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REVIEW

Understanding Suicide and its Prevention in the Indian Context: Mental Health Perspective

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Abstract

In India, suicide research has largely concentrated on the prevalence, method, psychological, and demographic risk factors. Suicide processes, paradigms, prevention strategies, and other features of suicide that are common in the West may not be applicable in India. It is vital to study potential underlying processes, various suicide prevention methods, and suicide prevention in general, as well as what more work has to be done in the Indian context. Suicide, on the other hand, is a cross-sectoral public health issue that demands collaboration across all key sectors, and its prevention should engage all stakeholders in India.

Keywords: Suicide, Suicide prevention, India, Intervention

Key message

In India, there are insufficient suicide prevention measures, which require the government's immediate attention. Suicide is a complex issue that necessitates the participation of all stakeholders. On the one hand, high-risk care is needed, yet resilience development is also required. However, because psychosocial factors explain the bulk of suicides in India, the role of mental health care practitioners is critical.

Suicide is a complex and multi-sectoral public health concern. Apart from the medical community, education, labor, social welfare, agriculture, business, justice, law, defense, politics, media, family and friends, workplaces, community groups, etc., have an essential role in preventing suicide. Suicide being a heterogeneous condition, there is no single universally accepted preventive strategy, and it should not be the only responsibility of mental

health care professionals. In the Indian context, mental health professionals playing a significant role in sensitizing these issues. There is a lot of literature on suicide at the national and international levels. There is a need to contextualize how much they are relevant in Indian context in terms of concept, process, models, prevention, etc. This narrative review was conducted to examine the published suicide literature in the Indian context. We have searched online databases with Google Scholar, Scopus, PubMed, PsycINFO, and ResearchGate for eligible articles. Google search engine was used to search for non-academic journal-based literature and relevant articles. Literature published from 1960 to the date of this review was included. The combination of search terms (in the title or abstract fields) used included 'suicide' OR 'suicidal' OR 'suicidality' OR 'hanging' OR 'drowning' OR 'self-poisoning' OR 'overdose' OR 'self-injury' AND 'India' OR 'Indian' or 'prevention' OR 'process' OR 'model' OR 'barrier' OR 'cause' OR 'efficacy of prevention' OR 'prevention strategy' OR 'need'. The

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titles of the papers identified through the database search were screened and the abstracts of papers that reported on suicide or self-harm in India were retrieved. These abstracts were examined in reference to the Indian context and selected.

1. Definition of suicide

There is no universally agreed definition of suicide, and theories or viewpoints bind those that exist from mental health fields such as philosophy, psychology, public health, sociology, and others. An act of self-harm, an act connected with the purpose to die, the expectation of an act's outcome to be death, and the act's consequence as death were the four primary components that emerged in the definition [1]. The World Health Organization defined suicide as the act of deliberately killing oneself [2].

2. Process of suicide

Suicide is typically described as a path that culminates in a suicide act. From the onset of the initial information regarding suicide through the actual attempt, the suicide process consists of a series of events [3]. The process begins with gathering knowledge on suicide from a reliable source, such as the media, society, or family members, and then taking time to analyze the information before transforming it into a death wish, depending on a variety of factors. Death wish may be further processed over time to decide to attempt. If the resistance is strong enough, the suicide attempt may be postponed.

3. Suicide prevention

Suicide prevention is preventing the onset of suicidal crises by eliminating situations of heightened risk, promoting life-enhancing conditions, and reducing negative societal conditions [4]. Suicide prevention is an umbrella term for the collective efforts of local citizens, organizations, health professionals, and related professionals to reduce the incidence of suicide [5]. Suicide prevention strategy needs to be multi-sectoral, involving the health sector and sectors such as education, labor, social welfare, agriculture, business, justice, law, defense, politics, and the media. Suicide being a heterogeneous condition, there is no single universally accepted preventive strategy, and it should not be the only responsibility of mental health care professionals.

