

## Exploring Contributing Factors of Suicide and Suicidal Behaviours to Map Research Gaps in Suicidology in Northeastern India: A Narrative Review

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### ABSTRACT

Suicide has turned into a public mental health issue globally. India's gradually increasing rate of suicide and contribution to the largest number of youth suicides has drawn the attention of government and policymakers with the recent introduction of the National Suicide Prevention Strategy. The suicide rate in some of the Northeastern states of India is extraordinarily high, but research in the field is still in the preliminary stage, with very little accessible published work. With this backdrop, the present review article attempts to synthesise factors contributing to suicide and suicidal behaviours among persons belonging to Northeastern India to understand the research gap and the need for further studies. In the findings, the review article shares that the vulnerability of suicide is higher for youth, students, daily labourers and unemployed persons. Suicide is observed to be associated with a wide range of socio-cultural factors in Northeastern Indian states. However, significant population, methodological, and empirical gaps have also been observed, which has caused a paucity of knowledge. In the end, the authors discussed the need to study vulnerable groups exclusively and employ qualitative methodologies more often to bridge the empirical gaps.

**Keywords:** *Suicide Prevention, Northeast India, Suicidology*

Suicide has been recognised as a global public mental health issue as persons of all ages and sexes throughout the world are affected. Suicide takes more lives than malaria, HIV/AIDS, breast cancer, or war, accounting for around 703,000 deaths each year globally. It stands as the fourth leading cause of death for young people aged 15-29 years for both sexes, accounting for 77% of the total number of suicides, where 88% of adolescent suicides are reported from low and middle-income countries (LMICs) (WHO, 2021). Against the global average age-standardized suicide rate of 9 persons out of 100,000, Southeast Asian countries have a higher rate of 10.2. In comparison, India has an even higher suicide rate of 12.9 persons per 100,000 population (WHO, 2021). India proposed the first-ever national policy in the form of the national suicide prevention strategy on Nov 21, 2022, making suicide prevention a public health priority. It aims to reduce suicide mortality

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by 10% by 2030 in comparison to 2020. However, Patel et al. (2012) write that the discrepant suicide risks and rates within India's diverse socio-demographic populations require to be understood to move ahead towards suicide prevention in India. For instance, both extremely high (Sikkim with 45.9 and Tripura with 20.6) and exceptionally low rates of suicide (Manipur with 1.5 and Meghalaya with 6.3) are reported by northeastern states. An understanding of these kinds of discrepancies amplifies the need for region-specific research. Nevertheless, a paucity of publications on suicide in northeast India has been highlighted (Mene, 2013). A review of articles on suicide published in the Indian Journal of Psychiatry from 1958 to 2009 does not include any articles that cite or relate to the problem of suicide in the northeastern states of India (Vijayakumar, 2010). This negligence that has resulted in a limited understanding of suicidal behaviours in the region calls for reviewing the published work to map the research gap and the need for further studies.

### METHODOLOGY

This review article attempts to synthesise factors contributing to suicide and suicidal behaviours among persons belonging to Northeastern India to understand the research gap and the need for further studies. Google Scholar and PubMed databases were extensively searched to look for empirical articles. The keywords used for the search were 'suicide,' 'self-harm,' 'deliberate self-harm,' 'suicide attempt,' 'suicide ideas,' etc. Research articles in each state were separately searched. The inclusion criterion was kept broad. Articles that studied suicide in the population of the northeastern states, viz., Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura, were included. All articles published before December 2023 were included. Only duplicate articles were excluded from this review. Articles for which full texts were not available were excluded. In this article, suicidal behaviour is defined as any acts showing an intention to end one's own life with careful consideration and/or planning of possible techniques of causing one's death, which may or may not have instances of a suicidal attempt. Suicide refers to all cases of death resulting directly or indirectly from an act by the victims themselves, which they undertake with the intent of killing themselves.

### *Findings*

The section is divided into seven sections, viz., 1. research contexts, 2. study population, 3. research objectives, 4. research methods employed, 5. vulnerable groups, 6. associated psychopathologies and co-morbidities, and 7. associated sociocultural factors (Table 1).

**Research contexts:** Altogether, 18 studies could be traced which had studied suicide in the northeastern population of India. Most of the research occurred in Assam, followed by Arunachal Pradesh, Sikkim, Meghalaya, Manipur and Tripura. No published work on suicide was found, which included samples from Nagaland and Mizoram.

**Study population:** Most of the studies focused on the adult population, while a few included adolescents as a subset of a wider age group that included adults. However, studies with an exclusive focus on children and adolescents were clearly at the margin. Similarly, almost all but four studies explored the phenomenon in persons with clear manifestations of suicidality. Three of these studies explored factors associated with completed suicide by reviewing police inquest reports, magistrate inquest reports, police headquarters, crime branches, and so on (Barman & Bairagi, 2023; Chettri et al., 2016; Panda et al., 2021). The rest of the pieces of literature were based on study samples that were reported to the hospital after the manifestation of suicidal behaviour or other mental and behavioural issues (e.g.,

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Ahmed, 2023; Nath et al., 2021; Victor et al., 2017) and out-number community-based research. Assam, Arunachal Pradesh and Tripura hosted a few community-based explorations, leaving the other states out (Roy & Chakma, 2015; Sharma, 2020; Singh et al., 2013; Singh & Rao, 2018).

