Suicide in South Asia: a narrative review

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Abstract

Suicide is a major public health issue globally as well as in the South Asian region. The figures of suicide death are compelling but the attention this issue receives is relatively less in this region. The epidemiologic characteristics and recent trends in suicide in South Asia reflects specific sociocultural situations and economic transitions in the region. The challenges in getting an exact magnitude, cultural influences, religious sanctions, stigmatization and socio-economic factors are the major dimensions that this problem needs to be looked into. Though there have been efforts on decreasing suicide rates, most of them are uncoordinated, under-resourced, and generally unevaluated. In this narrative review we aim to present the different dimensions and challenges of suicide prevention in South Asian context and provide few recommendations that would be helpful in suicide prevention.

Keywords: Mental Health; South Asia; Suicide; Suicide Prevention
Introduction

Suicide is a global public health problem, particularly in South Asia where high suicide. Each year worldwide approximately 700,000 individuals die of suicide, 20 times this number attempt suicide, and 50-120 million are profoundly affected by the suicide or attempted suicide of a close relative or associate. The high suicide rates in a few countries with large population in in South Asia particularly Bangladesh, Nepal, Sri Lanka, Pakistan, Afghanistan, and India account for the bigger portion of the world suicide rates. Despite such compelling figures and the fact that it is an enormous public health issue, suicide receives relatively less attention than it does in the West, resulting in under emphasis on related research and fragmented preventive approaches. Cultural influences, religious sanctions, stigmatization of the mentally ill and socio-economic factors have also played a significant role in this matter. As a result, the exact magnitude of the problem is unknown in most of the South Asian countries and overall efforts are uncoordinated, under-resourced, and generally unevaluated.

Epidemiology of Suicide in South Asia

Although suicide in South Asia is widely recognized as a compelling problem, obtaining accurate data about suicide has proved difficult. Some countries make no effort to collect data on the causes of death. In many South Asian countries, deaths occur without medical certification of the cause at times and may be reported by family members or other lay people who do not wish to acknowledge suicide for fear of stigma or shame. In many Asian settings suicide contravenes religious, cultural, or legal traditions (suicide is still criminalized in some South Asian countries, like Bangladesh) or is seen as a reflection of poor governance, so there is an understandable reluctance to compile and report accurate suicide statistics. Thus, a crucial challenge in studying suicide in South Asia is the availability and quality of suicide data for monitoring and surveillance.

Suicide Rates

The overall crude suicide rate in South Asia is approximately 11.22 per 100,000. Countries with low suicide rates include Maldives, Bangladesh, Afghanistan and Bhutan at 2.9, 3.9, 4.1 and 4.6 per 100,000 populations, respectively. This is followed by Pakistan (8.9) and Nepal (9.0). India and Sri Lanka, with rates of 12.7 and 14, respectively and are considered as countries with medium suicide rates (i.e., 12.0–18.0).

Quality of data

The validity of reported prevalence of suicide depends to a considerable degree on the method for determining the cause of death, the comprehensiveness of the death reporting system, and the procedures employed to estimate national rates based on crude cause of death data. Thus the reported prevalence of suicide for each country must be interpreted with some knowledge of the procedures used by that country. Globally, the availability and quality of data on suicide and suicide attempts is poor. Only some 80 WHO Member States have good-quality vital registration data that can be used directly to estimate suicide rates. Socio-cultural, legal and religious elements affect the reporting of suicide and are compounded by poor population estimates.

Among the South Asian countries, the quality of evidence used in mortality estimates for India and Sri Lanka – is poor to fair. India has a large population size and also estimates suicide rates, but many deaths, particularly in the rural areas, are not registered at all partly because of an inefficient registration system and partly because families fear the social consequences associated with suicide. The source of the data is the National Crime Records Bureau in the Ministry of Home Affairs. Large scale verbal autopsy studies of all deaths in rural regions reveal that the suicide rate in the rural areas is three to four times higher than that reported by the government, so the official suicide rate reported for the country is probably significantly lower than the actual rate.

