in marital structure had much smaller effects on female mortality trends.

- The recent decline in official marriages and growing importance of non-marital unions suggest that overall mortality will increasingly depend on the health situation in other than officially married groups.
- There is a need for more in-depth studies on the trends and determinants of the striking excess non-married male mortality in Eastern Europe.

References


Successful deinstitutionalization of mental health care: increased life expectancy among people with mental disorders in Finland

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To assess impact of deinstitutionalization of mental health care, we studied life expectancy for 341 630 people with hospitalization or early retirement pension for mental disorders in 1981–2003 in Finland. Life expectancy at the age of 15 years was significantly shorter for men/women with serious mental disorder (59.0/70.8 years) than in the general population (75.3/82.1 years) in 2001–03. Life expectancy increased for people with schizophrenia and other psychoses, mood disorders and neurotic disorders, but decreased for people with substance use disorders. Deinstitutionalization and decentralization of mental health services did not affect life expectancy negatively. Policy measures to control adverse effects of alcohol and substance abuse have failed.

Introduction

In most developed countries, mental health services have been transformed from hospital-centred to integrated community-based services. Social inclusion and empowerment of people with mental disorders has gradually replaced institutional care and paternalistic attitudes. However, evidence to support or challenge the change in mental health policy is scant and system-level outcome studies are rare.¹

In Finland, a deinstitutionalization process began in the 1980s and the number of psychiatric hospital beds has decreased by 75% since the 1970s.² Psychiatric services were merged with other secondary-level health services in 1991 and funding of mental health services was transferred to the autonomous municipalities in 1993. The annual number of psychiatric inpatients, however, has remained remarkably stable: approximately 30 000 people annually (round 6 per 1000 inhabitants).

People with serious mental disorders have considerable excess mortality, even excluding the effect of suicides.³ Mental disorders are also associated with low socioeconomic status and negative lifestyle factors that can contribute to excess mortality.⁴

Materials and methods

The study population was mainly retrieved from the 1981–2003 Finnish Hospital Discharge Register (HDR), kept by the National Institute for Health and Welfare (THL). The HDR contains information on all patients treated at any hospital in Finland. To maximize the coverage of people with serious mental disorders, we retrieved 1981–2003 data from the National Pension Register, kept by the Finnish Centre for Pensions. After excluding people treated for an organic mental disorder...
(ICD-10 codes F00-F09) or for intellectual disability (F70–F79), the data included information on 341,630 persons aged ≥15 years.

Subanalyses were carried out for the following diagnostic groups: mental and behavioural disorders due to psychoactive substance use (ICD-codes F10-19); schizophrenia, schizotypal and delusional disorders (F20–F29); mood/affective disorders (F30–F39); and neurotic, stress-related and somatoform disorders (ICD-codes F40–F48). Psychiatric diagnoses given in ICD-8 (1981–86) or ICD-9 (1987–95) were converted to ICD-10 codes.

Information on deaths was retrieved from the Finnish Cause-of-Death Register from 1981–2003. The register includes all deaths of Finnish citizens and permanent residents in Finland. In total, 91,445 people in the study population died before 31 December 2003.

Life expectancies (at the age of 15 years + 15 years) were calculated for men and women by using Wiesler’s method based on life table methodology with 1-year age stratification.2,5

Results

Men with serious mental disorders had a life expectancy at age 15 years of 53.8 years in 1981–85 and of 59.0 years in 2001–03 (figure 1). For women with serious mental disorders, life expectancy increased from 64.3 to 70.8 years. In 1981–85, the difference between people with serious mental disorders and the general population’s life expectancy was 17.1 years in men and 15.0 years in women. By 2001–03, the gap had been reduced to 16.3 years for men with serious mental disorders and 11.2 years for women with serious mental disorders.