4. Need of suicide prevention

Suicide is the leading cause of death that can be prevented. In India, it has climbed by 43% in the last

three decades, with a current rate of 10.3/100,000 in the general population. Repeated attempts at suicide are common before a successful suicide. After the index attempt, the rate of repeat attempts is about 12% in three months, 23% at the end of two years, and 20–40% in the first three years. With each attempt, the likelihood of dying by suicide rises by 32% [6–12]. It is estimatedly 41.4 life years are lost for each suicide victim [13]. Suicide has an economic cost to individuals. The cost of one suicidal death is about \$1,329,553 in the US, while in India, it costs about Rs 348842.65 L. Most of this cost is due to loss of productivity, cost of medical treatment, and other interventions [14,15]. Suicide takes an emotional toll on families, friends, and survivors. It mounted the risk factor of suicide in survivors [16], and about 6 and 32 survivors exist for each suicide [17]. In the US, approximately 7% of the population knew someone who died by suicide during the past 12 months [18]. Family members and friends are impacted by grief reaction, shock, and helplessness [19,20]. In the coming years' rate of suicide may increase significantly [21].

5. Possible psychosocial models of suicide applicable to Indian scenario

In India, no model for suicide has been offered so far. When mythological perspectives are taken into account, four psychological variables emerge: sin, guilt, worth, and glory. The psychological implication of these factors has always been employed in metaphysical obscurity [22]. Studies on the suicide note in India support this perspective [23].

In the Indian setting, "crisis theory" is another viewpoint. Only in the event of a crisis are Indians prone to commit suicide or engage in suicidal behavior [24]. In Western countries, various biopsychosocial models of suicide have been presented to better understand suicide; however, no study has looked at these models in the Indian population. The most probable appropriate suicide model in India is presented below, based on the cause of suicide. Because suicide is such a heterogeneous condition, there is unlikely to be a single 'modus operandi.' Multiple models may work for the same person, as models function at the individual, familial, and societal levels.

1. Arrested Flight Model (Cry of Pain): It is the experience of feeling as though one has been brought down (defeated) and has no prospect of escape or rescue (entrapment). The majority of suicides in India tend to fit this paradigm, as they are driven by family issues, professional/

career issues, and property disputes. Suicidal ideation, according to the hypothesis, arises from emotions of entrapment as a result of defeat in stressful conditions [25].

2. Escape from the self: People who commit suicide don't want to end their life, but just to stop the pain. This model can be used for illness-related suicide. Suicide is a method of obtaining relief from an unmanageable situation [26].
3. Interpersonal psychological model: The simultaneous presence of thwarted belongingness and perceived burdensomeness produce the desire for suicide. This paradigm can be used to explain suicide in the context of marital problems. Suicide is motivated by a sense of burdensomeness and betrayal of belonging that comes with the fearlessness of pain, injury [27].
4. Labelling theory – According to this theory, suicide is a reaction to deviant labels of illness. This model could include suicide linked to addiction, impotency, or infertility. People commit suicide as a result of being tagged with derogatory words such as addicted, sterile, or infertile, etc. [28].
5. Social Problem-Solving Vulnerability (Diathesis-stress-hopeless model) – This theory posits that when the combination of diathesis and stress exceeds the coping threshold of a given person, it leads to suicide. People who commit suicide as a result of problems with love affairs or unemployment fit this model. Because of the inability to tackle the situation, high life stress leads to hopelessness and suicidal ideation [29].
6. Baechler theory: This theory propose that suicide or attempted suicide is a solution to a problem affronted by a person. This concept can be used to explain suicides caused by bankruptcy or indebtedness, exam failure, and poverty. Suicide occurs when there is no other option for dealing with a problem, whether it be escapist (to avoid suffering or punishment) or oblativ (to obtain a desirable opinion) [30].
7. Social network theory: This theory posits that loss of social bonds leads to feeling disillusioned and disconnected and vulnerable to suicide. This model appears to be applicable to suicides resulting from the death of a loved one, a suspected/illicit relationship, or a decline in social standing. Suicide is caused by the weakening and deterioration of social bonds [31].