**Research objectives:** Broadly, research centred on five kinds of research objectives, viz., 1. Exploration of sociodemographics of persons with suicidal behaviours and persons who have died by suicide; 2. Exploration of risk factors for persons with suicide risk, 3. Exploration of traits and pathology associated with suicide, 4. Prevalence of suicide attempts (SA) and suicidal ideation (SI) in communities, and 5. Exploration of protective factors and coping strategies. It was observed that more studies had invested in examining socio-demographics, associated factors and risk factors compared to the other forms of research. Largely, studies inspected the association between suicidality and various psychological traits (Singh et al., 2013; Singh & Rao., 2018) or psychiatric disorders like schizophrenia, depression, etc. (Nath et al., 2021; Kaushik et al., 2020; Victor et al., 2017). Other kinds of research were scarce, with only three studies examining the prevalence of suicide ideation and attempts in a population of college students (Ghosh & Bhattacharjee, 2022; Lyngdoh et al., 2023; Sharma, 2020) and two studies looking for protective factors and coping strategies for persons having suicidal experiences (Ahmed, 2023; Roy & Chakma, 2015).

**Research methods employed:** Predominantly, three kinds of research methods and sources of information were used to generate data, which were a. Use structured questionnaires and interviews, b. case record files, and c. unstructured detailed interviews. Most studies used various questionnaires like Mini plus 5.0 for assessing suicidality, the Beck suicide intent scale, and the International Suicide Prevention Trial Scale for Suicidal Thinking (e.g., Sharma, 2020; Nath et al., 2021; Ahmed, 2023), while a few accessed the case record files (Barman & Bairagi, 2023; Chettri et al., 2016; Panda et al., 2021). The unstructured detailed interviewing method was utilised by only one study (Panda et al., 2021). Except for the mixed method study by Panda et al. (2021), all other studies undertaken quantitative research methods.

**Vulnerable groups:** Nearly all studies indisputably stated that the occurrence of suicidal behaviours was highest for the youth across the various northeastern states, including Assam, Silchar, Sikkim, Tripura, Arunachal Pradesh (e.g., Barman and Bairagi, 2023; Bhuyan et al., 2023; Pradhan, 2018; Victor et al., 2017). On the other hand, apart from a few exceptions (Elanbam et al., 2009), most of the literature stated that the frequency of suicidal behaviours was higher in males than in females (Barman & Bairagi, 2023; Bhuyan et al., 2023). In terms of social status, there were mixed findings; some claim a higher rate of suicide in married people (Bhuyan et al., 2023), while others claim otherwise (Mene, 2014; Victor et al., 2017). Nevertheless, persons who were daily wage earners, unemployed, students and belonging to rural places were consistently found to be at a higher risk of suicide (Barman & Bairagi, 2023; Bhuyan et al., 2023; Pradhan, 2018; Victor et al., 2017). Mene (2014) stated that persons engaged in farming contributed to the highest cases of suicide in the Idu Mishmi community. The limited amount of studies conducted in school, college and community settings from different northeastern states shared a 16-20 % prevalence of suicide ideation among college students (Sharma, 2020; Ghosh & Bhattacharjee, 2022; Lyngdoh et al., 2023). The risk of suicide attempts was reportedly present for 39.6% of college students in Goalpara, Assam (Sharma, 2020).

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**Associated psychopathologies and co-morbidities:** Suicidality was widely associated with schizophrenogenic psychopathologies and brief psychotic episodes (Nath et al., 2021; Bhuyan et al., 2023) and depressive episodes (e.g., Bhuyan et al., 2023; Elangbam et al., 2009; Kaushik et al., 2022; Pradhan, 2018). Similarly, alcoholism, anxiety disorder, and eating disorder were evidenced to be related to suicidality Singh et al., 2013; Kaushik, 2020). Additionally, Singh and Rao (2018) suggested that suicidal behaviours were significantly associated with psychological traits like impulsivity and aggression.

**Associated socio-cultural factors:** The vital role of life stressors behind suicide was underscored by several studies. Pradhan (2018) mentioned that stressful life events were present for all the participants in a hospital-based study in Sikkim, while Nonpiur et al. (2017) suggested that 92% of the participants in their study in Meghalaya had experienced some stressors. However, only a few research examined the various socio-cultural factors that play a role in suicide. They indicated a wide range of factors, of which the importance of economic problems, family problems, and problems related to love affairs have been underscored repeatedly (Pradhan, 2018; Lyngdoh et al., 2023; Sharma, 2020). The contribution of academic stress to suicidal behaviour in students was also highlighted (Lyngdoh et al., 2023; Sharma, 2020). Mene (2014) reported broader cultural factors like rigid social norms, conservativeness and other such factors associated with suicide in a small community. The psycho-socio-cultural-economic factors were comprehensively studied by only one study done in Sikkim (Panda et al., 2021).

