

Suicide and mental disorders: do we know enough?

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According to World Health Organization (WHO) estimates, approximately 814 000 people died by suicide in the year 2000 (World Health Organization, 2001a). In the past 45 years suicide rates have increased by 60% in some countries and suicide is now one of the three leading causes of death among those aged 15–34 years worldwide. These data clearly indicate that suicide is a serious public health problem.

The association of suicide and mental disorders has been widely discussed and documented, leaving the key role of the management of mental disorders in the prevention of suicide uncontested. However, do we know enough about this issue? To this end, we have undertaken the task of revisiting the available evidence. We found it essential to highlight a few issues critical to future action.

MENTAL DISORDERS IN CASES OF SUICIDE

In relation to more than 814 000 suicide deaths every year worldwide, the number of published cases (a full list of reviewed papers and a detailed table of results are available from J.M.B.) studying specifically the psychiatric diagnosis of people who died by suicide has been relatively small ($n=15\,629$).

Most strikingly, 82.2% of all cases explored came from Europe (particularly the UK and Scandinavian countries) and North America. Merely 1.3% (216 cases) originated from developing regions (India and Taiwan). This constitutes a strong bias towards Northern European countries and renders questionable any generalisation or recommendation derived from those data to other cultural settings.

Moreover, another big limitation comes from the fact that out of the 15 629 cases of suicide with information on the psychiatric diagnosis, slightly over 50%

($n=8205$ cases) originated from genuine studies of the general population. The remainder included subjects previously admitted to psychiatric hospitals, where the diagnoses were those found in the medical charts.

From a methodological point of view there are still more issues to consider. The publications available go back over 40 years. Different diagnostic manuals were used (DSM–III, DSM–III–R, ICD–8 to ICD–10), which makes comparisons of those studies somewhat problematic. Even if we generally assumed that the nature and definition of major psychiatric disorders such as depression or schizophrenia might have remained relatively stable (e.g. from ICD–8 through to ICD–10), the means of collecting information to establish a diagnosis were manifold; thus, the pooling together of the data could be questioned. The sources of information about the deceased comprised a varied combination of psychiatric, medical, health and/or police records and interviews with health professionals and/or family, friends or key informants. The comparability of diagnoses derived from psychological autopsies (Beskow *et al*, 1990) on the one hand and psychiatric hospital records on the other remains to be demonstrated. Frequently, various types of sources were combined in one study, which makes tackling this issue even more demanding.

If one still insisted on analysing the totality of the 8205 cases of suicide among the general population, thereby partly ignoring the limitations put forward, one would find first that, unsurprisingly, a psychiatric diagnosis was made in the majority (above 95%) of those investigated (a full list of reviewed papers and a detailed table of results are available from J.M.B.).

Second, in agreement with what is commonly believed, mood disorders (i.e. depression) were most frequently associated with suicide. The combined data from available general population studies

indicated that, regarding the distribution of diagnoses, depression accounted for 35.8% among all diagnoses (the number of diagnoses exceeded the number of cases in the studies using multiple diagnoses and it was not always possible to identify the individuals with a given multiple diagnosis). However, in relation to the 8205 cases, 53.7% of these were diagnosed with depression. This is in line with Lönnqvist (2000), who, reporting only on the results of psychological autopsy studies (12 studies, $n=1945$ cases), found diagnoses of depression in the range 29–88%.

Third, it is worth noting that the comorbidity of mood disorders with substance-related disorders (in reality, depression and alcoholism) was that most frequently found by those general population studies that recorded multiple diagnoses ($n=6370$ cases). This interface between depression and alcohol clearly requires greater attention.

Among the psychiatric hospital population, severe disorders (e.g. schizophrenia, organic mental disorders) reached 45.3% of all diagnoses, whereas less severe or disabling disorders (substance-related, anxiety/somatoform and adjustment disorders) were found mostly in the general population, amounting to 32.1% of all diagnoses.

IMPACT OF TREATMENT

Assuming that we had sufficient information about the relation between suicide and mental disorders, we could go a step further and question the treatment effectiveness of the disorders implied.

If we apply the depression treatment effectiveness of 52%, on average, indicated in the *World Health Report 2001* (World Health Organization, 2001a) – which reflects real, concrete constraints rather than an idealistic but unattainable 100% – and suppose that an average of 50% of people with depression were correctly identified and treated (preliminary information indicates that in developed countries this figure is below 45% (Suominen *et al*, 1998; Spijker *et al*, 2001), the impact on suicide rates would be about 7.8%. This would reduce suicide rates from a world average of 15.1 per 100 000 to 13.9 per 100 000.

Applying the same reasoning to alcohol-related disorders and schizophrenia and combining the corresponding calculations for these three disorders most

frequently found in association with suicide, we could ideally expect a combined reduction of suicide rates of about 20.5%: from 15.1 per 100 000 to 12 per 100 000. Applied to the number of cases of suicide in the year 2000, this would represent more than 165 000 lives saved; nevertheless, it still leaves much to do.

IMPLICATIONS FOR PREVENTION

From what we know today, predominantly from the experience of Western-oriented countries, we may need to reconsider suicide prevention strategies, focusing exclusively or mostly on the management of specific diseases (e.g. depression). A sound suicide prevention strategy should definitely take comorbidity into consideration and include the treatment of at least schizophrenia, depression and alcohol-related disorders as its major components. To this end, increasing public awareness about the treatment of psychiatric illnesses relevant to suicide (contact with mental health services averaged 32% (range=16–46%) in the year before suicide, according to Luoma *et al* (2002), and ranged up to 41% for contact with psychiatric in-patient care in the same period, according to Pirkis & Burgess (1998)) and integrating the management and improved treatment effectiveness of these illnesses are equally important. The strategy recently proposed by the WHO for the management of chronic disorders (World Health Organization, 2001b) seems particularly promising in this respect, given the chronic nature of mood disorders, substance-related disorders and schizophrenia. The key message here is that unidimensional solutions to complex problems do not work. Therefore, effective treatment for chronic conditions requires a transformation of health care systems, away from delivery focused on episodic care in response to acute illness, and towards a comprehensive system of care that is designed to meet the long-term needs of patients.

The prevention of suicide also should consider the (physical) environment (e.g. managing the availability of means of

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suicide and responsible media reporting). Finally, knowledge should increase about specific psychosocial risk factors, risk situations for suicide and suicidal people's experience of stress due to negative life events (e.g. Wasserman, 2001; Runeson, 2002) in different cultures.

Hence, from a worldwide perspective we do not know nearly enough about the association of suicide and mental disorders to make recommendations on a broader scale. Local studies might have been instrumental in informing local action but they are not enough to assist generalised global action. Using a common methodology to study larger numbers of completed cases of suicide, particularly if they come from different countries, cultural and social environments, is also important to allow further analysis of the age and gender distribution of different psychiatric diagnoses.

Gaps in knowledge need to be filled, particularly with regard to different cultural settings, because little information is available on a global basis. One of the WHO's most recent efforts is the undertaking of SUPRE-MISS, the Multisite Intervention Study on Suicidal Behaviours. At least one country from each of the six WHO regions is found among the participants. So far, eight culturally distinct sites, all of them applying common instruments, have been enrolled. To date, no systematic data collection has been conducted in some of these places. It is hoped that the components of this study, namely randomised clinical brief intervention, community survey and community description, will provide indispensable data and eventually

allow insights into hitherto unknown cultural characteristics.

DECLARATION OF INTEREST

None.

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