6. Models of suicide prevention

The acceptability of various forms of suicide prevention measures is influenced by socioeconomic,

cultural, and religious factors. Suicide prevention measures developed in the West may not be fully accepted or applicable in India. For Asian countries, including India, the World Health Organization recommends increasing media coverage, educating gatekeepers, reducing access to lethal means of self-harm, improving the treatment of depression and other disorders that indicate suicide risk, and combining community initiatives as suicide prevention strategies. Suicide prevention models based on empirical evidence have been presented; however, no single model is broad enough to handle the problem. The majority of these models are operative in a community or on an individual level. Some popular models are:

1. The 'Werther effect' is addressed in this approach, as well as the 'Papageno effect' of media. Werther effect is the tendency of humans to copy behavior - whether healthy or destructive, while the Papageno effect is the influence that mass media can have by responsibly reporting on suicide and presenting non-suicide alternatives to crises. Sensationalizing, normalizing, or rationalizing, or presenting it as a solution, or prominent placement, or clear description of the approach, or providing images in the media to be avoided. This model appears to be quite relevant, as an Indian study found that media was the initial source of knowledge regarding attempted suicide in roughly 70% of cases [32].
2. Training models: Health care practitioners (primary care, mental health care, and emergency care), teachers, community leaders, police, military, social workers, spiritual and religious leaders, and traditional healers are all targeted for suicide prevention training under the concept. Regular training sessions are held in India by non-governmental organization, including the 'Suicide Prevention India Foundation' and 'AASRA', as well as the National Institute of Mental Health and Neurosciences. Suicide prevention can benefit from training programs like these [33].
3. Access reduction model: Restriction to suicide methods may be especially successful in situations where the method is well-known, highly lethal, generally available, and/or difficult to replace with other similar methods [34]. Pesticide poisoning and other forms of poisoning are the most common causes of suicide in India, and a pesticide ban has resulted in a major drop in suicides linked to pesticide poisoning.

4. Gatekeeper model: The term "gatekeeper" refers to "individuals in a community who have regular face-to-face contact with a large number of community members." Gatekeeper training has been implemented in many of the Asian nations participating in the Strategies to Prevent Suicide (STOPS) Programme in order to equip critical community members [35]. As previously indicated, non-governmental organizations such as 'Suicide Prevention India Foundation' and 'AASRA', as well as the National Institute of Mental Health, offer such training to those who are eligible.
5. Medical Model – The medical model has long been recommended because, when compared to other measures, it has been proven to be the most successful in preventing suicide. It entails high-risk screening, mental disorder diagnosis and treatment, and crisis intervention [36]. It is unknown what role it played in the overall decrease in the national suicide rate.
6. Zero suicide model: It incorporates a multilayered, evidence-based approach that has been found to be beneficial in suicide prevention interventions such as clinical training, psychosocial intervention, short intervention, and fatal mean reduction [33]. In India, such a comprehensive program is desperately needed and should be launched as soon as possible by the state and central governments.

7. The barrier to treatment, prevention, and research of suicide

In India, there aren't many studies that look into these issues. Multiple barriers to the treatment and prevention of suicide have been identified in western countries, including general barriers (stigma and discrimination, financial barriers, mental health system), clinician barriers (in primary care in detection, emergency care, specialty mental health care in detection and treatment), and patients barriers (stigma, cost, and fragmentation of services, adherence, underreporting), treatment barriers (for the high-risk group such as old age, adolescent, racial and ethnic minority, societal barriers) etc. [37–39].

Suicide prediction faces challenges due to a lack of data on short-term risk and protective factors [39]. Multiple research roadblocks appear to exist, including methodological issues (low base-rate event, psychological autopsy base, issues of confidentiality-informed consent); research design issues

(no appropriate control, risk-based allocation, sample size considerations, no lifetime risk of suicide, inability to avoid suicide clustering); and analysis issues (predominant use of poisson regression models, mixed-effects ordinal regression models, interval estimation).

