

# SOCIO DEMOGRAPHIC PROFILE OF HANGING DEATHS

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## Abstract

**Background:** Hanging (self-suspension) is that form of asphyxia which is caused by suspension of the body by a ligature which encircles the neck, the constricting force being the weight of the body. Hanging is a common problem encountered in forensic practice. It may be suicidal, homicidal or accidental in nature. Suicide by hanging is the commonest, accidental hanging is less common and homicidal hanging is still less common.

**Materials And Methods:** The present study is a descriptive cross-sectional study carried out on cases of deaths due to hanging in mortuary of a tertiary health centre over a period of two years between January 2021 to December 2022.

**Results:** Maximum number of cases of hanging 31.4% (n=22) were seen in young adults i.e between age group 21-30 years. Majority of cases (67.1%) of hanging deaths were males. Married cases (58.6%) outnumbered unmarried (41.4%) cases. There is predominance of cases of hanging in the urban area that comprises of 68.6% of cases than the rural area (31.4%). Maximum cases (82.9%) of hanging were committed inside the house. 67.1% of cases were having some or the other kind of mental/psychological illness. 62.9% of cases belong to nuclear family followed by joint family in 25.7% of cases.

**Conclusion:** Suicide by hanging is very difficult to prevent but screening of vulnerable individuals along with counselling can reduce the rate of suicide.

**Keywords:** Hanging, Asphyxia, Suicidal, Constricting force

## Introduction

Death is inevitable, but it is only the humans who tend to end their lives earlier than destined by committing suicide. Human suicidal behaviour has always been a source of dread and wonder to mankind. Suicide is the deliberate act of taking one's own life, but suicide is merely the outcome, which is a result of a multi-factorial process and has biological, genetic,

psychological, sociological factors associated with it <sup>[1]</sup>. Eighty-four percent of global suicides occur in low and middle-income countries; India and China alone account for 49% of global suicides <sup>[2]</sup>. Hanging is one of the commonest methods of suicide as it can be done with a piece of ligature material readily available at that moment. Hanging (self-suspension) is that form of asphyxia which is caused by suspension of the body by a ligature which encircles the neck, the constricting force being the weight of the body <sup>[3]</sup>. Virtually, all hangings are suicidal. Accidental hangings are uncommon, and homicidal hangings very rare <sup>[4]</sup>.

### Materials and methods

The present study is a descriptive cross-sectional study carried out on cases of deaths due to hanging in mortuary of a tertiary health centre over a period of two years between January 2021 to December 2022. The details regarding history of the incidence, place of incident, personal details of the deceased were recorded on specially designed proforma to compile the information and analyze the same to obtain the socio demographic profile of cases of deaths due to hanging. Among the unnatural deaths, selected cases of death arising out of mechanical asphyxia with history of alleged hanging were considered for the study. Grossly decomposed body, skeletonised body, completely burnt or charred body with no definite history were excluded from the study.

### Results

Maximum number of cases of hanging (31.4%) were seen in young adults i.e between age group 21-30 years followed by 24.3% of cases each in the age group of 11-20 & 31-40 years. Although significant but minimum number of cases (4.3%) is seen in 51-60 years of age group (Table-1). Majority of cases (67.1%) of hanging deaths were males (Table-2). Married cases (58.6%) outnumbered unmarried (41.4%) deaths (Table-3). Most of the cases i.e 78.6% were unemployed and only 21.4% cases were employed. Majority of cases (50%) were under matric followed by educational status up to matric in 21.4 % of cases (Table-4). Considering the socioeconomic status, maximum number of cases (57.1%) were within the low income category followed by 40% of cases with middle income and only 2.9% of cases were in the high income group. 51.4% of cases were alcoholic followed by 40% who were with no history of addiction. There is predominance of cases of hanging in the urban area that comprises of 68.6% of cases than the rural area (Table-5). Maximum number of cases (82.9%) of hanging were committed indoors (Table-6). Maximum number of cases were having some or the other kind of mental/psychological illness i.e 67.1% of cases, whereas in 30% of cases there were no pre-existing diseases, only one case was having both mental as well as systemic illness. 62.9% of cases belong to nuclear family followed by joint family in 25.7% of cases. No previous attempt of suicide were seen in majority of cases (82.9%) and only 17.1% cases were having previous attempt of suicide.

