

Choosing to die — a growing epidemic among the young

Suicide is attracting attention worldwide as a major public health problem, and one that is growing alarmingly among the young. Phyllida Brown explores the reasons why adolescents and young adults in so many countries are succumbing to what many psychiatrists are beginning to call an “emerging epidemic”.

WHO estimates that about one million people kill themselves every year — a toll comparable to that of malaria. Worse, on present trends, WHO expects the number to climb to about 1.5 million by 2020.

Even politicians are starting to accept that suicide is not just a private issue. “Suicide is being talked about,” says Dr Michael Phillips, director of the research centre of clinical epidemiology at Beijing’s Hui Long Guan Hospital in China. Earlier this year, for example, Chinese vice-premier Li Lanqing chaired a high-profile national meeting on mental health at which suicide was mentioned. The meeting made the front page of the *People’s Daily*. “This would have been unthinkable even five years ago,” says Phillips. At varying levels of readiness, other governments, from Sweden to the United States, are now beginning to discuss, plan or implement national prevention strategies, partly as a result of WHO’s prodding. About a dozen have strategies in place.

Why all the attention now? After all, the rates of reported suicides have been climbing for decades, at least in much of Europe and the Americas, where data go back far enough to reveal trends. Dr José Bertolote, who is responsible for WHO’s global initiative on suicide prevention, says this trend is reflected in a sample of four large countries studied by WHO — Brazil, India, Mexico, and the USA — where increases from 5% to 62% were seen in suicide rates over the past two decades.

What is new is the realization that suicide is “un-greying”, or becoming more common in younger age groups. Although elderly adults have historically been much more likely than the young to take their own lives, suicide rates in young adults — especially men — have been rising steeply in recent years in some European countries, the US, Mexico, the Western Pacific, and elsewhere. In the US, for example, the rate among 15–24-year-olds trebled between the 1950s and the mid-1980s, and although



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Why are increasing numbers of young people killing themselves? “A loss of a sense of the future,” is one reason psychiatrists give.

now levelling off has not declined. “In some circles, this would be called an epidemic,” says Dr Morton Silverman, a psychiatrist at the University of Chicago, who helped to formulate the national suicide prevention strategy for the US.

Because of these upward shifts, and based on the available data, people under the age of 45 now account for more than half of all the “completed”, or successful, suicides committed in a year, compared with just 44% of the total in the 1950s, according to WHO. By 2000, suicide had become one of the three leading causes of death in young adults worldwide.

Why young people should be so much more likely to kill themselves today than they were in the 1950s is unknown. But psychiatrists have several theories. One is that in countries that have been through rapid economic upheavals the old certainties of jobs, relationships — even political enemies — are being swept away faster than the young can cope. Individualistic cultures are leaving people without ideals.

“There is a loss of a sense of hope and a loss of a sense of the future,” says Silverman. In the past, he argues, most adolescents in industrialized countries believed that if they studied, got a job and earned an income, they could expect a certain standard of living. Most could also expect lasting relationships. Today, says Silverman, “that’s all been turned upside down”.

This trend is not unique to the industrialized world, says Dr Diego De Leo of the Australian Institute for Suicide Research and Prevention at Griffith University, Brisbane. “We [in the developed countries] are globalizing and exporting a lot of our disadvantages,” he says. “There will be an increase in suicides in developing countries, with loss of tradition, social cohesion, and spontaneous social support. We are rendering the culture of these countries more individualistic and so making the people more vulnerable to suicide.”

But older adults are facing just as much uncertainty, so why are young adults and adolescents so vulnerable to it? Partly, says

A world view of suicide



Source: WHO

Data on suicides from different countries and over different time periods must be compared carefully, says Dr José Bertolote, who is responsible for WHO's global initiative on suicide prevention. In the 1950s, just 21 countries reported to WHO; now more than 100 do, but there are still many gaps. In some countries, such as India, suicide is illegal and this is bound to affect the certification of deaths, possibly driving official figures downward.