### DISCUSSION

An overview of the existing research work has led to the emergence of a few crucial insights into the status of suicide and suicidal behaviours in northeastern states, as well as some significant research gaps. Starting with the crucial insights, the discussion will move on to the research gaps to envision future research directions. The youth, roughly persons aged 15-29 years, are found to be most vulnerable across the various northeastern states. Such a finding is in sync with the broader pictures outside northeast India. In this context, worldwide data claims that suicide is the fourth leading cause of death in young people aged 15–to 29 years (WHO, 2019), while the National Crime Report Bureau stated that the age group of 18 to 30 years and persons aged 30- 45 years are the most vulnerable groups dying by suicide in India (NCRB, 2021). Along similar lines, the nationally representative survey in India shows that a large proportion of adult suicide deaths occur between the ages of 15 years and 29 years (Patel et al., 2012). Drawing data from NCRB data published over three decades, Swain et al. (2021) also confirm that suicide victims aged 15 to 29 have been the highest among all the age groups consistently during the period. Nevertheless, only a few studies focused their attention on this age group. Only two studies have studied adolescent and high school students, and one studied college-going students specifically. Thus, an urgency to study the age group of northeastern states stands out prominently.

On the other hand, the burden of suicide is seemingly more for males than in females across the various northeastern states, which comply with the national and worldwide data, which claims a generally higher prevalence in males over females worldwide (WHO, 2019) and nationally (Patel et al., 2012; Swain et al., 2021). While the difference can really exist out there, it is also essential to look at it through India's general unwillingness to accept suicide in females when it is related to domestic violence, abuse, and dowry issues (Rani & Verma, 2022) to make sense of the difference. Thus, it can be argued that while exploring men's experiences in depth is essential, women's experiences should not be ignored.

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A vast majority of the studies have drawn the reader's attention to the association between suicidality and various psychiatric co-morbidities, most commonly depression, followed by schizophrenia, acute psychotic episodes and so on. Many other studies have linked mental disorders with suicidality in India and abroad (e.g., Joiner, 2005; Rajguru & Balhara, 2023). Nevertheless, neurobiological research fails to demonstrate how psychiatric disorders lead to suicide or suicidal behaviours (Marsh, 2016; Hjelmeland & Knizek, 2010). In addition, Vijayakumar et al. (2005) stresses that the relationship between suicide and mental disorders is far more obvious in India, unlike other Asian countries. In this context, linking psychiatric disorders with suicidality is problematic as it may form a 'regime of truth' or a compulsory ontology of pathology offering only one possibility (Marsh, 2010; 2016). The risk of forming such a regime of truth is exceptionally higher in suicide research in northeastern states because most of these studies have ignored exploring other associated sociocultural factors. Moreover, they were restricted to persons reporting to general hospitals or mental health care institutes. This exclusive focus on mental disorders can reinforce a problematic assumption that suicidality originates from internal or psychic space by ignoring broader sociocultural factors (Marsh, 2016). Thus, it can be argued that the research objectives of future studies can be broadened, and more community samples should be studied.

A few other studies have shed light on the various critical socio-cultural factors associated with the phenomenon, including economic problems, family problems, problems related to love affairs, academic stressors, and broader social norms and practices, which are mentioned in detail in the previous section. Similar findings are shared by researchers from other Indian states where the role of psychosocial risk factors, including family disputes, marital discord, conflict with parents, domestic violence and so on, in increasing suicide risk was discussed (Chowdhury, 2013; Indu et al., 2016; Kosaraju et al., 2015; Sahoo et al., 2016; Sahoo et al., 2018). Halder and Mahato (2016) stated that 95% of suicide attempts were related to severe stress, while any significant relation between depression and suicide attempts could not be established. Also, the risk of suicide is consistently observed to be higher for students, unemployed, farmers and daily wage earners across the various northeast states. Along similar lines, a disproportionately higher vulnerability of suicidal ideation and attempts has been demonstrated in certain groups than others across various other Indian states. For instance, a higher risk of suicidality was observed in women, individuals with lower educational attainment, persons who are widowed, separated or divorced, daily labourers, gender-incongruent adults and the like (e.g., Amudhan et al., 2019; Kosaraju et al., 2015; Majumdar et al., 2021). These findings go beyond singular explanations and exemplify how each act of suicide is the result of an interaction of sociodemographic, economic, and cultural, all of which occur within a broader ecological context with a range of structural factors that play out disproportionately across specific subgroups in the population (Patel & Gonsalves, 2019). Researchers have posited that such socio-cultural and politico-economic factors are equally, if not more, relevant to examine than mental disorders and biological factors in Southeast Asian countries like India, Sri Lanka, China, Bangladesh, and Pakistan (Samuel & Sher, 2013).