Although Sri Lanka has a high reported suicide rate, there is still substantial underreporting and many deaths due to poisoning are misclassified as accidental or as deaths of undetermined cause. At the other end of the spectrum are Pakistan, Afghanistan, Bangladesh, Nepal, Bhutan and Maldives where the evidence used to report mortality due to suicide is rated poor. National suicide data are not reported and there is no proper national suicide registry or surveillance system but there are published estimates based on police and hospital data; these estimates are considered underestimates. In Bangladesh, where suicide is still considered illegal, the scenario is worse because of legal implications.

Age, sex, and location of residence

Similar to many Western countries, the suicide rates for males are about 3–4 times higher than those for females in India, Sri Lanka, Pakistan and...
the suicide rates are higher among females. Rural rates of suicide are higher than urban rates in all of the South Asian countries. Rural disadvantage in suicide rate trends can be caused by the higher rural population, stigma and/or insufficient knowledge of mental illness leading to suicide, rapid social change, difficulty in accessing services and ready access to lethal means of suicide (e.g., pesticides).1,11

Methods of suicide
Variations in the distribution of methods of suicide generally reflect the availability of methods used. In South Asian countries with large rural populations, pesticide poisoning is the most common method along with suicide by hanging. Jumping from a height is yet another common method of suicide in these countries.3

Economic factors
Economic prosperity varies across participating countries, according to the Human Development Index (HDI), which is a composite index that factors in life expectancy, literacy, education levels, and standard of living. Suicide rates are higher in countries that have achieved a high HDI quite rapidly. The highest suicide rates are found among those who have not been able to take advantage of the rapid development. Higher expectations accompanying economic prosperity may play a role here. Suicides in these countries are more likely to occur among individuals experiencing poverty, unemployment and/or debts.12 Several South Asian countries such as India and Pakistan experienced an increase in suicide after the COVID pandemic. However, the impact on suicide rates from the economic recovery beginning post COVID has been mixed.13 In other words, the economic slump is generally associated with an increase in suicide rates, but economic recovery is neither a necessary nor sufficient condition for suicide rates to improve. At the individual level, unemployment or job-related stress is a more common precipitant of suicide among South Asian men compared with their Western counterparts.1

Cultural factors
South Asian countries have traditionally been characterized by the dominance of extended family systems, dependence on the family, and the fact that family loyalty overrides individual concerns. Being married, for example, appears to be less protective against suicide in developing Asian countries than it is in Europe and the West, with studies in India finding that single individuals are no more vulnerable to suicide than their married counterparts.14,15

Cultural attitudes toward the woman’s role in marriage may also partially explain the comparatively higher ratio of female to male suicides found in South Asian countries as compared to Europe and the West. In South Asian countries where arranged marriages are common, the social and familial pressure on a woman to stay married even in abusive relationships appears to be one of the factors that increase the risk of suicide in women.16 Dowries, often complicate the problem. When dowry expectations are not met, young brides can be harassed to the point where they are driven to suicide.

There are strong cultural prohibitions regarding suicide in many of the South Asian countries. In some countries, (e.g., Bangladesh) there are also legal sanctions; attempted and completed suicide are regarded as crimes. These actions can consequently bring much shame and stigma to families. Funeral rites may be denied or conducted differently, and relatives of the person who died by suicide may have trouble finding a marriageable partner.1,11,15

Religion
The major religions practiced in South Asian countries are Islam, Hinduism and Buddhism and additional religions include Christianity, Sikhism, Animism and Jainism. Religion may be protective against suicide, both at the individual and societal level, and this effect may be mediated by the degree to which a given religion sanctions suicide.17

