Short Communication

Suicide Attempt by Hanging - A Study on Patients Admitted in Tertiary Care Hospital in Eastern India

Manoj Kumar Sahoo, Harshita Biswas

Department of Psychiatry, Tata Main Hospital and Manipal Tata Medical College, Jamshedpur, Jharkhand, India

Abstract

Background: Suicide is defined as a fatal self-injurious act with some evidence of intent to die. Despite the evolution of sophisticated methods to commit suicide, hanging remains one of the commonest methods to commit suicide across the world. To evaluate the individuals using hanging as a method of suicide and identify the contributing factors for this behaviour. **Material and Methods:** The study was carried out in a tertiary care hospital, over a period of 1 year on the suicide attempters using the method of hanging. Semi-structured in-depth interviews were conducted with all the 46 attempters. The questions focused on the precipitating events present before the attempt. After the in interview the risk factors of the conversations were identified, tabulated and categorized using descriptive analysis. **Results:** Findings from descriptive analysis reveals that significant age group using this method was below 19 years followed by 20-29 age group, female attempters were more compared to male. Psychiatric diagnosis was present in 8 attempters and 4 attempters had alcohol/substance dependence. The most common personality component in attempters was impulsivity. The most common immediate stressor found were financial stress, conflict with family, spouse, humiliation, substance abuse, exam stress and domestic violence. **Conclusion:** This study demonstrates that the reasons for suicide attempt by hanging is multifactorial. which includes, psychiatric diagnosis, personality factors, immediate stressors, ease of use, and accessibility, Overall, our study adds to understanding the intricates of this method and will help in developing effective suicide prevention strategies.

Keywords: Hanging, risk factors, suicide

Introduction

Worldwide, more than 800,000 people die due to suicide each year.[1] Suicide attempt is defined as a fatal self-injurious act with some evidence of intent to die.[2] Despite the evolution of sophisticated methods to commit suicide, hanging still remains one of the most common methods to commit suicide across the world.[3] History of committing this form of suicide dates back to time immemorial. Each suicide is the result of a complex dynamic and unique interplay between numerous contributing factors. While in one hand where individual efforts to predict and prevent suicide tends to fail, on the other hand, our knowledge of risk factors has increased substantially. Factors like mental disorders, previous suicide attempts, specific personality characteristics, genetic loading and family processes in combination with triggering psychosocial stressors, exposure to inspiring models, and availability of means of committing suicide are key risk areas in suicide.[4]

According to National Crime bureau Record data of India (2020),[5] the total number of suicides in the year were 153052, which amounts to suicide rate of 11.3 per one lakh and the most common means or mode of committing suicide was hanging, which accounted for 57.8% of the total suicides. This suggests that suicide by hanging still remains the most common method of suicide and understanding its dynamics, risk factors/reasons may help in preventing suicide more effectively. Hence, there is a need to understand the risk factors for this method of suicide and suicidal attempt. Accordingly, this study aimed to evaluate the factors associated with the use of highly lethal methods for suicide attempt.

Address for correspondence: Dr. Manoj Kumar Sahoo, Head Consultant and HOD, Psychiatry, Tata Main Hospital Associate Professor, Psychiatry, Manipal Tata Medical College, Jamshedpur, Jharkhand, India.
E-mail: drmanojsahoo@gmail.com

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Materials and Methods

The study was carried out in a tertiary care hospital in Jharkhand. Any act of self-damage inflicted with self-destructive intention was taken as a suicide attempt[6] and the patients with hanging as a method of suicide attempt were included in the study. The study was approved by the institutional ethics committee of the hospital. The data were gathered over the period of 1 year between 2019 and 2020. All these individuals were admitted to the hospital and referred for psychiatric evaluation in view of psychological and medicolegal issues.

Semi-structured interviews were conducted by the on-call psychiatrist after the patient was physically stable and, in the condition, to answer questions. Some 46 individuals who had made near-fatal suicide attempts by hanging were part of the study. After hanging, the patient displayed amnesia regarding the incidents, so the interview also involved the family members for validation of information.