However, these risk factor studies should act as a vantage point to understand the complex relationship between suicidality and socio-cultural risk factors in depth. In simpler words, researchers should attempt to understand what it is about the sociocultural factors that increase the risk of suicidal behaviour and what can be done about it (Marsh, 2019). Hjelmeland Knizek (2010) argue that mainstream suicide studies, including risk factor studies, tend to 'explain' different parts of suicidal behaviour and lack interest in

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‘understanding’ the phenomenon. They suggest that most of these studies isolate the facts from the context and strive to arrive at linear cause-and-effect relationships. On the contrary, they highlight the need to understand the ‘human mind’, which necessitates the use of qualitative methodology. Similarly, White (2016) writes, “If we want to adequately engage with the multiplicities, complexities, and uncertainties that characterise our social worlds, including experiences of suicidal despair and the contexts that surround its emergence, and work toward the development of ethical, effective, and culturally responsive approaches to suicide prevention, then multiple paradigms and diverse research, policy, and practice frameworks will need to be mobilised” (p. 336). Thus, it can be argued that a comprehensive understanding of the relationship between socio-cultural risk factors and suicidal behaviours requires researchers to take up qualitative methodology. The present review highlights a major methodological gap by which the research field is dominated by quantitative methodologies, with a severe lack of qualitative studies in Northeastern India.

### CONCLUSION

In conclusion, the narrative review shows young adults as one of the most vulnerable groups in Northeast India, along with daily wage earners, unemployed, students, and farmers. A wide range of sociocultural risk factors are unfolded and found to be associated with suicide and suicidal behaviours. However, significant population, methodological, and empirical gaps have caused a paucity of knowledge. The vulnerable groups are rarely studied individually, and qualitative methods are scarcely used. These have resulted in an empirical gap by which the understanding of the kind of relationship between sociocultural risk factors and suicidal behaviours cannot be captured. Thus, it can be argued that future research should study vulnerable groups more intently. The risk factor studies should guide and lead to more qualitative studies, which can help in arriving at a broader understanding of suicide in the northeast Indian states.

**Ethical approval:** The broader research is a doctoral research project and is approved by the Institutional Ethics Committee (EC/ NEW/ INST/ 2020/06/13 dated 27.05.20)

*Table 1 Key characteristics and findings of included studies*

Author & Place	Research objectives (RO), sample and tools used	Key findings
Sharma (2020), Assam	RO: To assess the risk factors of suicide and suicidal behaviour among adolescents in Goalpara, to assess the risk level of adolescents, and to find an association between risk level and selected socio-demographic variables. Sample: 250 higher secondary students aged 16-19 years in Goalpara, Assam Tools used: self-administered structured questionnaire	The economic problem shows the highest mean percentage, followed by academic problems, family problems, psychological problems, physical problems, high-risk behaviours, negative peer relations, family history of substance abuse, problems related to love affairs, family history of mental illness, sociocultural factors, and sexual abuse. The risk of SA was present for 39.6 % of respondents, the risk of SI was present for 20.4% and low risk of suicide was present for 40%.
Nath et al. (2021), Assam	RO: To find an association of SI with various sociodemographic	Among participants, 25.7% attempted suicide earlier, and

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	<p>and clinical profiles in patients with schizophrenia.            Sample: 140 patients from the age group of 18 to 65 years diagnosed with schizophrenia and attending a tertiary mental hospital in Tezpur, Assam.            Tools used: Structured questionnaires</p>	<p>29.3% had SI during the study period.            A family history of psychiatric illness and suicide, comorbid substance use, previous attempts, and a negative attitude toward psychotropics were significant predictors of suicidal ideation. SI was significantly correlated to schizophrenic psychopathology.</p>
Ahmed (2023), Assam	<p>RO: To assess the suicide risk and potential protective factors among the patients admitted to a tertiary mental health care institute.            Sample: 53 patients aged 18-60 years admitted to the inpatient department of a tertiary mental healthcare institute in Tezpur, Assam.            Tools used: Structured questionnaire</p>	<p>3.8% had very high suicide risk. Patients had considerable protective factors against suicide. A weak negative correlation between suicide risk and reasons for living was observed, implying the risk of suicide was reduced with more protective factors.</p>
Barman and Bairagi (2023), Dibrugarh	<p>RO: Analysed the socio-demographic characteristics of hanging cases.            Sample: Reported cases of suicide at a tertiary care hospital in Dibrugarh, Assam.            Information sources accessed: Police inquest reports, magistrate inquest reports, statements of the investigating officers, accounts from relatives, and eyewitnesses.</p>	<p>The majority belonged to the 21-30 years age group followed by 11-20 years.            Male victims accounted for 71.43% of the cases. Male-female ratio of victims was 2.5:1.            The majority were daily wage earners, followed by unemployed and students.</p>
Bhuyan et al. (2023), Assam	<p>RO: To assess the suicidality, mode of suicide attempt, and the psychiatric co-morbidity among persons who attempted suicide admitted to a tertiary hospital in Dibrugarh, Assam.            Sample: 66 patients aged between 12-65 years.            Tools used: Structured questionnaire</p>	<p>The majority were males, aged 18-29, 30-41 years of age, married, belonged to a lower-middle socio-economic class, and nuclear families of rural domicile.            Forty-two were male, and 24 were females            A high risk of suicide at 63.6%            The majority had co-morbidity of schizophrenia            Suicide risk was higher in those who had a psychiatric diagnosis, but the association was not significant.</p>
Singh et al. (2013), Arunachal Pradesh	<p>RO: To validate earlier reports of the high rate of suicides among them and to evaluate psychological traits.            Sample: 182 school children</p>	<p>Within a total of 31 suicide attempters, 23.1% and 6.1% were female and male attempters, respectively.            Multiple attempts were more</p>