**Table-1: Age wise distribution of cases**

| Age group in years | Frequency | Percent |
|--------------------|-----------|---------|
| 11-20              | 17        | 24.3    |
| 21-30              | 22        | 31.4    |
| 31-40              | 17        | 24.3    |

|       |    |      |
|-------|----|------|
| 41-50 | 7  | 10.0 |
| 51-60 | 3  | 4.3  |
| 61-70 | 4  | 5.7  |
| Total | 70 | 100  |

**Table-2: Gender wise distribution of cases**

| Gender | Frequency | Percent |
|--------|-----------|---------|
| Male   | 47        | 67.1    |
| Female | 23        | 32.9    |
| Total  | 70        | 100     |

**Table-3: Marital status**

| Marital status | Frequency | Percent |
|----------------|-----------|---------|
| Married        | 41        | 58.6    |
| Unmarried      | 29        | 41.4    |
| Total          | 70        | 100     |

**Table- 4: Educational status**

| Educational status | Frequency | Percent |
|--------------------|-----------|---------|
| No formal          | 2         | 2.9     |
| Under matric       | 35        | 50.0    |
| Matric             | 15        | 21.4    |
| Inter              | 8         | 11.4    |
| Graduate           | 9         | 12.9    |
| Post Graduate      | 1         | 1.4     |
| Total              | 70        | 100     |

**Table-5: Area of distribution**

| Area  | Frequency | Percent |
|-------|-----------|---------|
| Urban | 48        | 68.6    |
| Rural | 22        | 31.4    |
| Total | 70        | 100     |

**Table-6: Place of occurrence**

| Place of occurrence | Frequency | Percent |
|---------------------|-----------|---------|
| Outdoor             | 12        | 17.1    |
| Indoor              | 58        | 82.9    |
| Total               | 70        | 100     |

## Discussion

In the present study, the most susceptible group of the hanging was observed to be between 21-30 years age group which is similar to most of the researchers <sup>[5-19]</sup> which could be due to the fact that this age group is the most active phase of life and exposed to stress and strain of life except Biradar G et al. and Subramanyam S et al. where they have found the most common age group to be in 4<sup>th</sup> decade of life. Male preponderance was observed by majority of the authors <sup>[5-8,10-12,14,16-18,20,21]</sup> except studies done by Nayak SR et al, Shabnam S et al. where females outnumbered males. Male preponderance could be due to unemployment, drug addiction, alcoholism, love issues and also they are expected to bear dual responsibilities of family and career. Majority of victims were married individuals which is in parallel with other studies done by researchers <sup>[7,8,11,14-16,19-22]</sup> which may be due to marital disharmony, infidelity, substance abuse, financial problems etc. Unemployed persons accounted for majority of cases which is similar with studies done by Manigandaraj G et al, Rathod LS et al and Subramanyam S et al. This may be explained by the fact that unemployment leads to financial problems which may be the triggering factor for suicide. Considering the educational status of victims, it was observed that most of victims were educated which is at par with studies done by Khan S et al and Vishwakarma AK et al. The reason might be the fact that the study area of ours is having more educational institutions including the universities, government and private colleges as well as schools in the vicinity of the medical college. Most of the cases of hanging deaths belonged to low socio-economic status which is similar with study done by Biradar G et al while it is contradictory to findings of Vishwakarma AK et al where they have found most cases (72.09%) belonging to middle income group. Previous studies have correlated low socioeconomic status with increased incidence of suicide as negative ideas about life and suicidal ideation are more common among individuals with economic depression, unmanageable debts etc. In our study, we

found 51.4% of cases to be alcoholic while Goswami RB et al. observed it to be 33.3% that leads to financial problems, domestic quarrel etc. which might be the triggering factor for suicide. Urban hanging deaths outnumbered rural deaths which is similar with studies done by other researchers [6,16,18,19,20]. The reason may be that now a days people are preferring to reside in urban areas for their livelihood with ever growing day to day lifestyle stress. The place of occurrence is indoor in most of the cases which agrees with other authors [6,-11,14-16,18,19,23] which may be due the fact that victims preferred familiar environment devoid of any interference. Mental illness is seen in 67.1% of cases in our study while Biradar G et al, Rathod LS et al and Shabnam S et al found it to be 14.04 %, 12.74 % and 13.1 % respectively. The reason might be due to the fact that suicidal tendency is frequently seen in mentally ill persons. Most of the victims belong to nuclear families which is at par with other studies done by researchers [19,20,23]. The elders in the family to console the youngsters and help each other in difficult times rather than leaving them lonely, which may become the prime cause for suicide.

### **Conclusion**

Hanging is one of the hard ways of committing suicide which is difficult to prevent; However, the meticulous screening of vulnerable individuals, watchful monitoring of their behaviour and psychological counselling can reduce suicide. Parents should keep an eye on their children to reduce mobile addiction and to avoid certain gaming applications that lead to suicide. Family disputes pertaining to marital disharmony, failure in exams, mental stress, psychiatric conditions, unemployment are the common causative factors for suicidal hanging. Exemplary action should be taken in cases of eve-teasing and sexual harassment as they are also the predisposing factors for suicide. The young generation should be encouraged to reduce their screen time and increase the outdoor activities. The government should start chapters like psychosocial stress management in educational studies right from primary education. The concept of joint family should be encouraged in minds of the new generation so that they will be able to share thoughts with their near and dear ones. The above active interventions will boost their morale thereby reducing the death due to hanging in our society.

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