Study Of Pattern Of Suicides In Females Of Vadodara Region Of Gujarat.

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ABSTRACT
Background & Objectives: Suicide remains one of the most under investigated and least understood phenomena. In society, it is believed that females have the best tolerance, so they commit suicide less commonly, but in the era of rising tensions and frustrations, the number of suicides in females is also rising. Since, we can interview the suicide attempters but they are quite different from the suicide completers. Method: This prospective study was undertaken at the SSG Hospital, Vadodara, between 1\textsuperscript{st} January 2013 to 31\textsuperscript{st} December 2013. All the Female cases of suicide were taken in to study and a structured questionnaire was given to the friends and family members accompanying the dead body, and the data were analyzed. Result: In the present study, we observed that the majority of the females (83\%) were housewives who committed suicide within the home. In almost 50\% of the cases, there were some kind of verbal threats of suicide before the terminal event. These results were in accordance with the studies preformed previously. Conclusion: The Key-words: Suicide, Females, Unnatural death, Autopsy.

INTRODUCTION
There are 135,000 (17\%), Indians amongst 8 Lakhs people those kill themselves around the globe every year.\textsuperscript{1} The suicidal behavior has been an interesting question for the all-Why anyone has to take his/her own life? What drives them to take such a drastic step? These questions have perplexed human race for all the time. However, we don’t understand the phenomena of suicide that well, because the suicide completers are no more available for interview for psychiatric evaluation. We can interview the suicide attempters, but the completers are way more different than the attempters. Hence, the best we can do is profiling and interview of the relatives and friends of the suicide completers. The females are considered to be more sensitive and emotionally labile to the external influences as compared to the males and hence this study was undertaken, to understand the pattern of suicide in females in this area of the world and to know the difference from others.

MATERIALS & METHOD
The current prospective survey was undertaken at SSG Hospital & Medical College, Baroda, between 1\textsuperscript{st} January 2013 to 31\textsuperscript{st} December 2013 after taking due permission from the Institutional Ethical Committee. All the female cases of suicide were taken into the consideration based on
inclusion & exclusion criteria as mentioned below. Relatives, friends, etc. accompanying the dead body were informed about the study, and written informed consent was taken to assess the thoughts and feelings of suicide in that particular case with various factors affecting. A predetermined set of questionnaire was given to the friends and family accompanying the dead body and the data collected were analyzed using a MS Excel worksheet.

**Inclusion criteria:**
1. Cases with a history of suicidal death like hanging, poisoning, burns, etc. and later confirmed as suicide cases based on circumstantial evidences, the inquest papers and autopsy findings, were selected.
2. Only female deaths with residence in Vadodara region were selected.
3. Cases were selected only if reliable informants like immediate family members, co-workers or close friends were available for questioning.

**Exclusion criteria:**
1. Cases were relatives not willing to give written informed consent were excluded.
2. Cases where doubts are raised by the investigating officer about the manner of death, like suspicion of suicide or homicide, were excluded.
3. Cases not satisfying the inclusion criteria were excluded.

**RESULTS**
Total 200 cases of suicide were registered during the one year of this study and out of them 106 cases (53%) of female suicide were selected for the present study. More than half of the victims (52.83%) of suicide belonged to the 18-45 years of age group followed by victims of < 18 years of age (39.62%) and only 7.54% cases were of >45 years of age. The majority (90.56%) of the females were Hindu and only a few (9.43%) were Muslims. Out of 200 total cases of suicide 106 were females, that comes to 53% of total cases. Analysis of the cases was done according to their education status and we observed that 56.60% victims were having an education below 10th standard, while 30.18% were educated up to 12th standard and 5.66% were having done graduation. Only 7.54% victims in our study were illiterate. Out of 106 cases, 6 (5.66%) were Labourers, 12 (11.32%)- Household maids, 42 (39.62%) - Students, 46 (43.33%) Housewives. Out of 106 cases, 62 (58.49%) victims were Married, 2 (1.88%) were engaged, 2 (1.88%) were committed and 40- (37.73%) were Unmarried. 98.12% victims committed suicides within the home and only 2 (1.88%) committed suicide outside the home in some open place. In our study suicide note was recovered only in 2 cases. In this study out of 106 cases, 16 (15.09%) committed suicide by Burns, 36 (33.96%) by Hanging and 52 (49.05%) by Poisoning. Out of 36 hanging cases 18 used dupatta/sari/shawl, 12 used plastic ropes, 6 used other material as ligature material. Out of 56 cases of poisoning 50 ingested
household Organophosphorus compounds. Family history of suicide was positive in 3 cases and in 54 (50.94%) cases past history of verbal threats to commit suicide were present. There was a history of previous attempts of suicide in 4 (3.77%) cases before the terminal event and all of them tried ingestion of poison to commit suicide. Out of these 4 victims only one committed suicide by poisoning while the other committed suicide by hanging and 2 by burning herself. Signs of Psychiatric illness were present in 2 (1.88%) cases and diagnosed as schizophrenia, 1 (0.94%) as postpartum psychosis, 4 (3.77%) were under some psychiatric surveillance in whom the exact condition was not known to the history provider. In 18 (16.98%) cases, relatives or friends felt that there were some signs of depression in the person. No history of substance abuse in any victim of suicide was observed. Two deceased had a history of traumatic childhood and out of them one had an early unnatural death of mother & another was having abusive father. The cases were analyzed according to the precipitating factor of suicide and we found that 12 cases (11.32%) were having love affair problems, 11 cases (10.37%) economic constraint, in 10 cases (9.43%) there was a quarrel with husband on small home matters, in 10 cases (9.43%) victim committed suicide due to exam failure/fear of failure while in 5 cases small housing was the problem, 4 cases (3.77%) inter personal conflict with family regarding marriage, 6 cases (6.57%) quarrel with in-laws, 2 cases (1.88%) quarrel with mother, 1 cases (0.94%) professional failure/fear of failure, While no precipitating factor could be assigned in 45 cases (42.45%).

