SOCIODEMOGRAPHIC STUDY OF HANGING VICTIMS IN COASTAL DISTRICTS OF ODISHA

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ABSTRACT

Hanging has been a common method of capital punishment since medieval times, and is the official execution method in numerous countries and regions. Hanging is the most reliable method of suicide in which a person applies a ligature to the neck that leads to unconsciousness and then death by suspension. In all societies including developed or developing countries, hanging is considered as a medical and psychological problem with severe economic and social consequences not only to them, but also to their family and society in general. Death due to hanging (65.9%) was found to be the most commonly observed mechanical asphyxia. Maximum number of hanging cases were from rural areas (61.15%). Male victims outnumbered those of female by ratio 1.12:1. In the age group 21-30 years, maximum number of hanging deaths were seen. 55.37% of victims were married. Maximum numbers of hanging cases (38.84%) were seen during summer season (March-June). Only few cases are associated with disease (0.057%) and pregnancy (0.049%). Present prospective study was conducted at the mortuary of SCB Medical College and Hospital, Cuttack, Odisha over 2 years from January 2008 to March 2010. The aim of the study is to study the demographic profile and incidence of hanging death in coastal district of Odisha.

KEYWORDS

Suicide, Hanging, Autopsy, Demographic Variables, Ligature Mark, Violent Asphyxia.


MATERIALS AND METHODS

This prospective study was conducted on 121 cases of known dead bodies of both genders, brought for medicolegal autopsy with a definite history of suicide by hanging, at the Department of Forensic Medicine, SCB Medical College, Cuttack, during the period from January 2008 to March 2010. On the basis of post-mortem findings and correlating with the detailed history elicited from the police and the relatives of the deceased, it was concluded that the cause of death was hanging in 121 cases (65.9%) of all mechanical asphyxia. All these hanging cases were selected for the present study. The data so collected were tabulated on a master-chart and analysed.

OBSERVATION

A total of 3626 dead bodies were brought for post-mortem examination at the mortuary of SCB Medical College, Cuttack during a period of 2 years and 3 months ranging from 1st January, 2008 to 30th March, 2010. After post-mortem examination and correlation with the history received from the police and relatives of the deceased, it was confirmed that in 121 (33.33%) cases (Table 1), the victims had died because of hanging. These 121 cases are the part of the study. Amandeep Singh[6] encountered the incidence of hanging as low as 1.28%.

In our study, highest incidence (54 cases forming 44.6% of total) was noticed in the age group of 21-30 years (Table 2). Amandeep et al[6] also found nearby results with highest incidence (59.24%) amongst the population of 15-25 years. Whereas Azmak D et al[7] described highest victims (20.8%) between 30 to 39 years. It is clear that in majority age groups, males outnumbered females with a male: female ratio of 1.5:1. (Table 2).
A good majority of victims, 67 (55.37%) were married (Table 3). The percentage of married victims could be even higher since the marital status was undetermined in another 06 cases due to want of information (Table 3). Maximum number of hanging cases were from rural areas (61.15%) as shown in Table 4. Male victims outnumbered those of female by ratio 1.12:1 (Table 2).

The maximum number of hanging cases 47 (38.84%) were seen in summer (Table 5) and only few cases were associated with chronic disease (5.7%) and pregnancy (4.9%) as evident from the table 6.

**DISCUSSION**

Three thousand six hundred and twenty six cases of unnatural death were brought for post-mortem examination at the mortuary of SCB Medical College, Cuttack over a period of two years. Out of 3626 cases, 121 (3.33%) cases were due to hanging. The study of Gargi et al found higher association of chronic disease (0.049%) is negligible with this form of death.

Incidence of death due to hanging has male preponderance almost double than that of female. Similar male predominance was revealed by study of Sharjia et al, Gargi et al, Salacin et al and PB Wagmare et al. This high incidence of hanging death among males could be attributed to failure in domestic life, failure in love affairs, unemployment, frustration in life, maladjustment to the society, etc. Western studies are not in agreement with these findings where maximum occurrence in both sexes was between 21 to 30 years.

Marriage does not seem to be a protective factor. In the present study, 67 (55.37%) victims were married. Ashish Srivastava found 68% and Sharjia found 55.8% of the victims were married. These cases present a clear picture of the strain by various psycho-socioeconomic factors precipitating ultimately in death in this manner. Domestic problem is a major concern and failure to cope with it may lead to this lethal step taken by victim.

The incidence of death due to hanging is high in rural population (61.16%) as evident from the Table-4. Gargi et al found similar findings in his study that maximum cases i.e. 41.81% from the rural areas. It can be concluded that socioeconomic stress among the rural folks could have accounted for this large incidence.

Most of the hanging cases were seen during summer 47 (38.84%). PB Wagmare et al found summer and winter season contributes equal cases of hanging and fewer cases in monsoon season. In this study also the lowest numbers of cases were seen during monsoon season which corroborates with PB Wagmare study. Seasonal variation has a role in this type of death, this can be concluded from this study.

Association of chronic disease (0.057%) and pregnancy (0.049%) is negligible with this form of death. PB Wagmare et al found higher association of chronic disease (18.33%), this higher incidence of chronic disease may be explained by the fact that sample size was smaller (60 cases) when compared to the present study (121 cases). Katherine J. Gold et al described death by hanging in pregnant women is negligible, substance use and intimate partner problems seen with pregnancy-associated suicide. Females do not prefer violent methods such as hanging for suicide.

**CONCLUSION**

Hanging is the most commonly observed mechanical asphyxial death. Hanging death shows maximum frequency among the married people of either sex. It has been found that it occurs more frequently among the rural population than urban. Marked differences were noted in different geographical areas regarding age group, gender and seasonal variation in hanging. Chronic diseases or pregnancies are least associated with this form of death, but other psycho-socioeconomic factors have to be studied to get a clearer picture with this form of death. There is an increasing tendency towards suicide by hanging among the youth and families. The reason for this increased rate of suicides may be due to the transition phase from protective to liberal economy in Odisha, which is a mineral rich state, and growing ambitions of youth and lack of social support. The government has to accept this reality and take steps to tackle this growing menace at the grass root level by setting up counselling centres and improving economic status of rural population.
### Table 6: Hanging Death Associated with Chronic Disease/Pregnancy

<table>
<thead>
<tr>
<th>Associated Condition</th>
<th>Hanging Cases</th>
<th>% Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Disease</td>
<td>07</td>
<td>5.7</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>06</td>
<td>4.9</td>
</tr>
<tr>
<td>Undetermined</td>
<td>02</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>10.7</strong></td>
</tr>
</tbody>
</table>

**References**