The present study has a descriptive approach. Purposive sampling was used. The data were collected by in-depth interviews, and respondents were encouraged to talk at length. The questions focused on the stressors present before the attempt, and other factors contributing to the event. All the 46 interviews were then analyzed, and emergent risk factors were subsequently categorized for detailed descriptive analysis.

Results

The results includes tables indicating the gender distribution of patients, the age groups of the attempters and the various reasons/themes and psychiatric diagnosis of all the 46 patients. Table 1 shows the gender distribution of the 46 patients with attempted suicide by hanging, 24 patients where female and 22 were male. Table 2 shows the age range of the patients, the age group ranged from 13 years to 82 years. The highest attempters were found in the age group below 18 years, followed by 20-29 years age group. Table 3 shows the precipitating factors and psychiatric diagnosis identified from the interview of the 46 patients who attempted suicide using the method of hanging. Psychiatric diagnoses was found in 12 (26.8%) patients, out of which 8.6% has substance dependence, 6.5% had depression and adjustment disorder each and 4.3% has mixed anxiety depression. 30.4% patients had maladaptive personality and 65.2% patient has Precipitating factors before the attempt, conflict with family was the most common reason followed by financial difficulties.

Discussion

This study used an interview method to find various factors associated with suicidal hanging and no structured scale was used.

Socio-demographic data

In the present study, the major age group that attempted suicide by hanging was below 19 years followed by 20–29 age group.

Similarly, in India, the 15–24 years age group has the highest suicide rate,[6,7] a finding consistent with the global trend.[8] Higher suicidality in this age group has been attributed to developmental changes, the significant influence of the psychological and socio-environmental factors, coupled with the prominence of impulsivity, indulgence in substance use, and acquired capability to bear the pain and fear associated with suicide and ability to execute the suicidal plans.[9,10]

In our study, females were more compared to men attempters, few of the stressors that were reported specific to female gender was domestic abuse, perceived humiliation. interpersonal problems/relationship conflict in relationships. Similar findings were also noticed in a study by Bastia and Kar, 2009.[11] This can be due to internalizing problems in females, greater psychosocial stressors, cultural factors that oppress the rights of females, including intimate partner violence.[7] Identifying gender specific stressors may help in early identification and vulnerability.

In the present study, the past attempt of suicide was present in 10.8% of patients. Such people are at greater risk of completed suicide or repeating more such acts of self-harm. In a study by Rudd *et al*.,[12] it was found that

Table 1: Gender distribution

Gender	Number of patients ($n=46$)
Male	22
Female	24

Table 2: Age range of patients

Age range	No of patients ($n=46$)
Below 20 years	19
20-29 years	15
30-39 years	7
40-49 years	3
50-59 years	1
60 years and above	1

Table 3: Precipitating factors and psychiatric diagnosis of the patients

	No. of patients
Psychiatric Diagnosis (break-up of diagnosis below)	12 (26.08%)
• Depressive disorder	3 (6.52%)
• Mixed Anxiety Depression	2 (4.3%)
• Adjustment Disorder	3 (6.52%)
• Alcohol Dependence/Substance dependence	4 (8.69%)
History of Past attempt	5 (10.8%)
Maladaptive personality traits	14 (30.4%)
Precipitating factor	30 (65.2%)
• Conflict with parents/family	11 (23.9%)
• Conflict with partner/Spouse	6 (13.04%)
• Exam related stress	2 (4.3%)
• Financial difficulties	8 (17.39%)
• Domestic Abuse	1 (2.17%)
• Humiliation	2 (4.3%)

multiple suicide attempters displayed elevated suicidal ideation. This again emphasizes the need to provide easily accessible mental health services to such patients and help them develop resilience and effective coping mechanism.

