

Suicidal Tendencies and Comorbidities Among Patients Attending the Psychiatric Outpatient Department of a Tertiary Care Hospital in Ongole, Andhra Pradesh.

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Abstract

Background: Suicide is a critical public health concern globally and a significant cause of preventable mortality in India. Understanding the socio-demographic, clinical, and contextual factors contributing to suicidal tendencies is essential for effective prevention strategies. This study investigates suicidal behavior and associated comorbidities among psychiatric outpatients at a tertiary care hospital in Ongole, Andhra Pradesh.

Methods: A hospital-based cross-sectional study was conducted from June to December 2021. A total of 120 participants, equally distributed by gender, were recruited using a simple random sampling method. Data on socio-demographic characteristics, psychiatric history, reasons for suicide attempts, methods employed, and comorbidities were collected using a semi-structured proforma. Descriptive statistics were used for data analysis, and results were presented as percentages and frequencies.

Results: Middle-aged individuals (31–60 years) were the most affected group. Rural residents exhibited higher rates of suicidal behavior compared to urban residents. Two-thirds of participants lacked prior psychiatric diagnoses, while neurotic disorders were more common than psychotic disorders among those with psychiatric conditions. Organophosphate poisoning, hanging, and tablet overdose were the primary methods used, with psychological stress and financial problems cited as leading triggers. Substance dependence, particularly alcohol, was observed in 16.6% of cases. Gender differences were evident, with males favoring lethal methods like hanging and poisoning, while females more frequently overdosed on medications.

Conclusion: Suicidal tendencies in this population were influenced by socio-demographic factors, acute stressors, and comorbidities. The findings underscore the need for integrative mental health services, community interventions to reduce stigma, and socio-economic support programs. Restricting access to pesticides and promoting early psychiatric evaluations in high-risk groups are crucial to reducing suicide rates.

Keywords: Suicide, Psychiatric Comorbidities, Suicide Methods, Rural India, Public Health.

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Introduction

Suicide, a critical public health challenge, is a leading cause of preventable death worldwide. Each year, approximately 700,000 individuals lose their lives to suicide globally, with a disproportionate burden in low- and middle-income countries (LMICs), where 77% of suicides occur. In India, the suicide rate has been consistently high, with an estimated 18% of the global suicides reported from the country. It is a leading cause of death among the age group of 15-29 years, profoundly impacting socio-economic structures and causing significant psychological distress in affected families [1], [2]. Globally, suicide attempts outnumber completed suicides by a factor of 20, making suicide prevention a multidimensional issue that requires public health

and clinical interventions. The most common methods of suicide include pesticide poisoning, hanging, and self-immolation, with considerable variation across geographical regions [3]. In India, pesticide ingestion remains a prevalent method due to the easy accessibility in rural areas, reflecting the interplay between socio-economic factors and suicide risk [2].

Suicide is recognized as a complex phenomenon influenced by biological, psychological, and social factors. Psychiatric conditions such as depression, anxiety disorders, and substance abuse are strongly associated with suicide attempts and completed suicides. Notably, depression has been identified as the leading psychiatric condition linked to suicide in

India, with up to 60% of individuals with major depressive disorder displaying suicidal ideation or behavior [4]. However, a considerable number of suicide attempts occur in individuals without any psychiatric diagnosis, highlighting the importance of addressing social and environmental stressors [5].

Mental illnesses significantly increase the risk of suicidal behavior, with rates among psychiatric patients estimated to be 50 times higher than in the general population. Mood disorders, schizophrenia, and substance abuse disorders are particularly prevalent among those who attempt or complete suicide. Moreover, patients recently discharged from psychiatric facilities exhibit an acute risk for suicide within the first three months post-discharge [6]. Gender disparities also exist, with women more likely to attempt suicide, while men have higher rates of completed suicides, influenced by both social roles and chosen methods [7].

In LMICs like India, social determinants such as unemployment, poverty, marital discord, and lack of access to mental health resources compound the risk of suicide. The stigma surrounding mental health often delays treatment-seeking behavior, exacerbating the risk of self-harm. Studies have indicated that impulsivity, financial strain, and interpersonal conflicts are significant triggers for suicidal behavior in Indian populations [8].

Suicide rates in southern India are notably higher than in the northern regions, with socio-cultural and economic differences influencing the patterns. For example, the southern states report suicide rates exceeding 15 per 100,000 annually, compared to rates below 5 per 100,000 in the north [3]. Rural areas face unique challenges, such as the unregulated availability of toxic pesticides and limited mental health services. In such settings, psychiatric comorbidities often go undiagnosed, leaving individuals vulnerable to extreme measures during crises [1].