Islam provides clear rulings against suicide. The Koran strictly prohibits suicide, maintaining that it is an unforgivable sin.18 In Pakistan and Maldives, where the vast majority of the population (over 95%) are Moslem, hospital and police statistics suggest that the suicide rate is very low (although national suicide statistics are not kept). Hinduism is less forbidding about suicide. In general, it strongly condemns suicide, but suicides have been tolerated.19

Buddhism extols the value of human life, for birth as a human being is the culmination of the individual’s efforts through many previous cycles of birth, and a step on the way to ultimate enlightenment. Suicide is therefore seen as an empty act, which will lead to unpleasant consequences such as the loss of a child in the next rebirth.20

Individual-level risk/protective factors from psychological autopsy studies
Researchers in South Asian countries, especially India, have conducted psychological autopsy
studies to elucidate risk factors for suicide. The identified risk factors, such as mental disorders, substance/alcohol misuse, prior history of suicide attempt, and an acute life event, are very similar to research findings in Western countries. However, the reported prevalence of depression or other psychiatric diagnoses among suicides is lower than that in Western countries. For example, in a Chennai study (India), mood disorder was found in only 25% of the sample, although 88% of the cases had mental disorders. In a more recent psychological autopsy study conducted in rural south India, major depression was found in only 2% of suicide cases.1,15

The frequency of any mental disorder among suicides in Asian countries derived from psychological autopsy studies ranges from 37% to 97%–100%. The prevalence of mood disorders and of alcohol-related disorders is in the range of 2%–87.1% and 2.9%–56.7%, respectively. Several factors may contribute to the variations. First, the distribution of mental disorders differs among different cultures and countries in South Asia. Second, diagnostic tools used to elicit mental disorders may vary across different studies. Third, methods of interviewing (e.g., personnel training, interview structure) may lead to both underdiagnosis and overdiagnosis of mental disorders.6,21,22

Acute life stresses such as job loss, gambling, and work-related factors are important precipitants of suicide among South Asian men, whereas family conflicts are a key risk factor for South Asian women. Financial problems are more commonly found among suicides in South Asia than in the West. The role of acute life stresses and impulsivity seems to be more significant in Asia than in the West, particularly for those who do not have diagnosed psychiatric disorders.1,11,22

Suicide intervention programs
Since suicide is a relatively under researched area in Asia, evidence on the effectiveness of prevention programs is limited. National suicide prevention programs/strategies exist only in some of these countries. The establishment of the Presidential Task Force for Suicide Prevention in 1997 in Sri Lanka led to the implementation of several preventive measures, the most significant of these being the banning of certain class I organophosphorus pesticides. This was accompanied by a dramatic fall in the suicide rates in Sri Lanka after 1995, mainly of pesticide ingestion, reaching a 14.3 per 100,000 from a previous rate of almost 40 per 100,000 by 2015. However, this decline was accompanied by a relatively smaller concurrent rise in non-pesticide related suicide mortality (Nearly 2%). This was followed by the drafting of a national level action plan for suicide prevention in 2019.23

Bhutan launched its national suicide prevention action plan in 2015. India launched its National Suicide Prevention Strategy (NSPS) on Nov 21, 2022. This is the first policy in India to make suicide prevention a public health priority. Afghanistan was in the process of developing a national suicide prevention strategy in 2014; however, the process has been stalled. Pakistan, Bangladesh, Nepal and Maldives lack any national level suicide prevention plan or strategies, however, many of these are running hotline / helpline services for suicide prevention and mental health related problems. In addition, in many South Asian countries, both government and nongovernment organizations have been conducting different types of suicide prevention initiatives on a smaller scale.24

Suicide in South Asia: Future Directions
The extent of the problem
Any systematic attempt at reducing suicide must start with a detailed understanding of the rate and demographic pattern of suicides over time in the community, district, or country in which suicide prevention initiatives are planned. This information should be based on the registration of all deaths within a country and the determination, ideally by a physician, of the cause of death. South Asian countries lack the administrative and medical resources needed to implement a comprehensive death registration system.4 This poses substantial problems for the assessment of the effectiveness of suicide prevention efforts in these countries.