Equally, it is unwise, say researchers, to assume that general trends apply everywhere. Most countries report at least three times as many suicides in men as in women, but China — with the largest number of suicides anywhere — bucks that trend, with female suicides significantly outnumbering those of males. Nor are the trends uniform: overall suicide rates have stabilized or begun to fall since 1995 in some countries, including China and the Russian Federation. But in several countries, an apparently stable overall rate has disguised upward trends in one age-group or sex, compensated by a downward trend in another.

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Silverman, because young people's lives are normally in a state of transition. As yet "undefined" by parenthood, established career or other anchors and responsibilities, young people have more opportunities to drift out of the mainstream, he argues. Also important, says Dr Danuta Wasserman, director of the Swedish National Centre for Suicide Research and professor of psychiatry and "suicidology" at the Karolinska Institute, Stockholm, young people can no longer rely on their parents as role models. "There have been so many changes [in society], and it is not enough [for young people] just to take on the coping strategies of the older generation," she says. She believes that young people are left to their

own devices too much, without adequate support from adults or "positive models" to emulate. The lack of role models is intensified, she believes, as the age gap between generations widens in response to women's changing roles and smaller family sizes.

Wasserman believes that young people's distress is not restricted to industrialized countries. Preliminary unpublished research by members of her team in countries as different as Uganda and Viet Nam suggests that the reasons young people give for their attempts to commit suicide are similar to those in Sweden, she says.

While rapid economic and social transition does seem to be a critical factor, it is not the only one, say researchers. Young

people, just like their elders, are known to be at greater risk of committing suicide if they are exposed to certain identified risk factors, such as alcohol or other substance misuse, and mental illness. And psychiatrists like Silverman and De Leo agree that at least some of those risk factors are themselves on the rise in the young.

Hard data are patchy — particularly outside the industrialized West — but from the available studies, the suicide rate associated with alcoholism is, for all age-groups, between 75 and 85 times greater than the overall suicide rate for the population as a whole, according to Dr Guo-Xin Jiang, a colleague of Wasserman's at the Karolinska Institute. For substance misuse

in general, the suicide rate appears to be about 12 times that of the general population. While fads for certain drugs and for alcohol have ebbed and flowed among young people in different countries over recent decades, says Silverman, "there is no question that the use and misuse of mood-altering drugs has increased [in adolescents and young people]". Alcohol misuse is thought to be a major factor in the strikingly high rates of suicide found in some of the European countries in transition, such as the Baltic states and the Russian Federation, according to Dr Airi Värnik, head of the Estonian-Swedish Institute of Suicidology in Tallinn, and a collaborator of Wasserman's.

Mental health problems, particularly major depression, are believed to underlie 50–90% of suicides, says Wasserman, at least in Western countries. In any given year, the available data suggest, people with a diagnosis of depression are 22–36 times more likely to kill themselves than mentally healthy people, says Jiang, quoting data from studies conducted in the late 1980s. For people with a diagnosis of *any* psychiatric condition, the risk of suicide is 15-fold in men and more than 40-fold in women, compared with the general population.

If these data are applicable to other settings, the rising suicide rate in younger adults and adolescents can itself be partly explained by the apparent rise in the prevalence of mental illness in the young. Although researchers are baffled by the data, they consistently find an upward trend in the prevalence of mental health problems in adolescents and young adults in a number of countries. "There is no question but that the number of young adults with definable psychiatric illness is on the rise and has been for years," says Silverman. "It could be an artefact, or perhaps we are more aware of the degree of psychopathology," he says. "But every time we look, we find that more young people have a diagnosed psychiatric illness." Today, in the US, for example, the prevalence of any form of mental illness or mood disorder in young people is approaching 20%, compared with 10–12% in the 1960s, says Silverman.