Understanding psychiatric comorbidities is essential to developing targeted suicide prevention strategies. Approximately 40-60% of suicide attempters have coexisting psychiatric disorders, predominantly mood disorders, and substance use disorders. These comorbidities not only increase the risk of suicide but also complicate the management and rehabilitation of affected individuals. In rural and underserved regions, where access to psychiatric care is scarce, understanding these associations can guide interventions aimed at both prevention and treatment [9].

This study focuses on understanding the patterns of suicidal behavior among patients attending a tertiary care hospital in Ongole, Andhra Pradesh. By analyzing the socio-demographic profiles, psychiatric comorbidities, and methods of suicide attempts, it aims to identify key risk factors and

inform culturally relevant interventions. Andhra Pradesh, with its predominantly rural population, represents a microcosm of the challenges faced by LMICs in addressing suicide prevention. The findings of this study are expected to contribute to the growing body of literature on suicide in India and guide public health policies to reduce this preventable loss of life.

Methodology

This study utilized a hospital-based cross-sectional design to explore suicidal tendencies and associated comorbidities among patients attending the psychiatric outpatient department of a tertiary care hospital in Ongole, Andhra Pradesh. The study was conducted over a six-month period, from June 2021 to December 2021, and included both male and female patients who presented with a history of psychiatric disorders or suicidal attempts. Participants were recruited using a simple random sampling method, ensuring an equal probability of selection. The study population comprised 120 individuals, with an equal distribution of males (n=60) and females (n=60). Inclusion criteria encompassed adult patients presenting with a history of suicidal attempts or those referred for psychiatric evaluation. Patients provided informed consent prior to participation, and where necessary, additional information was corroborated by family members to ensure data reliability and completeness.

Data were collected using a semi-structured proforma that captured socio-demographic variables, psychiatric history, reasons for suicidal attempts, and methods used. The tool also assessed comorbid conditions, including psychiatric and medical disorders, to identify potential risk factors associated with suicidal behavior. Standardized diagnostic criteria based on the International Classification of Diseases (ICD-10) were employed to classify psychiatric disorders. The methodology incorporated both patient interviews and a review of clinical records to enhance the accuracy of findings.

To analyze patterns of suicidal behavior and associated factors, descriptive statistics were employed. Variables such as age, gender, domicile (rural vs. urban), psychiatric history, comorbidities, and suicide methods were examined. Chi-square tests were used to assess statistical significance for categorical variables, while p-values of <0.05 were considered significant. The results were presented as frequencies and percentages to provide a clear understanding of the observed trends.

The ethical clearance for the study was obtained from the institutional ethics committee. Confidentiality and privacy of participants were maintained throughout the study by anonymizing the data and securing sensitive information. This rigorous methodological approach ensured that the study adhered to ethical standards while providing a

comprehensive assessment of suicidal tendencies and associated comorbidities in this patient population.

Results

The study analyzed suicidal tendencies and their associated factors among patients attending a psychiatric outpatient department. Among the participants, an equal number of males and females were included, ensuring a balanced gender distribution. The majority of suicide attempters belonged to the middle-aged group, particularly those aged between 31 and 60 years, with younger individuals (<30 years) forming the second largest group. Elderly participants represented the smallest demographic. No significant gender differences were noted in age-specific trends of suicidal attempts.

When considering domicile, rural residents exhibited a higher prevalence of suicide attempts compared to urban residents. This disparity underscores the potential influence of socio-economic and cultural differences in rural settings, where access to mental health resources may be limited.

A notable proportion of participants had no prior psychiatric diagnosis, reflecting the complex interplay of non-psychiatric factors such as acute stress, financial difficulties, and interpersonal conflicts in triggering suicidal behavior. Among those with diagnosed psychiatric conditions, neurotic disorders were more common than psychotic disorders. Psychological stress emerged

as a leading reason for suicidal attempts, followed by life events and financial crises.

In terms of methods used, poisoning (particularly organophosphate poisoning) was the most frequently employed, followed by hanging and tablet overdoses. This preference for poisoning aligns with the accessibility of toxic substances, particularly in rural regions. Gender differences were evident in the choice of method, with females more frequently resorting to tablet overdoses, while males were more likely to use organophosphate poisoning.

Regarding comorbidities, the majority of participants did not present with any co-existing medical or psychiatric conditions, though a small subset reported substance dependency, primarily alcohol use. This finding highlights the role of socio-environmental factors in suicidal behavior, independent of underlying medical or psychiatric disorders.

The study also revealed that a significant portion of the participants were first-time attempters, with fewer individuals reporting a history of previous suicidal attempts. This underscores the need for early intervention and prevention strategies targeting individuals experiencing acute distress or crisis.

