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# High Suicide Rates among Nepalese Population: Need for Action

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## ABSTRACT

Suicide is a global public health problem and the burden has remained stable for last decades. The age standardized suicide rate was 9.77 per 100,000 in 2019 with males and older population being more affected. Based on age, the highest suicide rate was observed in individuals of age 80 years with suicide rate of 64.9 per 100,000 in male, 18.2 per 100,000 in female and 37.4 per 100,000 in both sexes in this age group. In all age group, the suicide rates are higher among males compared to females. Universal, selective and indicative preventive strategies should be implemented to reduce the burden of suicide in Nepal.


**Keywords:** Nepal; prevention; suicide.

## INTRODUCTION

Suicide is a global public health problem leading to approximately 703,000 deaths per year. [1] Although the exact number of suicidal attempts are hard to figure out, evidence suggest that for every suicide, there are many more people who attempt suicide each year.[2] Almost 77% of all suicide occur in low- and middle-income countries. Suicide is the fourth leading cause of death in adolescents of age 15-19 years. [1]

## BURDEN OF SUICIDE IN NEPAL

Age standardized suicide rate per 100,000 population has remained stable for last 20 years. The age standardized suicide rate was 10.87 [6.49 - 15.87] per 100,000 population in 2000, 9.98 [5.63 - 14.77] per 100,000 in 2005, 10.52 [5.53 - 15.93] per 100000 in 2010, 9.83 [5.18 - 15.32] per 100,000 in 2015 and 9.77 [5.4 - 15.22] per 100,000 in 2019.The rates vary notably by sex of individuals, with the suicide rates being approximately 6 to 7 times higher in males compared to female in all years from 2000 to 2019. The suicide mortality among males in 2019 was 18.56 [10.12 - 28.73] per 100,000 population while it stood at 2.94 [1.66 - 4.76] per 100,000 population among females.[3]

**Table 1.Trend of age standardized suicide rates per 100,000 population from 2000 to 2019, disaggregated by sex.**

| Year | Both sex | Male | Female |
|---|---|---|---|
| 2019 | 9.77 [5.4 - 15.22] | 18.56 [10.12 - 28.73] | 2.94 [1.66 - 4.76] |
| 2018 | 9.69 [5.25 - 15.14] | 18.45 [9.78 - 28.6] | 2.96 [1.66 - 4.77] |
| 2017 | 9.63 [5.17 - 15.02] | 18.35 [9.65 - 28.35] | 2.96 [1.65 - 4.78] |
| 2016 | 9.68 [5.16 - 15.08] | 18.44 [9.61 - 28.48] | 2.97 [1.66 - 4.77] |
| 2015 | 9.83 [5.18 - 15.32] | 18.69 [9.59 - 28.85] | 2.97 [1.67 - 4.79] |
| 2014 | 9.93 [5.18 - 15.42] | 18.55 [9.43 - 28.58] | 2.97 [1.66 - 4.75] |
| 2013 | 10.26 [5.34 - 15.83] | 18.9 [9.61 - 28.91] | 3.02 [1.69 - 4.83] |
| 2012 | 10.59 [5.53 - 16.27] | 19.23 [9.82 - 29.37] | 3.04 [1.73 - 4.82] |

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**Table 1.Trend of age standardized suicide rates per 100,000 population from 2000 to 2019, disaggregated by sex.**