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	aged 13–19 years and 36 family members of individuals who died by suicide. Tools used: Unstructured, open-ended questions on the mode, number, and fatality of attempts and structured questionnaire.	prevalent for females. Anxiety syndrome, alcohol abuse and eating disorders were also recorded in the population.
Mene (2014), Arunachal Pradesh	To explore the trend of suicide, its correlation with age and sex, occupation, education, marital relation, seasonal association, means used, etc. Information sources accessed by household enumeration of all the suicide victims following the interview method with a structured schedule. Data was also collected from District and State crime branches and the National Crime Records Bureau.	218 suicide incidences in four decades (1970-2010), out of which only two cases were registered at the local police station. The age group of 10-29 years was most vulnerable to suicide Unmarried Idu Mishmi died by suicide more often (49.6 %) than the married (40.8 %) Persons engaged in agriculture/farming contributed the highest cases and least by the Government employees. External factors were conservativeness, rigid social norms and customs, love affairs, weak family bondage leading, ignorance, poor guidance, lack of socialisation, domestic violence, marriage issues, lack of education, less exposure, economic and social problems, alcoholism, etc
Singh and Rao (2018), Arunachal Pradesh	RO: To assess impulsive and aggressive behaviours among primitive people of the Idu Mishmi tribe.  Sample: 177 Idu Mishmi participants divided into two sets: 39 suicide attempters and 138 non-attempters of both sexes aged 15-70 years from Anini town of Dibyang Valley district of Arunachal Pradesh Tools used: Structured questionnaires	Prevalence rate of suicide attempts was 22.03%. A higher frequency of suicide attempts was observed for persons above 19 years old, married, and high school educated. The suicide attempters scored significantly higher on aggression and impulsivity. The trait impulsiveness was at a higher difference in comparison to aggression, suggesting a profound role of impulsiveness in suicide attempts in the tribe.
Victor et al. (2017), Silchar	Ro: To find out sociodemographic profiles, modes of attempting suicide, and prevalence of depression among the subjects with suicide attempts and to find any association between them.	The majority of suicide deaths occurred for those who belonged to the age group of 15-24 years, were Hindu, and had a rural background. The majority were unmarried, unemployed, and from a lower socio-economic status.



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	<p>Sample: 108 people, aged 15-64 years, who attempted suicide and attended Silchar Medical College and Hospital (SMCH), Assam Tools used: Socio-demographic performa</p>	<p>A slightly higher number of suicide deaths was observed for the females. 66.66% of the participants fulfilled the ICD-10 criteria for depressive disorder.</p>
Pradhan (2018), Sikkim	<p>RO: To identify the sociodemographic factors, methods and to risk factors leading to suicidal attempts. Sample: 100 persons who attempted suicide and reported in Sir Thutob Namgyal Memorial Hospital, Gangtok, Sikkim Tools used: structured questionnaire</p>	<p>49% were male and 51% were female. Peak occurrence of suicidal attempts was found in the second and third decades (21-30 years). The majority were married and self-employed. They had an education up to matriculation and belonged to nuclear families, middle socio-economic groups, and rural backgrounds. Depressive disorder (44%) constituted a major category of psychiatric disorders.  All the participants had experienced stressful life events prior to their attempts, including family conflict, illness in the family, financial problems, broken love affairs, marital conflict and divorce.</p>
Panda et al. (2021), Sikkim	<p>RO: To evaluate the psychosocial, cultural, economic factors and psychiatric and physical comorbidity of completed suicide in Sikkim. Sample: 206 close relatives of the suicide victims, four psychologists, five psychiatrists, six social workers, three panchayat members /councillors, four police personnel, and twelve survivors of a suicide attempt  Information accessed from the police headquarters, Gangtok, Sikkim from Jan 2001- to March 2017 Tools used: Detailed interviews</p>	<p>The frequency of males ending their lives more than females, highest suicide was in persons aged between 15-24 years and belonging to rural areas <i>Psychological factors</i> included the presence of mental illness, substance abuse, poor coping strategies/ skills, impulsivity, and stress. <i>Physical health-related factors</i> included chronic physical illness and unwanted pregnancy. <i>Socio-cultural-environmental factors</i> were failures in love affairs, lifestyle, economic scenarios, and religious beliefs. <i>Family factors</i> encompassed conflicts, extramarital affairs, divorce, and inheriter characteristics of suicide. Other significant factors were lack of awareness, stigma, poor media reporting, and lack of assessment tools.</p>
Elangbam et al (2009),	RO: To determine the frequency	The frequency of reported suicidal