There is another well-known risk factor for suicide that may be on the rise in the young: access to the means. Young women in China's rural villages frequently kill themselves using the powerful, concentrated pesticides that are often kept in their domestic refrigerators. In the industrialized countries, particularly among young men, access to guns is a major risk factor. In one study, adolescents in the US who

"succeeded" in killing themselves were 2.5 times more likely to have access to a gun at home than their peers who had "failed" their suicide attempt. In the US, suicides by firearms among young people have increased more rapidly than suicides by other methods, according to Jiang. One study published this year suggests that a reduction of just 10% in ownership of firearms in the US could cut the overall suicide rate by 3%.

Clearly, however, as psychiatrists stress, the vast majority of people exposed to any of these risk factors do *not* kill themselves. Inevitably, some researchers are now reporting early evidence for biological and genetic traits that might distinguish the suicidal, including a tendency to impulsiveness and low levels of serotonin, a neurotransmitter important in regulating mood. But, says De Leo, it is difficult to see how genetic traits could explain either the current upward trend in young people's suicides or more than a fraction of the massive variation in the overall, age-adjusted suicide rates between countries — a variation that reaches 106-fold between the country with the highest rate, Lithuania, and the one with the lowest, Egypt.

Many suicide researchers are now turning their attention to the study of "protective factors" against becoming suicidal. Such research is only beginning, but, says De Leo, religion appears to be among these factors.

One striking protective factor seems to be the practice of Islam, a religion that strongly condemns suicide in most circumstances. Islamic countries tend to have some of the lowest suicide rates in the world, and while the figures may sometimes be low because death certificates avoid mentioning suicide, some researchers believe they are largely genuine. According to WHO, Iran, for example, had 0.3 suicides per 100 000 in men and 0.1 per 100 000 women in 1991, the latest year for which figures are available. Egypt recorded 0.1 suicides per 100 000 in men and none in women in the late 1980s.

Kuwait recorded rates below 2.7 per 100 000 for men and 1.6 per 100 000 for women in 1999, and Syria had rates of 0.2 in men and zero in women in the mid-1980s. Whereas the Baltic and European states of the former Soviet Union had suicide rates in men that rose as high as 60–70 per 100 000 in the mid 1990s, Tajikistan's rate for men was about 5 per 100 000 and Turkmenistan's rate has been around 12–13 per 100 000 for most of the last 15 years.

Governments have to find practical solutions to the suicide problem, says Bertolote. For example, they can promote mentally "healthy" strategies and educate people to provide support to distressed or mentally ill persons, rather than stigmatizing them, he says. One worry is how to find the money. But Bertolote says the costs may be lower than some imagine. In October, WHO launched a multicentre study to test out a methodology for suicide prevention in different countries. Eight states from Estonia to South Africa and from Brazil to Viet Nam are so far involved, but a total of 25 may eventually participate, says Bertolote. The study will examine, through a randomized trial, whether people who have attempted suicide can be protected from further suicidal action by an in-depth one-hour interview session with a doctor, nurse or social worker, followed by visits at home for several months. In low-income countries, the costs of such an intervention are only about one-tenth of their costs in high-income countries, says Bertolote. The results of the study will be available in about 18 months.

Few governments can ignore the need for action, say psychiatrists, particularly to prevent suicide from becoming even more common in young people. "We have got to the point where we know we have a problem," says Silverman. "A large number of suicides are preventable and we have the tools and techniques that will prevent them — so let's do something about it!" ■

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ERRATUM

Maternal mortality at the end of a decade: signs of progress? *Carla Abou Zahr & Tessa Wardlaw* (pp. 561–568).

On page 565 of Vol. 79, No. 6, first column, lines 15–19, "In Egypt, for example, coverage at delivery increased from 35% to 61% over the period 1988–99. In Indonesia, the percentage of deliveries assisted by a skilled attendant increased from 36% in 1997 to 56% in 1999." should read "In Egypt, for example, coverage at delivery increased from 35% to 61% over the period 1988–2000. In Indonesia, the percentage of deliveries assisted by a skilled attendant increased from 36% in 1987 to 56% in 1999."