Life expectancy increased for people with schizophrenia and other psychoses, mood disorders and neurotic disorders, but decreased for people with substance use disorders during the study period of 1981–2003 (figure 1). The gap to life expectancy among the general population diminished most for women with mood/affective disorders (10.3 years from 1981–85 to 2001–03) or with neurotic, stress-related and somatoform disorders (6.1 years) and for women with schizophrenia, schizotypal and delusional disorders (4.7 years).

Discussion

The life-expectancy gap between people with serious mental disorders and the general population remains wide. Men with serious mental disorders had a 16.3-years shorter life expectancy and women with serious mental disorders had an 11.2-years shorter life expectancy than men and women in the general population in 2001–03. Since the early 1980s, life expectancy for men with serious mental disorders increased by 5 years and by 6 years for women. Life expectancy increased in all diagnostic groups, except for people with severe substance abuse problem, who did not evidence any increase in life expectancy.

From a social policy perspective, the study period was characterized by easy access to primary health care and a high level of social security. Increasing numbers of people with mental disorders, especially with mood disorders, have left the labour market to enter disability pensions. Among people with schizophrenia and other psychoses, the increase in life expectancy coincides with the major shift in treatment paradigm from institutional care to community-based services. Among people with mood disorders and neurotic disorders, the study period was characterized by improved access to care and an increase in use of anti-depressant medication. Investment in community care, improved access to outpatient care, and increasing awareness about mental disorders may have contributed to the decrease in life expectancy gap in these diagnostic groups. On the other hand, no major reforms or treatment advances took place in substance abuse care. Increase in per capita alcohol consumption during the study period6 may also have contributed to the unfavourable mortality trend among people with substance abuse disorders.

Figure 1 Life expectancy at 15 years (in years) for total population, all people with mental disorders and by mental disorders in Finland 1981–2003. (a) Men. (b) Women. F, all mental disorders; F1, substance use disorders; F2, schizophrenia and other psychoses; F3, mood disorders; F4, neurotic disorders
**Study strengths and limitations**

A major strength of this nationwide study is good coverage of a large and unselected population including all people with a hospitalization or early retirement pension for mental disorders. Data were nationwide, prospectively collected for register purposes and have good coverage and quality.

As we have only included hospitalized patients with serious mental disorders or those who had received a premature retirement pension due to mental disorders, we are excluding less severe cases of mental disorders and mental health problems. Our findings, therefore, cannot be used to make generalizations about people with less-severe mental disorders not requiring inpatient care.

The less favourable outcome for men can be partly explained by the differing morbidity patterns between women and men: substance abuse disorders are more common among men. However, it may also reflect a gender-specific selection effect. If the life expectancy outcome is dependent on severity of illness, and severity would be related to gender, a selection effect would be possible because it has been shown that women more often seek help for mental disorders. This could lead to an overrepresentation of milder cases among women, and cause a gender effect in relative life expectancy.

Previous reviews indicate that adverse lifestyle factors (unhealthy diet, lack of exercise and smoking) are more common among people with mental disorders. Furthermore, studies indicate that people with mental disorders may encounter barriers in access to health care. It seems plausible that multi-factorial barriers are in function and that these may be related to the general stigmatization and marginalization of people with serious mental disorders.

Our study design does not allow any conclusions regarding causality, but our results support continued development of diversified community mental health services. However, the provision of adequate somatic care needs to be a service priority to reduce the still existing substantial gap in life expectancy between people with mental disorders and the whole population. In order to reduce the remaining gap in life expectancy, health promotion actions targeting this highly vulnerable population and actions to reduce health care access barriers are needed. Policies that reduce health inequalities need to consider that people with mental disorders are an especially vulnerable group, and positive discrimination may be needed to abolish the life expectancy gap.

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**Key points**

- People with mental disorders have been shown to have a higher mortality and thus, a shorter life expectancy than general population.
- During the rapid deinstitutionalization of mental health care, life expectancy among people with mental disorders has increased faster than among general population in Finland.
- The improvement was more significant among women than among men.
- People with schizophrenia and other psychoses, mood disorders, or neurotic disorders had the most positive trend, while the life expectancy decreased for people with substance use disorders.

**References**