| Year | Both sex | Male | Female |
|---|---|---|---|
| 2011 | 10.73 [5.64 - 16.31] | 19.19 [9.89 - 29.02] | 3.06 [1.76 - 4.8] |
| 2010 | 10.52 [5.53 - 15.93] | 18.58 [9.55 - 28.02] | 2.99 [1.75 - 4.66] |
| 2009 | 10.46 [5.57 - 15.76] | 18.36 [9.58 - 27.57] | 2.97 [1.75 - 4.61] |
| 2008 | 10.21 [5.5 - 15.3] | 17.77 [9.41 - 26.57] | 2.99 [1.76 - 4.63] |
| 2007 | 9.97 [5.51 - 14.89] | 17.36 [9.46 - 25.83] | 2.9 [1.74 - 4.52] |
| 2006 | 9.74 [5.46 - 14.48] | 17.03 [9.42 - 25.21] | 2.79 [1.68 - 4.33] |
| 2005 | 9.98 [5.63 - 14.77] | 17.45 [9.77 - 25.7] | 2.89 [1.73 - 4.5] |
| 2004 | 9.83 [5.65 - 14.48] | 17.37 [9.93 - 25.45] | 2.69 [1.61 - 4.17] |
| 2003 | 9.95 [5.84 - 14.69] | 17.49 [10.25 - 25.65] | 2.81 [1.69 - 4.41] |
| 2002 | 10.14 [6.03 - 14.93] | 17.89 [10.63 - 26.15] | 2.8 [1.69 - 4.41] |
| 2001 | 10.39 [6.22 - 15.22] | 18.59 [11.12 - 27.04] | 2.63 [1.59 - 4.12] |
| 2000 | 10.87 [6.49 - 15.87] | 19.35 [11.56 - 28.02] | 2.84 [1.71 - 4.48] |

*Source: Global Health Observatory, World Health Organization*[3]

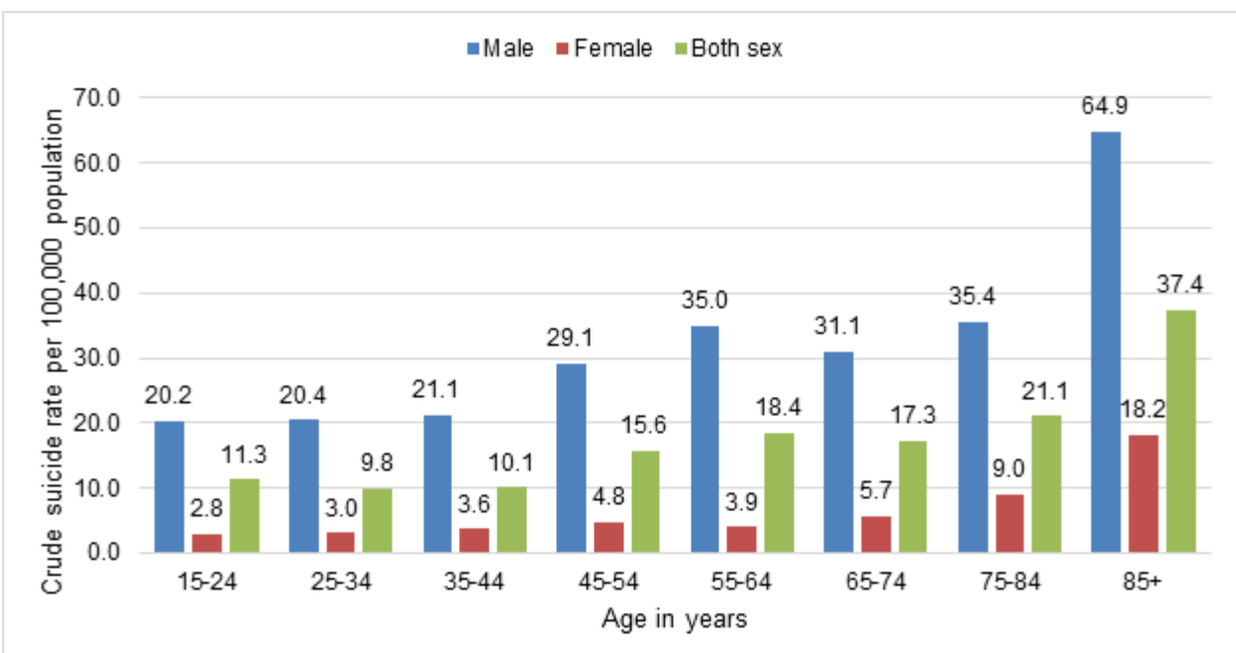


**Figure 1. Age specific suicide rate per 100,000 population disaggregated by sex in 2019.**

The suicide rate per 100,000 population is higher in males compared to female in all age group in year 2019. Based on age, the highest suicide rate is observed in individuals of age 85 years and above followed by 75-84 years of age. In older population of age 85 years and above, the suicide rate was 64.9 per 100,000 in male, 18.2 per 100,000 in female and 37.4 per 100,000 in both sexes. Similarly, among those between age 75-84 years, the crude suicide rate stood at 35.4 per 100,000 in male, 9.0 per 100,000 in female and 21.1 per 100,000 in both sexes. Data point out the need of suicide prevention and other mental health interventions among older age group individuals who are often neglected, and are victim of multiple other chronic diseases.[3]

