

Suicide

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The word suicide is derived from the Latin word *suicidium*, itself derived from *sui* (of oneself) and *cidium* (a killing; *caedere* = to kill. The word appears to have been first used around 1651, although the self-killing act itself is recorded in antiquity.¹ The choice of wanting to live or choosing to die has been described by French philosopher-novelist Albert Camus as “the only truly serious philosophical problem”.² Today, however, suicide is recognised as an important public health issue.³ Despite extensive research, educational efforts and strategies in early detection and prevention, the World Health Organization (WHO) estimates that approximately 1.53 million people will die from suicide in 2020 (averaging 3 suicides each minute); 10 to 20 times more persons will attempt suicide worldwide.⁴

The earliest scientific studies on suicide in the late 19th Century by Emile Durkheim were sociological, and focused on absent social relations, isolation, and negative events such as illness, stress and life events. Durkheim also attributed the variation in suicide rates between communities to religious differences and divergent family circumstances.⁵ Other definitions have been proposed over the years, and range from psychoanalytic (Karl Menninger, 1938), existential (Jean Baechler, 1975), psychological (Edwin Shneidman, 1985) to legal (Joseph Davis, 1988) and philosophical (David Mayo, 1992).⁶

Certain socio-demographic characteristics are recognised in association with suicide. The highest suicide rates for men and women are found in those eastern European countries that share similar genetic, historical and sociocultural features. This conspicuous geographical pattern, in the form of a J-shaped belt extending from Finland to Austria, is believed to reflect a past migration event still detectable in modern European populations (the Finno-Ugrian Suicide Hypothesis, FUSH).⁷ The lowest rates are in eastern Mediterranean regions that follow Islamic traditions. With the exception of China, rates in males are consistently higher than in females. While earlier rates appeared to increase with age, recent research shows a significant decrease in youth suicides and either a declining or a relatively unchanged suicide rate in the elderly in most countries.^{8,9} Epidemiological analyses reveal that occupation and employment status also affect the suicide risk.¹⁰

Global suicide rates have been consistent chronologically, despite substantial increases in rates within some countries in Europe.¹¹ Decreasing rates were found in Latin countries around the Mediterranean and in the American continent. In Asia, increases were seen for the South East region (Sri Lanka, Thailand and Singapore) and no changes or decreased rates for the Far East (Hong Kong, Japan and the Philippines). However, global data are limited by differing reporting policies, unresolved issues in suicidology nomenclature, and by how much a country perceives suicide as a public health problem.¹² Suicide rates may be underestimated by as much as 40% to 50% in certain regions.¹¹

In Singapore, leading work on suicide comes from the psychiatrists Chua Boon Lock, Kok Li Peng and Kua Ee Heok, and the sociologist Rizal Hussain.^{13,14} In 2006, the rate was 8.9 per 100,000 population (Ministry of Health data), and the male-to-female ratio was 1.5:1 (i.e. 60% male). Rates are higher in older persons (in particular elderly men), the Chinese and Indians over Malays, and higher among young married or divorced women, and the unemployed.

Complex social and psychological factors, and also biological traits and states are at play. There is convergent evidence from epidemiological (family, twin and adoption studies) and molecular genetic studies for specific genetic risk factors for suicidal behaviour. Such behaviour is highly familial and heritable.¹⁵ Monozygotic twins have higher concordance rates than dizygotic ones for suicide. Adoption studies have shown that genetic susceptibility to suicide is specific and independent of genetic susceptibility to psychiatric disorders.^{16,17}

Some of the strongest findings in biological psychiatry come from postmortem studies showing decreased levels of serotonin and its breakdown product hydroxyindoleacetic acid (5-HIAA) in the cerebral spinal fluid (csf) of completed suicides.¹⁸ Csf 5-HIAA levels, an index of serotonergic activity in the brain, is a biochemical trait under significant genetic control. Studies have shown that the lethality of suicidal acts is inversely related to lower levels of CSF 5-HIAA.

Researchers examining candidate genes have focused on the gene for tryptophan hydroxylase, the enzyme comprising

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the rate-limiting step in the synthesis of serotonin. The intronic polymorphisms (A218C or A779C) of the tryptophan hydroxylase-1 (TPH1) gene has been suggested as a quantitative risk factor for suicide behaviour.¹⁹ Although not implicated in general suicidal behaviour, the serotonin transporter gene is associated with violent and repeated attempts at suicide.

Mental disorders are also strongly related to suicide. The mentally ill person carries a 7 to 10 times increased risk of suicide compared with the general population. The Lundby Study found that 57% of suicide completers had been in psychiatric care. Suicide occurred at least 2.5 times more often in men with a psychiatric diagnosis than in the general male population.²⁰ The greatest risks are with mood disorders, schizophrenia, and substance abuse or dependence, while an increased risk of suicidal acts is linked to personality disorders such as borderline personality disorder.²¹ A meta-analysis of suicide studies in psychiatric patients found that the overall estimated suicide risk was about 6% for affective disorders.²²

The German philosopher Immanuel Kant emphasised the sanctity of human life, but the utilitarian view questions “Whose life is it?” Psychiatrist Thomas Szasz, speaking on suicide prevention at Harvard Medical School in 1985, contended that “the individual’s life belongs to him or her, not to God, the state, society, family or friends”. We are in an era where physician-assisted suicide policies are established in the Netherlands and in Oregon, USA.²³ Suicide cults (e.g. Jonestown and Waco) have sometimes surfaced, and Dr Jack Kevorkian’s assisted suicides get much media attention.²⁴ The choice or decision has very much become an individual one. As Douglas suggests, the emphasis should be on “individual meanings of suicide”.²⁵

Do interventions work in such scenarios? A literature review of studies published between 1966 and 2005 showed that both physician education in depression management and restrictions on access to lethal methods reduce suicide rates. There is considerable evidence that support the effectiveness of mood stabilisers and antidepressants on suicide rates for those who are depressed.^{26,27} But not all components of suicide prevention programs are effective.²⁸ Paradoxically, some mental health initiatives are associated with an increase in suicide rates.²⁹ The WHO recommends that studying methods used for committing suicide is fundamental for suicide prevention programs.³⁰

Suicide is a leading cause of unnecessary premature death. Maris, in addressing the American Association of Suicidology, described suicide as “a solution to the problem of life itself, not some perverse response to life gone awry”.³¹ Yet it is an irrevocable “solution”. It is a decision which, Riaz Hassan concludes, is reached by complex processes similar to those “by which one attempts to

sustain one’s own life”.¹³ Ultimately, “the individual would like to be talked out of suicide or at least hear arguments for continuing to live”.⁶ There are efforts to provide post-suicide care for survivors of suicide, but we can also do more to help the devastation and tragedy faced by the survivors of a loved one’s suicide.³²

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