8. The common cause of suicide and attempted suicide in India

Cultural differences may influence prevalence patterns, etiological causes, and life reasons. Because the cultures of the West and the East are so dissimilar, the causes will differ. As members of a collective society, numerous socio-cultural processes interact to create a value system that determines whether suicide is appropriate. The majority of suicides in India were caused by personal/social factors, health issues, and financial difficulties [40]. Among the specified causes, 'family problems' and 'illnesses' account for 21.7 percent and 18.0 percent of total suicides, respectively. Family problems, illness, marriage-related issues, drug abuse/alcoholic addiction, love affairs, bankruptcy or indebtedness, failure in examinations, unemployment, professional/career problem, property dispute, poverty, death of a loved one, suspected illicit relationship, and fall of social reputation were the most common causes of suicide as reported by the National Crime Record Bureau in 2015 [41].

9. Efficacy of suicide prevention

We haven't been able to find any research in India that has looked into the effectiveness of suicide prevention measures. In India, research on Telephone-Based Psychosocial Interventions and the SPIRIT Integrated Suicide Prevention Programme is now underway [42,43]. According to the literature, intervention at the individual level appears to be more effective than intervention at the community or population level. The effectiveness of general physician suicide prevention intervention is inconclusive, according to a meta-analysis [44]. A meta-analysis also finds that most interventions delivered by a qualified health professional to an individual, one-on-one, or in a group setting are considerably successful in preventing complete and attempted suicide [45], though another study says that the evidence is inconclusive [46]. The effectiveness of national and community-level interventions and strategies is ambiguous [47], whereas individual-level interventions tend to be promising [48].

10. Failure of the suicide prevention strategy

The evaluation and efficacy of suicide prevention strategies are less documented in the literature. As previously stated, the assistance offered to a person who is suicidal looks to be more promising than a wide population preventive strategy. Suicide prevention failure in primary care settings appears to be linked to the physician's inability to recognize and manage suicidal patients [49], and proper training is suggested. Interventions aimed at those who are at high risk of suicide appear to be effective, but they did not reduce the general suicide rate [50]. Suicide after hospitalization demonstrates that the risk paradigm is useless in identifying a suicidal patient who is likely to die. The failure to reduce suicide rates appears to be due to a variety of factors, including levels of protective factors, quality of life, the ineffectiveness of brief interventions to deal with overwhelming distress, and the dynamic nature of suicidality, and most research data on intervention or etiology are correlational data rather than causal data that cannot be used to inform treatment [51]. Suicide prevention technique is being scrutinized by some [52]. Suicide should be viewed as a risk to life rather than a cause of death, with suicide prevention concentrating on life and the choice to live [53].

11. Status of suicide prevention in India

The Indian Psychiatric Society and the World Health Organization have recommended that the Indian government prioritize suicide as a health concern, develop policies, and implement a suicide prevention program. The Indian government has not made mental health a priority so far, and having a national strategy, plan, or action in the near future seems unlikely. There are only a few individuals, NGOs, or institutional departments dedicated only to suicide prevention, which is insufficient to meet the country's staffing needs. Even India's top medical institutions don't have suicide prevention programs, which is surprising. The quality of national government data is insufficient to make any medical conclusions or to develop any guidelines, and it urgently needs to be improved [54]. More than one-quarter of all suicides occur in India [55]. In India, suicide claims the lives of around 200 000 people every year. Within a month, almost 30 million Indians aged 18 would consider suicide, 52 million will plan suicide, and 26 million will attempt suicide. Kerala, Manipur, Rajasthan, Madhya Pradesh, Uttar Pradesh, and Tamil Nadu are the six states with the highest suicide rates [55], yet the state government in this state did not consider it as a serious health

issue. For a long time, there had been a demand for national and state policy and strategy [56].