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Imphal	<p>of suicidal acts and ascertain the association between suicidal acts and other variables. Sample: 200 individuals who reported in the Regional Institute of Medical Science Hospital, Imphal, after suicidal acts</p> <p>Tools used: Socio-demographic performance</p>	<p>acts was significantly higher in females. The young adults (20-35) had the maximum number of suicidal acts.</p>
Kaushik et al. (2020), Manipur	<p>RO: To determine the socio-demographic profile and psychiatric disorders in patients presenting with attempted suicide in the Department of Psychiatry, Regional Institute of Medical Sciences, Manipur. Sample: 45 persons who have attempted suicide within the study duration and attended the Department of Psychiatry, RIMS Tools used: Socio-demographic proforma and structured questionnaires</p>	<p>Out of 45 persons with a history of attempted suicide, 26 were male and 19 were female. Maximum persons belonged to the age group of 21-30 years followed by the age group of 31-40 years. The majority were educated till matriculation and were unemployed, followed by students.</p>
Chettri et al. (2016), Sikkim	<p>RO: To investigate the sociodemographic profile of individuals who had committed suicide in Sikkim. Information sources access: Ten-year data (2006-2015) related to the various socio-demographic variables of completed suicide was retrieved from the Police Headquarters, Crime Branch, Gangtok, Sikkim.</p>	<p>Most of the victims belonged to the age group of 21-30. Among the ethnic groups, the Rai was the dominant group, followed by the Chetry and Subba. People from rural backgrounds had a significantly higher number of suicides in comparison to those from urban backgrounds. The occurrence of most of the suicides was found in the eastern district of Sikkim, followed by western, southern, and northern.</p>
Lyngdoh et al. (2023), Meghalaya	<p>RO: To determine the prevalence of suicidal ideation, suicide attempts, and the predictors for both suicidal ideation and attempts among young adults in Meghalaya. Sample: 345 respondents from medical students of NEIGRIHMS and undergraduate students of Synod College in the East Khasi Hills district of Meghalaya. Tools used: Socio-demographic proforma and structured</p>	<p>The prevalence of lifetime SI &amp; SA was 15.9% and 5.8 %, respectively. Reasons related to SA were academic stress, relationships, family issues, financial issues, and attempts to escape problems. A smaller number of family members, presence of stress, experiencing violence/abuse, unhealthy relationship with their parents, experiencing loss of a loved one, and presence of behavioural issues were associated with SI.</p>

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	questionnaires	A significant association was found between SA and the experience of the loss of a loved one. Coping mechanisms were contact with family and friends, praying to God, and professional help.
Nongpiur et al. (2017), Meghalaya	RO: To explore deliberate self-harm (DSH) and to understand the pattern of occurrence to help improve early intervention strategies conducted at a tertiary care hospital in Shillong, Meghalaya, India Sample: 50 participants who presented with a history of DSH at outpatient departments and inpatient wards of North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences in Shillong. Tools used: Socio-demographic proforma and structured questionnaires.	Nearly 65% of the persons attempting DSH was in the age group of 15-25 years, while 25% of the study population was in the age group of 26-44 years. The majority of them were from an urban background. The study reported that 92% had life stressors in the last month of the attempts, where family and relationships were most common.
Roy and Chakma (2015), Tripura	RO: To analyse and compare the coping strategies, social support, and quality of life of suicide attempters versus matched normal controls and to identify the risk factors leading to suicide. Sample: 100 persons with experience of suicide attempts admitted to different departments of Medical College (AGMC) & GBP Hospital, Agartala, Tripura Tools used: Socio-demographic proforma and structured questionnaires	Social support was found to be significantly lower in persons who had attempted suicide in comparison to the control group. Most common coping strategy used by persons who had attempted suicide was coping by confronting, followed by distancing and positive reappraisal, but predominant coping in the control group was seeking social support followed by accepting responsibility and self-controlling. Quality of life was significantly lower for persons who had attempted suicide.
Ghosh and Bhattacharjee (2022), Tripura	RO: To examine the prevalence of suicidal ideation among adolescents and the association between demographic variables and suicidal ideation among adolescents in Tripura. Sample: 500 adolescents from Tripura Tools used: Socio-demographic proforma and structured questionnaires.	Findings represented that 9.6% had high suicidal ideation, 20% had moderate suicidal ideation, and 46% had mild suicidal ideation. The frequency of suicidal ideation was significantly higher in adolescents who used substances, belonged to urban backgrounds, and had a non-peaceful family environment.

