

ORIGINAL ARTICLE

Pattern of Female Suicides among Reproductive Age Group in Southern Marathwada Region of India

R.A. Patil¹, R.V. Kachare², P.S. Dode³, R.M. Kamble⁴

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ABSTRACT

Background: Suicidal deaths reflect the prevailing social set up and mental health status of the region. Female suicidal deaths show mirror to the society with regards to universally accepted values of equality and justice.

Objective: The current study was conducted with an objective to study the pattern of suicidal deaths in females among reproductive age group.

Methodology: The present study is an observational, cross-sectional study conducted in Department of Forensic Medicine at a government tertiary care institutes' mortuary in which 72 autopsy cases of suicidal deaths in females of reproductive age group were taken out of total 553 autopsies conducted at the mortuary of SRT Rural Government Medical College, Maharashtra during January 2021 to December 2021.

Results: The most common cause of death in majority of deaths was Burns (45%) followed by poisoning (26%) and hanging (18%) and drowning (11%).

Conclusions: Most of the cases of female suicides can be prevented with timely, evidence-based and often cost-effective interventions. This study shows the pattern of reproductive age female suicide cases in rural areas of an economically backward region in Central India and access to psychiatric counselling and legal remedial measures along with equal opportunities for economic independence, basic education and awareness of rights can help to eliminate the shocking trend.

KEYWORDS

• Female suicidal deaths • Autopsy • Mortuary

AUTHOR'S AFFILIATION:

¹ Assistant Professor, Department of Forensic Medicine, Dr. DY Patil School of Medicine, Navi Mumbai, India.

² Professor and Head, Department of Forensic Medicine, SRTR GMC, Ambajogai, India.

³ Associate Professor, Department of Forensic Medicine, TMMC & RC, Moradabad, India.

⁴ Assistant professor, SRTR Government Medical College, Ambajogai, Beed, Maharashtra, India.

CORRESPONDING AUTHOR:

Rahul Patil, Assistant Professor, Department of Forensic Medicine, Dr. DY Patil School of Medicine, Navi Mumbai, India.

E-mail: drrpatil86@yahoo.com

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INTRODUCTION

Suicide is defined by WHO, as an act of deliberately killing oneself.¹ Every year more than 7,00,000 people commit suicide and the number of suicidal attempts is even higher. An overwhelming majority of global suicides occurred in low and middle-income countries in 2019.² The reduction in suicide rates of countries is an indicator in the United Nations Sustainable Development Goals (SDGs), the WHO GPW13 (13th General Program of Work) and Mental Health Plan.³

Suicide rates range from 0.7/100,000 to 63.3/100,000 world-wide.^{4,5} India ranks 43rd globally with a suicide rate of 10.6/100,000 reported in 2009 (WHO suicide rates).^{4,5} Youth suicide rates have increased over the years, and youth are now the group at highest risk in one-third of countries. The emerging phenomenon of "cyber-suicide" in the internet era is another cause for concern.⁴

Suicides rates have been studied with respect to economic status, religion, marital status and the level of education for females in the reproductive group.⁶⁻⁸ However, there is less regional data available on female suicides and one of the reasons female suicides have not been extensively studied is that nearly 80% of suicides in the United States, as per one study, occur among males.⁹ Studies have shown that when it comes to the psychological aspect of suicides in males and females, there are differences due to factors like, the duration of the suicidal ideation, help-seeking behavior, intent to go through with the plan of committing suicide etc.¹⁰

The causes of suicides differ according to economic status of community or region and the study of these regional differences will help immensely to address the social issue of suicides amongst females.

OBSERVATIONS AND RESULTS

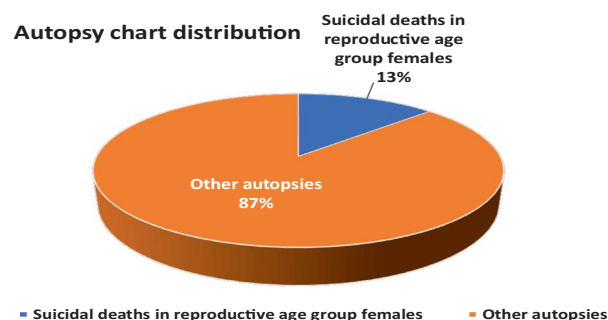


Figure 1: Shows that out of total autopsies 533, 13%(72) autopsies were of females from reproductive age group who committed suicide

Marathwada region of Maharashtra is infamous for farmer suicides. Multiple studies have been conducted on farmer suicides from Marathwada region of Maharashtra⁽¹¹⁻¹⁴⁾ but there is paucity of data on female suicides from Marathwada region of Maharashtra. Hence, study was conducted to understand the pattern of female suicides in the economically weaker region of Maharashtra in central India.

