

Mortality statistics in psychiatry[†]

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Often the medical epidemiologist can gain valuable information, with therapeutic implications, from the study of mortality statistics – and it causes neither pain to the patient, nor the emotional trauma of a post-mortem to the relatives. In psychiatric epidemiology, death is one of the few really hard items of data we have, and mortality statistics have been used both in research and service planning. The earliest study was conducted 160 years ago (Farr, 1841). Early studies of the mortality associated with mental illness were conducted with patients in mental hospitals and showed greatly increased premature mortality, especially from tuberculosis and gastrointestinal infections (Shepherd, 1957). As the quality of care improved in mental hospitals during the 20th century, the excess mortality among psychiatric in-patients began to diminish, with fewer deaths from pneumonia, tuberculosis and malnutrition (Norris, 1959).

In the early studies conducted on hospitalised patients, the increased mortality was as much a function of institutional hazards as of the underlying psychiatric disorders. Babigian & Odoroff (1969) studied the mortality of different categories of patient from the Monroe County Case Register, which recorded all residents of this urban county in New York who came into contact with any of the major providers of psychiatric care. The relative risk of death for all psychiatric diagnoses in the register was three times that of the age-matched comparable general population. Similarly, Innes & Millar (1970) investigated the subsequent mortality matched with the general population for age, gender, area of residence and occupation occurring in all referrals to the psychiatric services of a regional board area in Scotland. They found the relative risk of death for these subjects to be twice that of the general population.

[†]See pp. 498–502, this issue.

This approach to mortality statistics in mental disorder could be said to have been concluded by the comprehensive meta-analysis of 152 English-language reports on the mortality of mental disorders (Harris & Barraclough, 1998). These data cover 27 categories of mental disorder and 8 ‘treated’ categories, and they show the relative risk of death for these psychiatric conditions from the major causes of death. The highest risks for natural and unnatural deaths are, in terms of psychiatric diagnosis, substance abuse and eating disorders, but almost all conditions carry some increased risk. Schizophrenia and major depression are associated with high risk of death from unnatural causes – suicide and accidental death – and deaths from natural causes are highest among those with organic mental disorders, ‘mental retardation’ and epilepsy.

We know, therefore, much about the premature risk of death for those recorded as being psychiatric patients, in terms of both psychiatric disorder and immediate cause of death, whether in or out of hospital. However, these studies shed no light on the potentially large number of people who may have a psychiatric illness but have not presented to specialist services.

PSYCHIATRIC MORTALITY IN THE GENERAL POPULATION

Much of the best longitudinal population-based epidemiological research has emanated from Scandinavia, and this is true also for mortality studies, which have sometimes been built into a larger programme (Rorsman *et al*, 1982). In this issue is reported a 17-year follow-up study recording the 1597 deaths in a nationally representative sample of 8000 adult Finns (Joukamaa *et al*, 2001, this issue). Between 1977 and 1980 data were collected with a preliminary screening phase and subsequent psychiatric diagnosis. Thirty-five per cent of the subjects in this survey of the general

population were identified as psychiatric cases; diagnosis was made from various sources of information. Deaths occurring in this population were then identified and the cause of death recorded. This is the first population-based, cause-specific mortality study related to different mental disorders. Suffering from any mental disorder, as identified by the screening instruments, was associated with a significant risk of premature death, with a relative risk of 1.56 in men and 1.38 in women. Both genders had excess mortality from cardiovascular disease in general, coronary heart disease, respiratory disease and suicide; men also had excess deaths from non-suicidal injuries.

Comment on the excess death rates for schizophrenia is of interest, as the effect of the institution had been largely excluded. Those with schizophrenia had increased death rates from respiratory disease, cancer and (in men) suicide. The smoking habits of those with long-term schizophrenia are well known. When one considers that some ward-based token economy programmes for patients with schizophrenia used cigarettes as rewards, this is salutary.

MOOD DISORDERS

As the baseline data for this study were collected in the 1970s, before the tidal waves of DSM-III-R and DSM-IV (American Psychiatric Association, 1987, 1994) obliterated the European concept of neurosis, the diagnoses using the ninth edition of the Present State Examination (Wing *et al*, 1974) distinguished between mood disorders, neurotic depression and other neurotic disorders. In a population survey these diagnostic categories are much the larger part of the whole initial sample. For example, 1 in 6 adults had suffered from a neurotic disorder in the week before the British psychiatric morbidity survey conducted in 1993 (Jenkins *et al*, 1998).

Neurotic depression in men was associated with increased mortality from coronary heart disease; this supports the association between myocardial infarction and a history of depressive illness or dysthymia (Pratt *et al*, 1996). The well-known association with suicide was demonstrated and is in line with follow-up studies based upon cohorts of patients from secondary psychiatric care (Harris & Barraclough, 1997). Neurotic depression was found to be associated in women with increased risk

of death from respiratory disease. This may be linked to the known association between depression and smoking (Covey *et al*, 1998), and between neurosis and greater exposure to the toxic effects of smoking (Salmons & Sims, 1981).

There are practical implications for this study. It supports an increased emphasis on treating psychiatric illnesses, especially depressive conditions, not only for symptom relief but also for the prevention of physical illness, particularly cardiovascular disease. It also demonstrates the consequences of morbidity for future premature mortality in people who suffer from diagnosable psychiatric conditions but have not come to the attention of specialist services. All people with psychiatric symptoms have a decreased life expectation, and therefore the delivery of treatment services – provided they can be shown to be effective – should be improved and better directed to those in need.

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