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**REFERENCES**

- Ahmed, N. (2023). Assessment of Suicide Risk and Potential Protective Factors among Patients Admitted at a Tertiary Mental Health Care Institute in Assam. *Nursing Journal of India*, 114(1), 32-36.
- Amudhan, S., Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Sheehan, D. V., Kokane, A. M., Chavan, B. S., Dalal, P. K., Ram, D., Pathak, K., Lenin Singh, R. K., Singh, L. K., Sharma, P., Saha, P. K., Ramasubramanian, C., Mehta, R. Y., & Shibukumar, T. M. (2019). A population-based analysis of suicidality and its correlates: findings from the National Mental Health Survey of India, 2015-16. *The lancet. Psychiatry*, 7(1), 41–51. [https://doi.org/10.1016/S2215-0366\(19\)30404-3](https://doi.org/10.1016/S2215-0366(19)30404-3)
- Barman, S., & Bairagi, K. K. (2023). Analysis of Socio-Demographic Profiles of Suicidal Hanging Cases to Formulate a Preventive Strategy: An Autopsy-Based Study Conducted at a Tertiary Care Hospital in the North-East Region of India. *Cureus*, 15(7). e42483. <https://doi.org/10.7759/cureus.42483>
- Bhuyan, D., Dihingia, S., Das, B. S., Goswami, S., Das, J., Kaur, K., ... & Konwar, B. (2023). Suicidality, Mode of Suicide Attempt and Psychiatric Co-Morbidity Among Suicide Attempters in A Tertiary Hospital of North-East India—An Observational Study. *Journal of Population Therapeutics and Clinical Pharmacology*, 30(4), 540-547.
- Chettri, R., Gurung, J., & Singh, B. (2016). A 10-year retrospective study of suicide in Sikkim, India: Sociodemographic profile and risk assessment. *Indian journal of psychiatry*, 58(4), 448.
- Chowdhury, A. N., Banerjee, S., Brahma, A., Hazra, A., & Weiss, M. G. (2013). Sociocultural context of suicidal behaviour in the Sundarban region of India. *Psychiatry journal*, 486081. <https://doi.org/10.1155/2013/486081>
- Elangbam, V., Singh, A. B., Devi, K. S., & Devi, L. U. (2009). Suicidal acts reported at a teaching hospital in manipur. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 34(4), 357-358.
- Ghosh, T., & Bhattacharjee, A. (2022). Understanding suicidal ideation among adolescents of north east India through the lens of demographic factors. *Demografie*, 64(4), 297-308.
- Halder, S., & Mahato, A. K. (2016). Socio-demographic and clinical characteristics of patients who attempt suicide: a hospital-based study from Eastern India. *East Asian archives of psychiatry*, 26(3), 98-103.
- Indu, P. V., Remadevi, S., Vidhukumar, K., Shah Navas, P. M., Anilkumar, T. V., & Subha, N. (2020). Domestic violence as a risk factor for attempted suicide in married women. *Journal of interpersonal violence*, 00 (0), 1-19
- Joiner, T. (2005). *Why people die by suicide*. Harvard University Press.
- Kaushik, N., Singh, S. G., & Bihari Thingbaijam, H. A. (2020). Psychiatric disorders among patients presenting with attempted suicide in RIMS hospital, Manipur. *Int J Health Res Medico Leg Prae*, 6(1): 67-70. DOI 10.31741/ijhrmlp.v6.i1.2020.14
- Kosaraju, S. K. M., Vadlamani, L. N., Bashir, M. S. M., Kalasapati, L. K., Rao, G. C., & Rao, G. P. (2015). Risk factors for suicidal attempts among lower socioeconomic rural population of Telangana region. *Indian journal of psychological medicine*, 37(1), 30-35.
- Lyngdoh, M., Sundaram, S. P., Ningombam, J. D., & Medhi, G. K. (2023). Suicidal ideation, attempts and its determinants among young adults in Meghalaya: a cross sectional study. *International journal of adolescent medicine and health*, 35(4), 375-380.

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Suicidology in Northeastern India: A Narrative Review**