The cultural context in which suicide occurs
In countries where attempted suicide and suicide are considered crimes, great stigma attaches to the surviving family members and there is an understandable reluctance to report suicide or to seek help following a suicide attempt. When suicide is also considered an unforgivable sin as it is in Moslem countries like Pakistan, the stigma is even greater, so much so that a suicide in the family will seriously diminish young woman’s marital prospects.38 Governments in these countries are also less willing to acknowledge the problem of suicide or to devote resources to suicide prevention. There is evidence, however, that strong religious prohibitions against suicide can reduce suicide.1,21

Paradoxically, rapid economic development may contribute to increasing the suicide rates but this
may not be consistent.25 The migration of young people to the cities and abroad where economic opportunities are greater leaves many elderlies behind without traditional social support and help from their children which along with loneliness may be one of the contributing factors leading to increase in suicide rates in rural settings.

Increasing public awareness
The South Asian countries are undertaking depression and suicide awareness activities in variable extents. Most are conducted by government health departments or, as in most of the South Asian countries, by nongovernmental organizations. The methods employed include the distribution of pamphlets and posters, commentaries in newspapers and on television, talk programs and postings on websites. Evaluation of these programmes, when undertaken, should focus on improvement in mental health literacy in regions exposed to the information campaigns. The next step is to see if the change in literacy actually results in greater willingness to seek help on the part of those who need it.

Improving media coverage
Media reporting of suicide that is sensational and can encourage suicide contagion (‘copycat suicides’) was seen to be as much of a problem in South Asian countries as it is in the west. So too is misinformation about suicides that simplistically gives the impression that suicide is caused by immediate stressors rather than linked to mental illness and/or substance abuse.76 Activities in South Asian countries regarding this issue country have been limited to meetings with the press that are usually organized by nongovernmental organizations and specific national guidelines are yet to be promulgated. As yet, there is no concerted effort to affect suicide related content in TV, films, and on the internet.1,22,27

Educating gatekeepers
Some of the South Asian countries have instituted gatekeeper training to equip community members who regularly come into contact with individuals or families in distress with suicide prevention skills. Training programs have commonly focused on teachers but have also included social workers, hotline volunteers, youth leaders, family members and caregivers of depressed or suicidal individuals, police and prison staff, and religious leaders. However, these programs are rarely evaluated. When they are evaluated, assessment is typically limited to before-and-after changes in participants’ knowledge of suicide prevention, confidence in dealing with suicidal individuals, and satisfaction with the training program. What is missing is a determination of whether the gatekeeper training actually results in a change in gatekeeper behavior and whether it results in greater willingness to seek help on the part of those who need it. Innovative screening approaches for at-risk populations (elderly depressed patients, suicide attempters etc.) are another way of identifying individuals at risk for suicide. Such approaches are being implemented in, Sri Lanka.22,23,27

Reducing access to lethal means of self-harm
Restricting access to means of self-harm shows promise as a suicide prevention strategy in South Asian countries, particularly in circumstances where the suicide method in question is responsible for a high proportion of overall suicides.28 The primary methods of suicide vary widely in different countries, and some are more amenable to restriction than others. In countries where the most common methods of suicide could be influenced by means restriction, for example, in countries where pesticide-related suicides are prevalent – this approach should be one of the cornerstones of the overall suicide prevention effort. Similarly, strategies to secure jumping sites (such as barricading bridges and high rise buildings) may be yet another means for restricting means.

Restricting access to means is not generally seen as a feasible approach to reducing suicide by hanging because of the difficulty of limiting hanging points and materials that can be fashioned as nooses. Countries in which hanging is a frequent method will need to consider how best to target specific settings (e.g., prisons and psychiatric hospitals) where hanging is a common means of suicide and where restriction may be a realistic option.

