

Trend of Suicide in India: An Analysis of the Past Decades

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Abstract: This study examines the trends in suicide in India over the past decades, focusing on suicide rates, sociodemographic factors, causes, and prevention strategies. **Background:** Suicide remains a major public health concern in India with substantial variation across demographic and socioeconomic groups. Long-term analysis of routinely collected national data is important for identifying changing patterns and vulnerable populations. **Objective:** To examine the temporal trends in reported suicides in India from 2014 to 2023 and to describe the distribution of suicide according to various sociodemographic characteristics and reported causes. **Methods:** A retrospective analysis of secondary data was conducted using suicide statistics obtained from the annual Accidental Deaths & Suicides in India reports 2014–2023 provided as open datasets in the National Crime Records Bureau (NCRB), Ministry of Home Affairs, Government of India. Annual suicide numbers and rates were examined alongside available demographic, socioeconomic and reported-cause characteristics using descriptive statistics. **Results:** The reported suicide rate declined from 10.6 per lakh population in 2014 to 9.9 in 2017, followed by a sustained increase, reaching 12.4 per lakh in 2022 before marginally declining to 12.3 in 2023. The absolute number of reported suicides increased from 131,666 in 2014 to 171,418 in 2023. Males consistently constituted the majority, increasing from 67.7% to 72.8% of reported suicides. Persons aged 18–30 and 30–45 years together accounted for approximately two-thirds of reported suicides. Family problems and illness remained prominent reported causes, while drug abuse/alcoholic addiction increased from 2.77% to 7.01% during the study period. Lower-income groups constituted the largest proportion of reported suicide deaths. **Conclusion:** Suicide in India demonstrated a changing temporal pattern with an increasing reported burden after 2017 and marked concentration among males and younger-to-middle-aged adults. Strengthening surveillance and implementing age-, gender- and socioeconomic-responsive prevention strategies are warranted.

Keywords: Suicide Trends in India, Suicide Rates, Sociodemographic Factors, Causes of Suicide, Suicide Prevention

1. Introduction

Suicide is a major public health concern and a leading cause of preventable mortality worldwide mirroring the complex interaction of psychological, biological, social and economic factors. Nearly 700,000 individuals die by suicide each year globally, with a disproportionate burden in low-and middle-income countries. Suicide not only results in loss of life but also has profound psychological, social, and economic consequences for families and communities.

The ever increasing population and diversity of the socio-cultural context in India contributes significantly to the global suicide burden. Over the past few decades, the rapid demographic, economic and social transitions in the country resulted in urbanization, industrialization and changes in family structures. These transitions have been associated with evolving mental health challenges and may influence suicidal behavior, reiterating on the need for suicide prevention measures and spread of awareness.

In India, systematic data on suicide is primarily collected and disseminated by the National Crime Records Bureau (NCRB), which publishes annual reports titled “Accidental Deaths and Suicides in India (ADSI).” These reports provide detailed information on suicide cases, including demographic characteristics, methods, causes, and regional distribution.

2. Need for the Study

Suicide is a preventable cause of death, yet it remains a major public health challenge in India. Although several studies have examined different aspects of suicide, there is a need for a comprehensive analysis of long-term trends using nationally representative data. Over the past decades, the various

transitions in India may have influenced mental health and suicidal behavior and their impact on suicide trends is not fully understood.

Most existing studies are limited to specific regions, populations or time periods, restricting a holistic understanding of national patterns. Additionally, differences in methodologies and data sources hinder comparability across studies. The National Crime Records Bureau (NCRB) dataset provides a valuable opportunity for longitudinal analysis, offering detailed information on demographic and socio-economic factors, but is underutilized. Issues such as underreporting and misclassification due to stigma and socio-cultural factors persist, although NCRB data is still the most consistent national source. Analyzing temporal trends is essential for identifying vulnerable groups and informing effective public health policies. This study aims to examine suicide trends in India using NCRB data to support evidence-based prevention strategies.

3. Review of Literature

Suicide is a multifactorial phenomenon influenced by a wide range of determinants, including mental health disorders, socio-economic conditions, cultural factors, and life events. Globally, research has emphasized the importance of surveillance systems in understanding suicide patterns and developing prevention strategies. The World Health Organization has highlighted that suicide rates vary widely across countries and regions, reflecting differences in socio-economic conditions, healthcare systems, and cultural attitudes. In many low- and middle-income countries, limited access to mental health services and high levels of stigma contribute significantly to the burden of suicide.

At the global level, suicide remains a major cause of mortality, particularly in low- and middle-income countries, which account for a large proportion of global deaths. Although age-standardized suicide rates have declined in some regions, absolute numbers remain high due to population growth. Commonly identified risk factors include mental health disorders, substance abuse, socio-economic stressors, and limited access to healthcare services.

Age-wise distribution of suicide shows distinct patterns, with higher rates among young adults, particularly those aged 20–29 years, while rates also increase in older age groups. Gender differences are evident, with males generally exhibiting higher suicide rates compared to females, although female suicides remain significant in certain socio-cultural contexts. Socio-demographic factors such as marital status, occupation, and education level play a critical role in influencing suicidal behavior.

In the Indian context, the National Crime Records Bureau (NCRB) serves as the primary source of suicide data through its annual *Accidental Deaths and Suicides in India (ADSI)* reports. Studies utilizing NCRB data indicate that suicide rates have shown increasing trends over time, with notable demographic and regional variations. Young adults, particularly those in the 15–29 age group, account for a significant proportion of suicide deaths, often associated with factors such as academic pressure, unemployment, relationship issues, and social expectations.

