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Medical disorders of suicides in Australia: analysis using a multiple-cause-of-death approach

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Abstract

The impaired health of a person who has committed suicide is often suggested among the proximate causes of suicidal behaviour. The introduction in 1997 of multiple-cause-of-death coding by the Australian Bureau of Statistics provided an opportunity to examine health impairments recorded on the death certificates of suicides. Data for the quinquennium 1997–2001 revealed a high prevalence of mental and behavioural disorders, in particular among women and among young and adolescent suicides. Comparison of multiple causes of death attributed to those who died in accidents with those recorded as suicides revealed that of the chronic and terminal illnesses, HIV and cancer were probably the conditions likely to trigger suicidal action.

Keywords: Australia; Suicide; Suicidal behaviour; Mental disorders; Chronic illness; HIV/AIDS

Introduction

The extent to which suicidal behaviour is a response to severe deterioration of a person's health has been a matter of debate for a long time. There is considerable variation in the prevalence of such disorders reported in various studies; this is partly due to different sources of information—coroners' reports as against psychological autopsies or hospital records of psychiatric wards. In general, mental disorders, especially substance-use disorders, often go undetected by physicians and are likely to be under-reported.

Among the earliest studies, one carried out by Sainsbury (1955) that reviewed coroners' reports on 390 suicides, found about one-third to be associated with mental disorder and about 18% with physical illness. In Hawaii, Tseng, Hsu, Omori, and McLaughlin (1992), reviewing hospital records of 1002 suicides committed between 1973 and 1987, found that mental illness was recorded in 19% and 31% of suicides of men and women, respectively. In about one in eight suicides of men and women poor physical health was indicated as a precipitating factor. Studies of the health status of persons who committed suicide have most often focused on mental health. Harris and Barraclough (1997) in a review of 36 such studies published between 1966 and 1993 concluded 'Of those with an increased risk [of suicide] most have associations with mental disorder, substance abuse, or both'. The highest risk was found for persons with mood (affective) disorders; intermediate risk for those dependent on alcohol or psychoactive substances; and the lowest risk for those with organic mental disorders. A similar conclusion was reached by Moscicki (1997) who studied risk factors of suicide among young people. Henriksson

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et al. (1993) investigating the prevalence of mental disorders among suicide victims in Finland also found that the majority suffered from comorbid mental disorders. The most prevalent were depressive disorders (higher among females than among males) and alcohol dependence or abuse (more common among males). Marttunen, Aro, and Lonnqvist (1993) reviewed seven studies based on psychological autopsies of adolescent suicides. They reported that the proportion of mental disorders—defined as affective or depressive disorders; substance-use disorders; and conduct and antisocial disorders—in these studies ranged between 67% and 95%. According to Goodwin and Guze (1996, p. 20), of those who commit suicide, between 50% and 70% have had symptoms characteristic of depression.

A similar pattern of comorbidity of mental disorders was found in persons making suicide attempts. One study which tested substance-related and non-substance-related psychiatric disorders as predictors of attempted suicide among 503 adolescents in the USA found that bipolar disorder was the non-substance-related psychiatric condition that placed adolescents most at risk of attempted suicide. Among the substance-use disorders, inhalants, cocaine, and hallucinogens were the drugs that most increased the likelihood of attempted suicide (Kelly, Cornelius, & Lynch, 2002, pp. 306–307). Similarly, a New Zealand study of persons who had made a serious suicide attempt concluded that there is a strong relationship between mental disorders and such suicide attempts of young people. Individuals with two or more such disorders had odds of serious suicide attempt 40 times those of individuals with no such disorders (Beautrais, Joyce, & Mulder, 1998). A follow-up study of patients who were hospitalised after attempted suicide in Denmark in 1976–1983 found, however, that only a few could be described as 'mentally ill'; although about one in four had a serious problem of alcohol or drug abuse (Juel-Nielsen, Bille-Brahe, & Wang, 1986).

The studies investigating the increased risk of suicide in patients suffering from a somatic disease have been reviewed by Harris and Barraclough (1994). They compiled a list of 63 medical disorders referred to in medical and psychiatric literature as possibly having an effect on suicide risk. Their review of results of 235 studies published between 1966 and 1992 found that in only a few instances could a higher risk of suicide be observed. In the majority of the diseases the risk was not higher than expected. Only one condition significantly reduced the risk, namely, pregnancy and puerperium. The higher than expected risk of suicide was in persons diagnosed with HIV/AIDS, malignant neoplasm, Huntington's disease, multiple sclerosis, gastric ulcer, disorders of the kidney, injuries of the spine, and *lupus erythematosus*.

The majority of the studies reported above examined the risk of suicidal behaviour among patients diagnosed with a specified disease. In contrast to those studies, the objective of the analysis presented here is to assess the prevalence of mental and physical diseases in persons who had committed suicide.

Materials and methods

In Australia, death registration has been compulsory for over 150 years. Information about a death is recorded on a death certificate where, in addition to the disease or condition leading directly to death, other contributing diseases or conditions are also listed. Death certification can be completed in one of three ways: (i) If a medical practitioner had treated the deceased recently and if the practitioner is certain of the cause of death then he/she can provide the required certificate. (ii) If no medical practitioner can certify the cause of death then the case is referred to the government pathologist to conduct an autopsy to determine the cause of death. (iii) If death resulted from an external cause (such as accident or self-inflicted harm) and, in particular, if a possibility of suicide is suspected, the medical practitioner attending such a case is not allowed to sign a death certificate and must report such death to the police. The details of the death are then investigated and evidence is gathered from a number of sources, in particular, members of the deceased's family, friends, witnesses and any physicians the deceased may have consulted (Driscoll, Henley, & Harrison, 2003). The result of the police investigation, including the pathologist's autopsy report, is reported to the coroner who then hands down a verdict of suicide or accidental death. Where the coroner is unable to reach a firm decision he/she may recommend that the case receive one of the undetermined death codes (Y10-Y34) of ICD-10. The Australian Bureau of Statistics (ABS) is not permitted to allocate these codes to any cause of death without the coroner's recommendation.

Suicide and self-inflicted injury are complex concepts and are subject to differences of interpretation. There is no doubt that the verdict of suicide is avoided unless there is a high probability, beyond reasonable doubt, that the deceased had intentionally contributed to his/her death. It is not always possible to establish an intention of the deceased during the investigation of the circumstances leading to death. If there is no report of a suicide note having been left, the social stigma of suicide might prompt a case to be presented in a way that leaves the intention indeterminate. As a result, statistics of causes of death undoubtedly under-report the actual incidence of suicides. Deaths from drowning or drug overdose are examples of causes especially susceptible to misinterpretation of intent and, hence, misclassification.