Sri Lanka, for example, has introduced legislation to regulate the production, importation, transportation, storage and sale of pesticides, and has conducted small-scale projects to discourage the ingestion of pesticides (e.g., including warnings on labels, adding stanching agents or emetics, and creating solid or diluted forms). India and Sri Lanka have also explored the introduction of locked boxes for pesticides. These boxes are located on individual farms or at a central point in the local village, and the keys are held by a trusted family member or a respected community figure.29

Restricting access to means in this way may have the effect of decreasing suicidal behaviors (particularly among those who engage in impulsive, low-intent
acts), and may reduce the overall case fatality rate of those who engage in self-harming behavior. Good monitoring systems to determine the effectiveness of restricting access to lethal methods of suicide are not yet in place; cost-effectiveness assessments need to be conducted over a long enough period (typically 3-5 years) to evaluate accurately the degree of substitution of the restricted method by other methods of suicide and to determine the level of public acceptance of the specific steps taken to restrict access to the suicidal method.30

Improving treatment of depression and other disorders that convey suicide risk
Training primary care physicians to recognize and treat psychiatric disorders, particularly depression and other mood disorders, is a primary focus of South Asian countries seeking to improve mental health services. Efforts are also being made to optimize the treatment of mood disorders by making medications more available, and by improving psychological therapies. Many of the countries are organizing trainings to assist primary care physicians to diagnose and treat depression and related disorders. There have been negligible efforts, however, to evaluate these training programs and their effect in preventing suicide. The one such comprehensive project conducted by the International Clinical Epidemiology Network and the World Psychiatric Association in Chennai, India showed that such training increased physicians’ rates of diagnosis of depression and led to greater correspondence between their diagnosis and their prescription of selective serotonin reuptake inhibitors (SSRIs). However, it is unlikely that simply increased training of clinicians about depression will have much effect in this setting unless there are simultaneous changes in the organization of services. The situation is even more problematic in the rural areas of South Asia where the majority of the population live in villages that have no doctors or only partially trained medical personnel who have not received any mental health training and may not be licensed to prescribe psychotropic medications.31

Combined community initiatives
Most of the South Asian countries in the are undertaking some initiatives aimed at increasing public awareness, improving media reporting of suicide, screening for persons at high risk of suicide, restricting access to means and improving treatment of suicidal depressed patients or patients at risk due to mental disorders. But it is important to keep in mind that the synergistic effect of a multifaceted suicide prevention effort has probably a greater potential for success than the application of a single approach. Public education campaigns and appropriate media coverage help increase public and governmental support for suicide prevention efforts and, perhaps more importantly, destigmatize depression and suicide thus increasing care-seeking among those who need help. Gatekeeper training and other screening programmes could increase the recognition of high-risk individuals and, thus, increase the likelihood that they will receive needed care. Improved treatment for depression and mental illnesses will increase the likelihood that those who receive care will be effectively helped. A national strategy or action plan which addresses all of these issues in a collective manner is the need of the hour in South Asia.32

Conclusion
The epidemiologic characteristics and recent trends in suicide in South Asia reflect specific sociocultural situations and economic transitions in the region. Collection of accurate national data related to suicide and related research in South Asia is still remains elusive. Without sound research evidence, a comprehensive and updated list of risk and protective suicide factors that can help identify the target groups will still be missing, and cost-effective interventions will not be possible. Moreover, suicide is a complex and multifaceted problem that often involves several interdisciplinary efforts for prevention.

In view of large population sizes in South Asia with limited available resources, a public health approach that emphasizes community-based intervention strategies is viable and practical. The South Asian suicide profiles clearly speak of the need to design more culturally sensitive interventions catering to the local milieu. Simply applying Western-based suicide prevention schemes without considering the specific socioeconomic-cultural context will certainly fail in providing relevant remedies. There are many challenges ahead and ample opportunities to make suicide prevention work well in South Asia.

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