Suicide Mortality and Suicide Prevention in Finland

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Suicide rates per 100 000 inhabitants in the Nordic countries 2000-2014

Suicide Mortality in Finland 1970-2015

$N_{tot2015} = 731$, mortality $13.3/10^5$

Statistics Finland, 2016
Male suicide mortality in Finland in 2000 and 2015 by age group

Statistics Finland, 2016
The National Suicide Prevention Project in Finland 1986-1996

• The Finnish suicide prevention project was the first research-based comprehensive national programme for suicide prevention in the world.

• Three phases:
  o Research phase: "Suicide in Finland 1987", a national psychological autopsy study of all suicides (N=1397)
  o Implementation phase: "Suicide can be prevented". A target and action strategy for suicide prevention (1993)
  o Evaluation phase: Internal and external, international evaluations (both 1999)

• Generally perceived as successful effort, and led to improved practices in health and social care services.
Suicide in Finland in 1987: Treatments received for major depression before suicide

- Adequate antidepressant: 3%
- Weekly psychotherapy: 7%
- Electroconvulsive therapy (ECT): 1%

Suicide after psychiatric hospitalization for depression in Finland 1991-2014:

- Register data from:
  - The Finnish Hospital Discharge Register, containing data on all psychiatric hospitalizations in Finland,
  - the Census Register of Statistics Finland providing sociodemographic information, and
  - Statistics Finland’s register on causes of death were linked pertaining to years 1991-2014.

- All first psychiatric hospitalizations in 1991 – 2011 with a principal diagnosis of a depressive disorder (N=56 826) were included. The subjects were followed-up until death by suicide, death for other reasons, or end of follow-up 2014 (maximum 23 years).
Temporal trends in suicide mortality among psychiatric inpatients with depression

- Suicide risk has markedly declined during the study period 1991-2014.
- Age- and sx-adjusted HR 0.48 for the most recent cohort (reference years 1991-95).
- Greatest change occurred in the 90’s.
Sales of antidepressants (ATC-group N06A), DDD/1 000 inhabitants/day, 2005-2015

- N06AA Non-selective monoamine reuptake inhibitors
- N06AB Selective serotonin reuptake inhibitors
- N06AG Monoamine oxidase type A inhibitors
- N06AX Other antidepressant

Alcohol in Finnish suicides (Suicide in Finland in 1987)

- Alcohol dependence or abuse diagnosable in 43% of all suicides.
- Furthermore, about ½ of all suicides under influence of alcohol.
- Prevalence of alcohol use disorders or alcohol at time of death much higher among males.

Sales of alcoholic beverages in litres of 100 per cent pure alcohol per inhabitant aged 15 years and over, 1995-2014

Source: DK, FO, GL, IS, NO: The central statistical bureaus; FI & ÅL: THL; SV: Public Health Agency of Sweden

Service provision matters

Suicide mortality in Finland is about 10% lower in municipalities with weight in psychiatric outpatient rather than inpatient services.

Figure 3: Factors associated with variation in suicide rate at the municipal level
Rate ratio indicates the relative risk of suicide for the 1 SD increase in the value of each variable (except for 24-h-emergency services, mobile outpatient services, and transfer of services to primary care, for which rate ratio indicates the change from no boxers). The lines are 95% credible intervals (Bayesian analogues for the confidence intervals). O/E = observed/expected ratio.
Current state and challenges for suicide prevention in Finland:

- Downward trend in Finland in suicide mortality ongoing since 1990, but male suicide mortality is still higher than in the other Nordic countries.
- Probably multiple factors underlying the positive trend, these including the national suicide prevention project, and improved treatment of depression.
- No national strategy for suicide prevention in Finland since the late 1990s.
- National Institute for Health and Welfare (THL) responsible for national registries. Active suicide research conducted in universities, but too few intervention studies.
- Finnish Mental Health Association has an important role as a leading NGO, providing crisis hotlines and counselling, and launching the ASSIP intervention for suicide attempters (an ongoing RCT in Helsinki).
Thank you!