More than a third of hospitals may be unable to assess suicide attempts due to the paucity of mental health specialists and undertrained emergency room personnel [57]. A general physician is the first point of contact for any health issues and may play a significant role in suicide prevention; nevertheless, more than half of them appear to be unable to recognize and intervene with suicidal patients [58]. They lack awareness of suicide, suicide risk factors, how to ask about suicidal behavior, and how to support a suicidal patient [59]. In terms of appraising suicidal patients, Indian medical students have a mixed approach [60]. The Indian media is unprepared when covering it, unsure of their role in teaching the public, skeptical of suicide's preventability, and unaware of current media guidelines [61].

Suicide prevention strategies suggested by Indian researchers are the establishment of 'Crisis Centre' or 'suicide prevention center' in the major cities of India [62], improving public health [64], having suicide prevention program with a multidimensional approach and with different professionals [64], 24-h telephone service [63], support of family and society [65], capacity building and counseling services [66], and having a national center for suicide prevention [61,66,67], training of health care professions [58], regulate media [69], etc. The majority of Indian research has concentrated on risk factors rather than preventive factors, and greater research into this area could aid in prevention [70].

12. Some rays of hope

The Indian government released a mental health strategy for the first time in 2020, indicating that steps to improve mental health will be taken. The Indian government's decriminalization of attempted suicide is a significant step that may provide an option to seek mental health treatment while staying out of legal trouble, as well as aid to overcome suicide underreporting and relieve health care professionals of medicolegal burdens [71]. Another significant measure was the nationwide pesticide ban, which is said to have avoided 92 percent of male suicides and 60 percent of female suicides due to insecticide poisoning [72,73]. The Indian Press Council has developed suicide reporting guidelines, which may be useful in raising public awareness and avoiding the negative consequences of irresponsible media coverage [74]. The Indian Psychiatric Society has also issued a statement and guideline on suicide coverage in the media [75] and

encourages all mental health practitioners to Connect, Communicate, and Care [68,69]. Many non-governmental organizations (NGOs) such as SNEHA Suicide Prevention Centre (Chennai), Suicide Prevention India Foundation (SPIF), and Sisters Living Works are solely dedicated to not just addressing but also preventing suicide. Individual and institutional initiatives to alter the Indian situation are underway [76–78]. Suicide prevention smartphone apps are freely available for Indian users, and they provide screening and assessment of suicide risk, as well as suggestions for appropriate measures and helpline numbers [79].

13. What needs to be done

On the basis of their findings and experiences, Indian researchers have given recommendations. These include the development and implementation of a national suicide prevention policy, an integrated system of interventions across multiple levels within society [73,78,80,81]; a strategy to reduce risk factors at the national and state level [44,82]; the use of health settings as suicide prevention centers, access restrictions, and education [83–85]; multi-sectoral approaches [55,86]; addressing the culture and psychology aspects of suicide [87,88]; targeting risk group populations [88,89]; broad population-based tactics that straddle disciplinary boundaries [78]; and universal, strategic, and selective approaches [90].

In India, there appears to be a need to investigate intervention strategies from an etiological standpoint. Psychosocial concerns are the leading cause of suicide, according to the National Crime Records Bureau (e.g., family troubles, marriage-related issues, love affairs, loss of social reputation, property dispute, death of a loved one, and suspected illicit relationship) [41]. Mental health professionals can help with most of these concerns [91–94]. However, impediments to mental health care access must be addressed, such as the provision of mental health care services, stigma, integration of mental health services with other medical services, and enhancing mental health literacy.

14. Conclusion

Given India's high suicide rate among Asian countries, there is an urgent need for the government to address this issue. Because suicide is such a complex issue, it necessitates the participation of all stakeholders. On the one hand, high-risk care is required, while resilience building is also necessary. However, given that the majority of suicides in India are caused by psychosocial difficulties, the role of mental health care professionals is critical.

Conflict of interest

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