OBJECTIVE

The current study was conducted with an objective to study the pattern of suicidal deaths in females among reproductive age group and the various causative factors associated with them.

METHODOLOGY

The current study is an observational, cross-sectional investigation conducted at the Department of Forensic Medicine in SRT Rural government medical colleges' mortuary. It involved 72 autopsy cases of suicidal deaths among females of reproductive age, selected from a total of 553 autopsies. The tertiary care institute is in the economically weaker region of Maharashtra in central India. The study was conducted from January 2021 to December 2021. Data was collected from police inquests, postmortem examination reports and relatives' interviews.

Inclusion Criteria: All cases of female suicidal deaths of reproductive age were included in this study.

Exclusion Criteria: Cases out of reproductive age groups, of natural deaths, alleged history of homicide, advanced decomposed, skeletonized bodies where cause of death cannot be determined were excluded.

Methods to Suicide

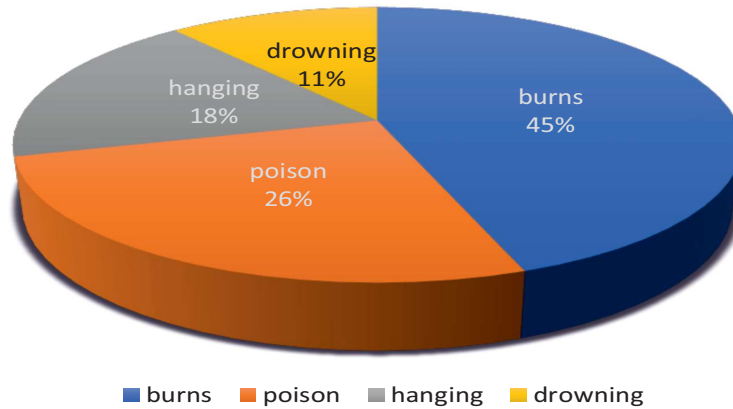


Figure 2: Shows the methods used by females to commit suicide. Most common method of suicide in 32 females was found to be burns (45%) followed by consumption of poison in 19 females (26%), hanging in 13 females (18%), drowning in 8 females (11%).

Marital Status

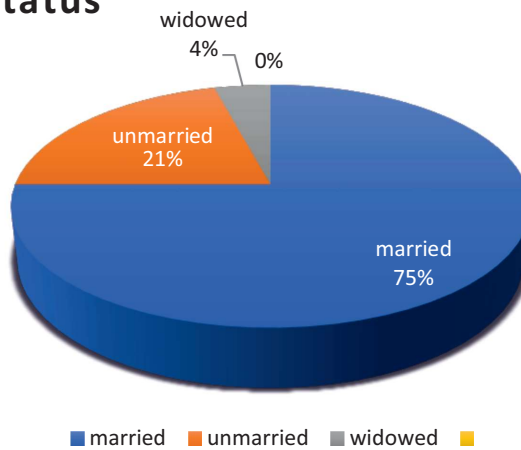


Figure 3 shows marital status of females who died by suicide, most of which 54 (75%) were married, 15 (21%) unmarried and 3(4%) were widowed.

Age Wise

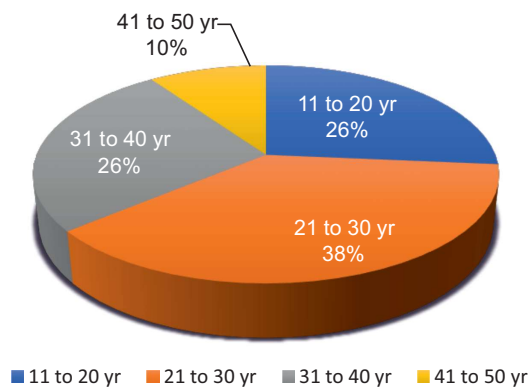


Figure 4: Shows age wise distribution of females who died by suicide. 27 (38%) females belonged to the 21-30 years age group followed by 19 females (26%) to 11-20 years age group; 19 females (26%) to 31-40 age group and 41-45 years 7 (10%) age group.