- Majumder, A., Chatterjee, S., & Bhattacharjee, K. (2021). Exploring cross-sectional predictors of suicide ideation, attempt, and risk in gender incongruent adults in India. *Indian journal of endocrinology and metabolism*, 25(2), 103-109.
- Marsh, I. (2010). *Suicide: Foucault, history and truth*. Cambridge University Press.
- Vijayakumar, L. (2005). Suicide and mental disorders in Asia. *International Review of Psychiatry*, 17(2), 109-114.
- Marsh, I. (2016). Critiquing contemporary suicidology. *Critical suicidology: Transforming suicide research and prevention for the 21st century*, 15-30.
- Marsh, I. (2019). Suicide and Social Justice: Discourse, Politics and Experience. In *Suicide and Social Justice* (pp. 15-31). Routledge.
- Mene, T. (2013). Underestimation of suicide: A study of the Idu Mishmi tribe of Arunachal Pradesh. *Economic and political weekly*, 129-133.
- Mene, T. (2014). Suicide: a study of the Idu Mishmi tribe of Arunachal Pradesh. *Resarun J Directorate ResGovernment of Arunachal Pradesh. India*, 37, 20-6.
- Nath, S., Kalita, K. N., Baruah, A., Saraf, A. S., Mukherjee, D., & Singh, P. K. (2021). Suicidal ideation in schizophrenia: A cross-sectional study in a tertiary mental hospital in North-East India. *Indian journal of psychiatry*, 63(2), 179–183. [https://doi.org/10.4103/psychiatry.IndianJPsychiatry\\_130\\_19](https://doi.org/10.4103/psychiatry.IndianJPsychiatry_130_19)
- Nongpiur, A., Tesia, S. S., & Raghavan, V. (2018). Pattern of deliberate self-harm seen at a tertiary teaching hospital in Meghalaya, India. *Open Journal of Psychiatry & Allied Sciences*, 9(1), 34-36.
- Panda, S., Basumatary, U., & Kashyap, K. Exploring Nature and Risk Factors of Completed Suicide in Sikkim. *Research Journal (Arts)*, 48, 79-102.
- Patel, V., & Gonsalves, P. P. (2019). Suicide prevention: Putting the person at the center. *PLoS Medicine*, 16(9), e1002938.
- Patel, V., Ramasundarhettige, C., Vijayakumar, L., Thakur, J. S., Gajalakshmi, V., Gururaj, G., ... & Jha, P. (2012). Suicide mortality in India: a nationally representative survey. *The Lancet*, 379 (9834), 2343-2351.
- Pradhan, C. L (2018). Psychiatric and Psycho-social Profile of Risk Factors in Attempted Suicide in Sikkim, India. *International Journal of Contemporary Medical Research*, (5)10, 1-5.
- Rajguru, A. J., & Balhara, Y. P. S. (2023). Increasing trend of deaths due to suicide attributable to mental disorders and substance use (disorders) in India. *Asian journal of psychiatry*, 88, 103722 <https://doi.org/10.1016/j.ajp.2023.103722>
- Hjelmeland, H., & Knizek, B. L. (2010). Why we need qualitative research in suicidology. *Suicide and Life-Threatening Behavior*, 40(1), 74-80.
- Rajguru, A. J., & Balhara, Y. P. S. (2023). Increasing trend of deaths due to suicide attributable to mental disorders and substance use (disorders) in India. *Asian journal of psychiatry*, 88, 103722. <https://doi.org/10.1016/j.ajp.2023.103722>
- Rani, A., & Verma, P. (2022). Domestic Violence–Suicide, Dowry Death: Stigma on Indian Society *Journal Global Values*, 8, (1), 17-24.
- Roy, B., & Chakma, P. (2017). Social Support, Coping Strategies and Quality of Life in Attempted Suicide: A Hospital Based Study. *Eastern Journal of Psychiatry*, 18(2), 19-26.
- Sahoo, M. K., Biswas, H., & Agarwal, S. K. (2016). Risk factors of suicide among patients admitted with suicide attempt in Tata main hospital, Jamshedpur. *Indian journal of public health*, 60(4), 260–267. <https://doi.org/10.4103/0019-557X.195853>

## Exploring Contributing Factors of Suicide and Suicidal Behaviours to Map Research Gaps in Suicidology in Northeastern India: A Narrative Review

- Sahoo, M. K., Biswas, H., & Agarwal, S. K. (2018). Study on risk factors in adolescents admitted with deliberate self-harm in Tata main hospital, Jamshedpur. *Industrial psychiatry journal*, 27(1), 80-86.
- Samuel, D., & Sher, L. (2013). Suicidal behavior in Indian adolescents. *International journal of adolescent medicine and health*, 25(3), 207–212. <https://doi.org/10.1515/ijamh-2013-0054>
- ADSI. (2021). Accidental Deaths & Suicides in India, ADSI report. National Crime Records Bureau, Ministry of Home Affairs, Govt. of India. <https://ncrb.gov.in/en/accidental-deaths-suicides-india-adsi>.
- Sharma, R. M. (2020). A Study to Assess the Risk factors of Suicide Among Adolescents in Selected Colleges of Goalpara, Assam. *International Journal of Scientific and Research Publications*, 10(6), 538-542
- Singh, P. K., & Rao, V. R. (2018). Explaining suicide attempt with personality traits of aggression and impulsivity in a high risk tribal population of India. *PloS one*, 13(2), e0192969. <https://doi.org/10.1371/journal.pone.0192969>
- Singh, P. K., Singh, R. K., Biswas, A., & Rao, V. R. (2013). High rate of suicide attempt and associated psychological traits in an isolated tribal population of North-East India. *Journal of affective disorders*, 151(2), 673–678. <https://doi.org/10.1016/j.jad.2013.07.018>
- Swain, P. K., Tripathy, M. R., Priyadarshini, S., & Acharya, S. K. (2021). Forecasting suicide rates in India: An empirical exposition. *PloS one*, 16(7), e0255342. <https://doi.org/10.1371/journal.pone.0255342>
- Victor, R., Sengupta, C., Naskar, S., Boro, B., & Saxena, K. (2018). Suicide menace in North-Eastern India: a hospital-based study on the clinical aspects of suicide attempters. *Open Journal of Psychiatry & Allied Sciences*, 9(1), 26-32.
- Vijayakumar L. (2010). Indian research on suicide. *Indian journal of psychiatry*, 52(Suppl 1), S291–S296. <https://doi.org/10.4103/0019-5545.69255>
- Vijayakumar, L., John, S., Pirkis, J., & Whiteford, H. (2005). Suicide in developing countries (2) risk factors. *Crisis*, 26(3), 112-119.
- White, J. (2016). Qualitative evidence in suicide ideation, attempts, and suicide prevention. *Handbook of qualitative health research for evidence-based practice*, 335-354.
- World Health Organization. (2021). Suicide worldwide in 2019: global health estimates.

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