These findings provide a comprehensive understanding of the socio-demographic, clinical, and contextual factors associated with suicidal tendencies. They emphasize the importance of targeted interventions that address both psychiatric and non-psychiatric contributors to suicide risk.

Table 1: Gender, Age and Domicile among suicidal attempters

Variable	Male (%)	Female (%)
Gender	50	50
Age < 30 years	38	40
Age 31 – 60 years	49	45
Age above 61 years	13	15
Urban domicile	51.5	32
Rural domicile	48.5	68

Table 2: Past suicidal attempts and psychiatric illnesses

Variable	Male (%)	Female (%)
Past suicidal attempts: Yes	28	40
Past suicidal attempts: No	72	60
No psychiatric illness	62	63
Neurotic disorders	23	30
Psychotic disorders	15	7

Table 3: Reasons and methods used for suicide

Variable	Male (%)	Female (%)
Psychological reason	33	27
Life events / Financial problems	23	20
OP poisoning	43	23
Tablet poisoning	15	33
Hanging	23	28

Discussion

This study investigates the complex interplay between socio-demographic factors, comorbidities, and suicidal tendencies in psychiatric outpatients in a tertiary care hospital in Ongole, Andhra Pradesh. The findings provide valuable insights into patterns and associated risk factors, emphasizing the need for targeted intervention strategies.

The study revealed that suicidal tendencies were more prevalent in middle-aged individuals, particularly those aged 31-60 years. This finding aligns with global and Indian studies, where suicide rates peak among middle-aged adults due to heightened exposure to life stressors such as financial difficulties, familial responsibilities, and health-related concerns [5]. The equal representation of males and females in this study underscores that while men often have higher suicide completion rates, women report more frequent attempts, possibly due to socio-cultural constraints that exacerbate emotional distress in women [7].

Rural residents were disproportionately represented, highlighting socio-economic vulnerabilities unique to rural India. Factors such as limited access to mental health services, greater stigma surrounding psychiatric care, and a higher prevalence of stressors like poverty contribute to this disparity [10].

Interestingly, two-thirds of participants did not have a prior psychiatric diagnosis, emphasizing the significant role of situational and non-psychiatric stressors in suicide attempts. Nevertheless, among those with psychiatric comorbidities, neurotic disorders were more common than psychotic disorders. This finding corroborates other studies reporting that anxiety and mood disorders, particularly depression, are the most frequent psychiatric diagnoses among suicide attempters [11].

Substance dependence, particularly alcohol use, was observed in 16.6% of cases. Alcohol consumption is a well-documented risk factor for suicidal behavior, exacerbating impulsivity and impairing judgment [12]. Addressing substance abuse through integrative treatment programs is crucial to mitigating this risk.

The study identified organophosphate poisoning as the most common method of suicide, followed by hanging and tablet overdose. The preference for poisoning aligns with findings from rural India, where the accessibility of pesticides significantly increases the likelihood of impulsive suicide attempts [13]. This underscores the importance of regulating pesticide availability and promoting safer storage practices in rural households.

Psychological stress was the leading cause of suicide attempts in this cohort. Financial difficulties,

interpersonal conflicts, and life events such as unemployment were also cited as significant triggers, highlighting the need for holistic suicide prevention strategies that address socio-economic factors [14].

Gender-specific patterns in methods of suicide were evident. Females more frequently used tablet overdoses, reflecting a potentially less lethal but more accessible method. Males, on the other hand, were more likely to use hanging or pesticide ingestion, consistent with higher completion rates among men [15].

The findings suggest several areas for targeted intervention like Strengthening mental health infrastructure, particularly in rural areas, is essential. Primary healthcare settings should integrate psychiatric evaluations into routine care, with trained professionals identifying and managing high-risk individuals. Reducing stigma through community-based awareness campaigns can encourage early help-seeking behaviors and decrease barriers to accessing care. Programs aimed at alleviating poverty, providing financial support, and fostering community engagement may reduce the incidence of suicides triggered by socio-economic stressors. Legislative efforts to regulate pesticide sales and promote safe storage could significantly reduce impulsive suicides, especially in rural areas.

Limitations and Future Directions

This study is cross-sectional and limited to patients attending a single hospital, which may not fully capture the broader population. Longitudinal studies are needed to explore causal relationships and evaluate the effectiveness of preventive interventions over time. Additionally, incorporating psychological autopsies for completed suicides could provide deeper insights into risk factors and protective mechanisms.

Conclusion

The findings from this study emphasize the multifactorial nature of suicidal behavior in India, influenced by socio-demographic factors, psychiatric comorbidities, and environmental stressors. Addressing these through integrated mental health services, community support, and socio-economic interventions could significantly reduce the burden of suicide in vulnerable populations.

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