Table 1: Education level of females who committed suicide

Education level	Number of deceased (Percentage)
Illiterate	04 (6%)
Below or equal to higher secondary school	42 (58%)
Graduate	18 (25%)
Post-graduate	08 (11%)
Total	72 (100)

Table 1 shows the education status of females who committed suicide showing that majority of females who committed suicide were from the 'below higher secondary school' group (58%) followed by graduate (25%), postgraduate (11%) and illiterate (5%) group.

Table 2: Profession of females who committed suicide

Profession	Suicides (%)
Housewives	40 (55%)
Laborer	14 (19%)
Student	10 (14%)
Service	05 (07%)
No work	03 (04%)
Total	72 (100%)

Table 2 shows the profession of females who committed suicide. Highest number of suicides were amongst the housewives' group (55%), followed by labourers (19%), students (14%), service (7%) and no work (4%).

DISCUSSION

Suicide is one of the indicators of social and mental health of a region. The present study concluded that suicidal deaths amongst females in reproductive age was seen in about 13% of the total medico-legal autopsies. The commonest method of suicide was burns (45%) followed by poisoning (26%). This is in concordance with a study done by Parchake *et al.*¹⁴ in 2015 at a government tertiary care center in neighboring district of Latur in Marathwada region of Maharashtra. Parchake *et al* found that most unnatural deaths in females of Latur region were due to Burns (61.99%) followed by poisoning (17.09%). This may be since this region is one of the most socio-economically backward regions

of Maharashtra where majority of females are housewives and prevalence of dowry and domestic violence is high compared with the rest of Maharashtra.¹⁶ This is not in concordance with previous studies done by DS Bhullar *et al*⁴ from North India and BK Guntheti *et al*⁸ from south India, which showed poisoning as the most common method (56% and 45% respectively) of suicide.

The overwhelming majority of females who committed suicide i.e. 54 (75) females were Married and maximum 27 (38) females were from age group of 21-30 years, followed by 19 (26%) females each from 11 to 20 and 31 to 40 years age group which shows preponderance for young age group as majority of females in this region get married at 18-25 years of age and Dowry and domestic violence cases are also high in this age group.

Study shows that maximum 42 (58%) females were below or equal to higher secondary school which indicate highly educated females (Graduate and above) were less likely to commit suicide than illiterate and below higher secondary education level. Most of the females 40 (55%) were housewives followed by laborers, indicates that economic status, especially economic independence as well as education status plays an important role. The number of suicides in this group can be reduced by timely intervention about education and financial independence, counselling and supportive therapy.

CONCLUSION

Our study highlights the concerning trend of suicides in reproductive age group females and underscores the need to address the paucity of better education and access to psychiatric counselling in less developed regions.

Government and NGOs should conduct audio-visual shows highlighting the ills of dowry and educate about the strict laws against dowry harassment. This study points to a combination of educational, social, and economic vulnerabilities contributing to the risk of suicide in this demographic. There is a need to promote community-based programs that encourage social connections and provide emotional support to women. Community healthcare workers should be trained to identify early signs of mental distress and intervene effectively. We must strengthen family counseling services to

address interpersonal conflicts and domestic violence. Conducting awareness programs for men and families to promote gender equality and reduce societal pressures on women. We should also encourage shared responsibilities in households to reduce the burden on women. The study underscores the urgent need for targeted interventions to address these root causes and prevent further loss of life.

LIMITATIONS

This study is conducted at an autopsy centre of a tertiary care centre and includes only females that did not survive the suicide attempt. Patterns of suicides in females from reproductive age group that survived the attempt must be included in study to better arrive at conclusion. Also, more sample size and study duration must be conducted to reduce errors.

This study is conducted relying solely on inquest papers, hospital records, autopsy reports and interviews with acquaintances which may sometimes be inaccurate or biased.

Conflict of interest: None

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