (0%) and fifth decade 41-50 years (0%). This might be due to the fact that married females are exposed to evil practice of dowry in initial years of marriage and in unmarried females most common reason for suicide was academic failure and hence adolescent females were most commonly involved. Similar study by Shinde^[16] found that most of the married was belonging to third decade (66.21%) followed by fourth decade (17.56%). Most of the unmarried females were belonging to second decade (12.16%).

CONCLUSION AND SUGGESTION

In our study most of these female suicidal deaths were young adults, Hindu, housewives, married and belonging to rural areas. Most of the females were from low socio-economic status, educated up to high school, most common cause of death was burns and dowry was most common reason for the suicide. In married females dowries was most common reason for suicide and third decade was most common age group involved. While in unmarried females most common reason was academic failure and second decade was most common age group involved.

A proper awareness programs should be implemented to educate females so that they should not be dependent on their husband for economic purposes and say no to dowry. Early marriages should be discouraging so that they can be mature and complete their education and be independent of their families. Small scale industry should be started for females so that they can earned their livelihood. Bachatgut(Saving plan in banks) should be encouraged. Counseling centres should be started in each district to prevent suicide, free counseling on the families and newly married couples and their expected problems and their solutions to initial years of marriage. Anti-dowry cell and women protection cell concepts should be brought up more.

FUNDING

None.

REFERENCE

1. R N Mangoli, Ganpati M Tarase. Crime against women. A statistical review. International Journal of Criminology and Sociology theory 2009 December; 2(2): 292-302.
2. K Vij. Forensic medicine. 7th edi. New Delhi: Jaypee brothers;1999.

3. Suicides in India-Wikipedia [Internet]¹ Place unknown. Date unknown [last updated 10 December 2014, cited 12 December 2014]¹ Available from: http://en.wikipedia.org/wiki/Suicide_in_India.
4. Aggarwal N. Rethinking suicide bombing. *Crisis* 2009;30(2):94-7.
5. Meir Robert F, Clinard Marshall B. *Sociology of deviant behavior*. 14th ed. Belmont, CA: Wadsworth Cengage Learning: 2008, pp.169.
6. Bertolote JM, Fleischmann A. suicide and psychiatric diagnosis: A worldwide perspective. *World psychiatry* 2002; 1(3):181-5.
7. World health organization report. Suicide prevention [internet]¹ Geneva. 4 September 2014 [cited December 2014]¹ Available from; http://www.who.int/mental_health/prevention/suicideprevents/en/; 2009 accessed 13/9/14.
8. Accidental deaths and Suicidal deaths in India 2011. New Delhi: Government of India, Minister of Home Affairs, National Crime Record Bureau Report 45th Edition; 2012 June 27. 283 p.
9. Latur District; Censx 2011 Data [Internet] 2011 [cited October 2014] Available From <http://www.census2011.co.in /census /district/362latur. Html>
10. Sharma B.R, Singh V.P, Sharma R, Sumedha. Unnatural Deaths in Northern India-A Profile. *Journal of Indian Academy Forensic Medicine* 2004 October-December; 26(4):140-146.
11. Shrivastava A K, Arora P. Suspicious Deaths in Newly Married Females-A Medicolegal Analysis. *Journal of Indian Academy Forensic Medicine* 2007 October-December; 29(4):63-67
12. Geeta S, Saschidananda M, Sekhar T C, Manju P. Victimologic study of female suicide, *Medicolegal Update-An International Journal*; 8(1)2008
13. Gad ElHak S, El-Ghazil A, Salama M, Aboelyazzed A. Fatal suicide cases in Port Said city, Egypt. *J Forensic Leg Med* 2009; 16:168-266.
14. Zine K U, Mugadlimath A, Gadge S J, Kalokhe V S and Bhusale R G. Study of some socio-etiological aspects of unnatural female deaths at Government Medical College, Aurangabad. *Journal of Indian Academy of Forensic Medicine* 2009 July-September; 31(3):210-218.
15. Pathak A, Sharma S. The Study of Unnatural Female Deaths in Vadodara City. *Journal of Indian Academy Forensic Medicine* 2010 July-September; 32(3):220-223.

16. Shinde J R, Tekade P, Verma N M. Suicide: An important exit of life. *International journal of applied biology and pharmaceutical technology* 2011; 2(1):478-482.
17. Prajapati P, Prajapati S, Pandey A, Joshi V, Prajapati N. Patterns of Suicidal Deaths in Females of South Gujarat Region *NJMR* 2012 January-March; 2(1):31-34.
18. Kumar S, Verma A K, Bhattacharya S, Rathore S. Trends in rates and methods of suicide in India. *Egyptian Journal of Forensic sciences* 2013; 3: 75-80.
19. Mandar R S, Anand K. Unnatural deaths of adult females in south Bangalore an autopsy study. *J Indian Acad Forensic Med.* April-June 2014; 38(2): 130-132.
20. Pawar C K, Bhullar D S, Oberoi S S, Aggarwal K K. Profile of unnatural deaths in females a retrospective study. *J Indian Acad Forensic Med.* April-June 2014; 36(2): 122-124.
21. Dedic G. Gender differences in suicide in Serbia within period of 2006-2010. *Voinasnit Pregl.* 2014 Mar; 7(3): 265-270.
22. Daniel D, M Cristina Mendonca, Francisco C R, Duarte N V, Helena M T. Suicide in the centre of Portugal: Seven Years analysis. *Forensic Science International*, 2014; 234: 22-28.