Psychiatric diagnosis

Our study showed 26% of patients had psychiatric illness. Similar findings have been seen in a study by Parker *et al*. (2006)[13] and Das *et al*. (2008).[14] These findings suggest that suicide attempts are not only limited to psychiatrically ill subjects, but it is also used by so-called normal persons as a coping mechanism under stress to communicate their needs and distress.

Diagnosis of depressive episode or adjustment disorder in six subjects matches the existing literature from India.[13] It is to be noted that 12 of our subjects had diagnosable psychiatric illness, but most of them had not sought treatment for the same before this incident. This implies that there is an urgent need to promote awareness regarding mental health.

Alcohol/substance dependence was found in 4 subjects, that is, 8.6%, this finding is like the NCRB data (2020)[6] which showed that 6% of sample were dependent on substance/alcohol. Studies have shown that substance use independently increases the risk of suicidal behavior. Implying that acute and chronic substance abuse may impair judgment, weaken impulse control, and interrupt neurotransmitter pathways, leading to suicidal tendencies through disinhibition.[15]

Personality factors

Personality traits are endemic to patients and affect situational and emotional perception, decision making and, consequently, behavior.[16] Personality traits can, therefore, influence a patient's proclivity to react suicidal in individual situations that are known to affect suicidal behavior. Our study revealed that the most common personality factor present in attempters was impulsivity. Studies conducted in Korea showed that 36.1%–85.3% of suicide attempts were initiated impulsively[17,18] while studies on suicides in Asia suggested that impulsive suicide attempts, when coupled with the availability of fatal suicide methods, can increase suicide rates.[19] Other than impulsivity, other personality characteristics that correspond to such behaviors are poorer problem-solving skills.[20] Few studies[19] have linked it to the rigid thinking process often found in young people. This inability in problem solving and mood regulation often causes insecurity, low self-efficacy and self-esteem, which ultimately leads to emotional crisis.[21] Such individuals are vulnerable to break down and self-harm. The clinician should focus on working with the patients in these areas for effective suicide prevention strategy.

Precipitating factor

Indian society, being sociocentric, lays importance on interpersonal relationships. It is, therefore, unsurprising that marital conflict is the most common cause of suicide.[6]

In the present study, 65.2% individuals had a precipitating event before attempting. The most common precipitating event was interpersonal relationship issues with family (23.9%) followed by interpersonal issues with spouse/partner (13.04%) and financial strain (17.39%) of cases. Similar findings have been reported in various studies that specific important life may become a stressor leading to suicide. Interpersonal losses such as relationship break-ups, death of family member, peer rejection, prolonged illness, relationship issues and family problem, illicit relationship of spouse, financial problem, and unemployment may have a great impact and are found in significant number of suicide cases.[11,22] Even failure in examinations, are extremely stressful to students particularly where competition is intense, in our study amounted to 4.3% of the cases. Examination stress and suicidality have been frequently noted in India.[23,24]

Limitations

Our study has some limitations. Firstly, the sample size can be considered small, and our sample cannot be considered as truly representative of the population. Secondly, no structured scale or tool was used to assess precipitating factors, personality factors, and psychiatric diagnosis. Lastly, there was no comparison to other methods of suicide that has similar high intent like poisoning; a comparison would have helped to understand hanging specific stress factors and personality factors in a better way.

Implications

This study demonstrates the importance of common reasons of stress in suicide by hanging attempters. Hanging is currently viewed as a rapid, accessible and "tidy" method of securing escape from difficulties and distress. Impulsivity and access to means can override individuals' perceptions and preferences. This reinforces the importance of identifying the vulnerable individuals and helping them with coping and emotional regulation, making the mental healthcare system more robust and accessible. Overall, understanding the intricacies of this method will help in developing effective suicide prevention strategies.

Conclusion

Prevention of suicide, particularly hanging, is extremely difficult. The impulsivity trait and easy access make it a challenge to manage. The clinicians need to explore the reasons behind the attempter's choice of method as hanging to understand and find a suitable strategy to manage it.

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Conflicts of interest

There are no conflicts of interest.

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