## RISK AND PROTECTIVE FACTORS OF SUICIDE

Globally, ingestion of pesticide, hanging and firearms are the most common methods for suicide.[1] Suicide is preventable and having better understanding about the rates in specific age group, sex or other population subgroup could help to devise preventive measures.[1, 4] There has been a well-established link between suicide and some mental conditions like depression and alcohol use disorders.[1, 4, 5] Approximately one third of total suicide cases are found to be among individuals who are dependent on alcohol while approximately 5-10% of those dependent on alcohol end their life by suicide.[6] Suicides are more commonly reported during the time of crisis such as financial problems, break-up in relationship violence, abuse, chronic pain, illness and suffering, conflict, disaster, and when individuals feel isolated and lonely.[1, 4] Similarly, stressful life events like loss of a loved one, legal problems, feeling of shame and bullying can exacerbate the problem.[4] During such circumstances, individuals find it difficult to deal with life stresses and are more likely to attempt suicide.[1, 4] Among different population subgroups, suicides are more common among vulnerable groups, discriminated population like refugees, migrants, ethnic or religious minorities; sexual minorities like lesbian, gay, bisexual, transgender, intersex persons; with prisoners.[1]

Strong family relationship, feeling of being liked by friends, personal wellbeing and effective positive coping strategies serve as protective factors in preventing suicide.[7] Apart from these factors, individuals with strong religious and spiritual beliefs are considered to be at less risk of suicide compared to their counterparts. However, in absence of strong and reliable data, the debate remains open on whether it is religious belief per se or the connectedness that people feel while participating in religious functions that is protective.[7]

### PREVENTION OF SUICIDE

As the suicide are relatively higher among males and among individuals of older age group, suicide prevention intervention should effectively address the risk factors of suicide among these population subgroups. Multi-layered preventive strategies combining universal preventive strategies, selective preventive strategies and indicated preventive strategies could be useful in preventing suicide.[8]

Universal preventive strategies focus on entire population and attempt to reduce the risk of suicide. As some universal preventive strategies, countries could take initiatives to reduce the risk factors of suicide. Preventing alcohol and drug dependence, promoting income generation activities, delivering sessions on stress coping strategies could reduce the suicide rates. Restricting access to the means of suicide is a key element of suicide prevention efforts. However, means restriction policies (such as limiting access to pesticides and firearms or putting barriers on bridges) require an understanding of the method preferences of different groups in society and depend on cooperation and collaboration between multiple sectors.[2]

Selective preventive strategies should target individuals at increased risk of suicide irrespective of whether they display suicidal ideation, attempt or behavior. For example, the older adults who experience life transition including professional retirement, economic dependence to family members and loss of loved ones make them vulnerable to depression and suicide. Strategies should be implemented to enhance independent functioning by reducing disability, increase access to health service for chronic disease patients and help older people feel connected to other individuals in society by organizing programmes where they can get together.

Indicated preventive strategies should be implemented targeting individuals who have survived suicide attempt. As the depression is closely linked to suicide, screening and treatment of depression and other mental conditions could be the key in preventing suicide. Apart from this, professionals should be trained to detect and manage depression, deliver counselling session reassuring the hopeless individuals that his/her existence is meaningful and is appreciated.

Apart from these, having comprehensive data on suicide rates among different population subgroups and risk factors in Nepalese context could be useful in designing context specific intervention. Thus, comprehensive nationwide representative studies on suicidal ideation and attempt, means of suicide and risk factors could be useful.

## CONCLUSIONS

Nepal has high burden of suicide particularly among older population and among males. Three levels of strategies: universal, selective and indicative preventive strategies should be implemented to prevent suicides in Nepal.

## CONFLICT OF INTEREST

None

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