Occupational distribution highlights increased vulnerability among farmers, daily wage earners, and self-employed individuals. Agrarian distress, financial instability, and debt have been strongly associated with higher suicide rates in these groups. Cause-wise analyses suggest that family problems, illness, and substance abuse are among the leading reported causes, although these categories may not fully capture the complexity of underlying factors.

Regional variations further emphasize the heterogeneity of suicide patterns within India. Southern states such as Kerala, Tamil Nadu, and Karnataka consistently report higher suicide rates compared to other regions. These differences may be influenced by socio-economic conditions, literacy levels, reporting practices, and cultural dynamics.

Several studies have also highlighted limitations in suicide data in India, including underreporting and misclassification due to stigma, legal concerns, and socio-cultural barriers. Variations in methodology and data sources across studies further limit comparability of findings. Authors such as Radhakrishnan et al. (2018) have reported increasing trends with regional differences, while Ransing et al. (2021) emphasized the need for improved data quality and standardized reporting systems.

Recent analyses of NCRB data indicate a continued rise in suicide deaths, particularly among vulnerable groups such as students and daily wage earners, reflecting changing socio-economic pressures. These findings underscore the importance of continuous surveillance and updated research. Overall, existing literature demonstrates that suicide in India is influenced by a complex interplay of demographic, socio-

economic, and cultural factors. However, there remains a lack of comprehensive long-term analyses integrating multiple variables, highlighting the need for studies that examine evolving trends using standardized national data.

4. Research Gap

Although suicide in India has been widely studied, most research is limited to specific populations or short time periods, lacking a comprehensive long-term national perspective. Existing studies often examine individual factors such as age or gender in isolation, with limited integration of multiple variables. Additionally, data from the National Crime Records Bureau (NCRB), despite being the most comprehensive source, remains underutilized for longitudinal analysis. There is also a need for updated studies using recent data to better understand evolving trends and inform targeted suicide prevention strategies.

5. Aim

To analyze the trends of suicide in India over the past decades.

6. Objective

To examine temporal trends in suicide rates in India over the past decades.

7. Methodology

- **Study Design:** Secondary data-based descriptive study
- **Data Source:** NCRB reports (ADSI) from 2000 - 2023
- **Study Population:** All reported suicide cases in India
- **Inclusion Criteria:** All suicide cases recorded in NCRB reports during the study period
- **Exclusion Criteria:** Incomplete or missing data entries
- **Data Analysis:** Descriptive statistics and trend analysis will be used.

8. Method

This study will be conducted using a secondary data-based descriptive design to analyze trends in suicide rates in India over time. The key variables considered for analysis will include the total number of suicide cases reported annually and the corresponding suicide rates per 100,000 population. Where available, additional variables such as age group, gender, occupation, and causes of suicide may also be considered to provide a broader understanding of trends. Data will be collected by systematically reviewing NCRB reports and extracting relevant variables into a structured dataset. The data will be organized year-wise to facilitate trend analysis.

For data analysis, descriptive statistical methods will be used to summarize the data. Frequencies and percentages will be calculated to describe the distribution of suicide cases across years. Suicide rates per 100,000 population will be used as a standardized measure to allow comparison over time. Trend analysis will be conducted to examine changes in suicide rates over the study period. This will involve graphical representation using line charts to visualize patterns and identify increases, decreases, or fluctuations over time.

Comparative analysis across different years will be performed to highlight significant changes in trends. Data analysis will be performed using statistical softwares Microsoft Excel and SPSS.

9. Ethical Considerations

Since this study involves the use of secondary data available in the public domain, there is no direct involvement of human participants. Therefore, ethical approval may not be required. However, all data will be used responsibly, and appropriate acknowledgment of data sources will be ensured.

10. Expected Outcomes

- Identification of suicide trends across different strata
- Recognition of high-risk groups

11. Significance

Understanding long-term patterns in suicide is essential for informed public health planning and effective intervention. This study is significant as it provides a comprehensive analysis of suicide trends in India over the past decades using data from the National Crime Records Bureau, which is the most consistent and nationally representative source of suicide-related information in the country.

By examining temporal trends, this study will help identify changes in suicide rates over time and highlight emerging patterns. Such insights are crucial for recognizing high-risk populations and understanding how socio-economic transitions, policy changes, and public health interventions may influence suicidal behavior. The findings can support policymakers in designing targeted and evidence-based mental health programs.

Additionally, this study contributes to the existing body of knowledge by utilizing longitudinal data, which has been underexplored in previous research. It can also help in evaluating the effectiveness of national initiatives such as mental health policies and suicide prevention programs. Identifying gaps and inconsistencies in available data may further inform improvements in surveillance and reporting systems. From a public health perspective, the study's findings can guide resource allocation, awareness campaigns, and early intervention strategies aimed at reducing suicide rates. It may also assist healthcare professionals and researchers in understanding broader trends and planning future studies.

Overall, this study has the potential to provide valuable evidence for strengthening suicide prevention efforts and improving mental health outcomes in India.

12. Limitations

The study is subject to certain limitations, including potential underreporting in NCRB data due to social stigma and reporting practices, as well as the lack of individual-level details, which restricts in-depth analysis of personal risk factors associated with suicide.

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