![Precipitating factors]

**DISCUSSION**

As per data available on an average, more than 1 lakh persons commit suicides every year. In the year 2014, 5.5% of all suicide cases belonged to Gujarat state.¹ The near equal suicide rates of young men and women and consistently narrow male:female ratio denotes that more Indian women die by suicide than their Western counterparts. Poisoning (34.8%), hanging (31.7%) and self-immolation (8.5%) were the common methods used to commit suicide (accidental deaths and suicide 2007).² Banarjee et al who studied the vulnerability of Indian women and found that the incidence of suicide was 43/100,000 in Bengal and that women (79.3%) were more than the men and 75% of the victims were under the age of 25 years.³

Our observations are corresponding with the observations of most of the other authors.⁴⁻⁶ Causes of suicide in Females in 2014- by National Crime Records Bureau (NCRB)⁷ shows that family problems other than marriage related issues accounted for 21.7% cases of suicides in female and illness
accounted for 18% cases, followed by Marriage related problems (5.1%), Love affair(3.2%), Drug related problems(2.8%), Failure in examination(1.8%), Bankruptcy (1.8%), Other minor causes (33.2%) and Not known (12.4%). In Benarjee et al study done in Bengal, the common cause of suicide in women was quarrelling with the husband, while in men it was with the parents and ingestion of insecticide was the most common method of committing suicide. Similarly, a study by Badrinarayana also revealed that younger people (age range of 10 to 30 years) were more likely to attempt suicide. The primary causes were identified as mental illness and disturbed interpersonal relationships.

The data of previous studies regarding the cause of suicide in females is quite consistent with our study- biggest precipitating factor was love affair problems, followed by economic constraint, quarrel with husband on small home matters, Exam failure/Fear of failure, while it was not supporting the observations of others like Housing problem, Interpersonal conflict, quarrel with in-laws or with parents and professional failure/ fear of failure. In the present study no precipitating factor could be assigned to 45 cases(42.45%) as compared to 12.4% of NCRB data.

According to NCRB, Male to Female ratio of suicide is 67.7:32.3, while Boys:Girls (<14 years) ratio is 52.3:47.7. In our study, Male to Female ratio was 50:53, which is contradictory to the NCRB data. The observations of Lal & Sethi also supported the findings of the current study like- women attempted suicide more often, age < 30 years of age, housewives or domestic help, married. In our study, majority of suicide lady were housewives, followed by students, laborers and household workers.

The study conducted by Bagadia et al on patients admitted for suicidal behavior shows that the suicide is an impulsive act in 17% of the cases, 18% communicated about the attempt while the majority of the women (76.1%) attempted suicide in the presence/proximity of others. Previous attempts were reported in 7% with 2.4% having more than one previous attempt and most common psychiatric diagnosis were depression (39.73%), schizophrenia (24.4%) and hysteria (14%). In our study, verbal threats to commit suicide were more as compared to the observations of Bagadia et al and findings were almost similar to the findings in relation to previous attempts of suicide. In 18 (16.98%) cases, relatives or friends thought there were some signs of depression in the person before committing suicide, which was also noticed by others.

As per, Chitta Ranjan Chowdhury et al cultural influence may have significance in South East Asian population, because, this part of the world has got strong influence of male dominated feudalisticdemocratic society (a bad mix of feudalism and democracy), and the society creates lot of psychological pressure to their females, interestingly the male shows a “love” to female—the distressed female expects that illusion of “love” & this societal conflict (silently prevalent among female folk) could have a hidden role—needs to be explored.
while investigating any anthropological and cultural elements for causation of a suicide. Genetic factor will also be taken into consideration, because, there are a number of reports on genetic and hereditary link with suicide have been published by Andrej M, Anne F, et al. The findings of family history of suicide in our study is positive in 3 cases pointing towards some hereditary or genetic link.

CONCLUSION
The present study shows that the majority of the female victims were housewives who were literate, belonged to the middle age group and committed suicide within the home surroundings either by burns or poisoning or hanging. The past history of depression or some psychiatric problems were found in a majority of the cases with a positive family history and verbal threats of suicide before the terminal event. This study can be helpful to the health authorities to form strategies and guidelines to reduce the incidence of suicide in females.

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Conflicts of Interest: None declared.

References:
11. Chitta Ranjan Chowdhury - “Mental Depression of Indian Women and High Suicide Rate in South-East Asia—is a Big Concern Today: An Anthropological Perspective”- Anthropol, (2013); 1(4), 100-11.