

Suicide deaths have risen by 20,000 over past 30 years around the world

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The overall global death toll from suicide has risen by nearly 20,000 over the past 30 years, despite a significant fall in age-specific suicide rates during this period, finds an analysis of international data, published

online in the journal *Injury Prevention*.

Population aging, [population growth](#), and changes in population age [structure](#), especially in lower middle-income and upper middle-income regions, have largely driven the figures, say the researchers.

Countries may struggle to reverse the trend in suicide deaths, because suicide rates are highest among those aged 70+ in almost all regions of the world, they point out.

Despite accounting for nearly 800,000 deaths every year, suicide hasn't received the level of attention given to other global public health issues, such as HIV/AIDS and cancer, they say.

In a bid to change that, the researchers set out to explore the complex relationships between population growth, population age structure, [income level](#), sex, and age-specific suicide rates to gain a better understanding of the global changes in suicide rates and deaths over the past 30 years.

They drew on data from the Global Burden of Disease Study (GBD) 2019. This provides population estimates for 204 countries and territories for 1950–2019 by location, age, and sex. And it captures information on 369 diseases and injuries from 1990 to 2019 by age and sex.

The researchers looked at the influence of changes in age-specific and gender-specific suicide rates; population age structure; and population growth for each of the four income level regions, as defined by the World Bank: low-income; lower middle-income; upper middle-income; and high-income.

In 1990, the overall global suicide rate was 13.8 per 100,000 of the

population, falling to 9.8/100,000 in 2019. The rate among men fell from 16.6/100,000 to 13.5/100,000, and from 11/100,000 to 6.1/100,000 among women.

The most significant fall occurred in upper middle-income countries—a fall of 6.25/100,000— followed by those in the lower middle-income region, with a fall of 2.51 per 100,000.

Overall, the decline in suicide rates among women was steeper than that for men: a fall of 4.91 vs 3.09/100,000, especially in upper middle-income countries where the equivalent falls were 8.12 vs 4.37/100,000.

The reduction in age-specific suicide rates was the major driver for the declining rates of suicide, offsetting the effect of changes in population age structure.

For example, in the high-income [region](#), the declining age-specific suicide rate (−3.83/100,000; 216%) had a much larger impact than the change in population age structure (2.06/100,000;−116%).

The overall number of suicide deaths rose by 19,897 from 738,799 in 1990 to 758, 696 in 2019, with the sharpest rise in lower middle-income countries where the [death](#) toll rose by 72,550 from 232,340 to 304,890.

The main contributors to this increase were population growth (1512.5%), followed by changes in population age structure (952.5%). But these effects were offset by the the substantial reduction in the age-specific suicide rates (−470,556/100,000;−2365%).

The total number of male suicide deaths rose sharply, largely explained by male population growth (890%) and changes in male population age structure (604%). But these patterns weren't universal.

The overall contribution of population age structure mainly came from the 45–64 (565%) and 65+ (529%) age groups, a trend that was observed in middle-income and high-income regions, reflecting the global effect of [population aging](#), say the researchers.

"The reasons for the significant decline in suicide [rates] across all income level regions have yet to be determined," write the researchers, although global efforts by the WHO and the United Nations to foster national suicide prevention initiatives, might have played a part, they suggest.

But the contribution of population growth should be a cause for concern in view of global population projections in low income countries, they add. Sub-Saharan Africa and Central and Southern Asia are set to account for over 75% of the additional 2 billion total global population growth between 2019 and 2050.

Increasing life expectancy and declining fertility will continue to affect global age structure, with populations around the world continuing to "experience pronounced and historically unprecedented aging in the coming decades," write the researchers.

"As [suicide rates](#) are highest among the elderly (70 years or above) for both genders in almost all regions of the world, the rapidly aging [population](#) globally will pose huge challenges for the reduction in the number of [suicide deaths](#) in the future," they warn.

And there's a considerable imbalance in the resources allocated to [suicide](#) prevention work, especially in low-income and middle-income countries, they note.

"It is time to revisit this situation to ensure that sufficient resources can be redeployed globally to meet the future challenges," they conclude.

More information: Demographic and epidemiological decomposition analysis of global changes in suicide rates and numbers over the period 1990–2019, *Injury Prevention* (2021). [DOI: 10.1136/injuryprev-2021-044263](#)

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