Individual and familial mental illness is associated with an increased risk of suicide in young people

Agerbo E, Nordentoft M, Mortensen P. *Familial, psychiatric, and socioeconomic risk factors for suicide in young people: nested case-control study*. *BMJ* 2002 July;325:74–9.

QUESTION: What family, individual and socioeconomic factors are associated with youth suicide?

Design and setting

Case-control study using Danish population registers.

Participants

All recorded youth suicides between 1981 and 1997 (496 people aged 10–21 years) were matched with 24,800 controls.

Assessment of risk factors

Parents and siblings were identified from population based registers. Inpatient data were gathered from discharge registers of national hospitals and socioeconomic data were collected from administrative registers.

Main outcome measures

Suicide data were collated from official registries.

Main results

Youth mental illness was the factor most strongly associated with youth suicide. Parental factors linked to increased suicide risk were parental suicide or early death, hospitalisation for mental illness, unemployment, low income, poor schooling and divorce. Mental illness in siblings and short duration of schooling were also risk factors. Socioeconomic factors were less important after controlling for confounders.

Conclusions

Mental illness in young people and their family members may be linked with an increased risk of suicide. Early and appropriate identification of mental illness in young people may reduce suicide rates.

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COMMENTARY

Agerbo *et al* present more precise estimates of suicide risk factors than previous studies which used psychological autopsies and smaller samples.^{1 2} The authors highlight the role of mental illness in youth suicide.³ Previous psychological autopsy studies have focused mostly on attempts and ideation when examining family history of suicidal behaviour. Agerbo *et al* found that suicide of the biological mother and father were associated with an increased risk of suicide among young people. Agerbo *et al* also collated information about the role of socio-economic risk factors in adolescent suicide, an area where knowledge is limited.⁴ The effect of socio-economic variables lessened when parental history of psychiatric inpatient admission was considered.

In this study, the statistical analyses are generally well conceived and executed. There is one exception. The authors compute attributable risks for significant factors (individual mental illness, mental illness of a parent and suicide of a parent) to estimate the reduction in suicide if a risk factor was removed. This strategy is misleading since it is based on the flawed assumptions that (1) these risk factors are causal and (2) the causal factors are independent.⁵

The links between family functioning and psychiatric admissions, socio-economic status and parental suicide remain unclear. We do not know how family dysfunction is related to suicide. Psychological autopsies have provided refined interpretations of family variables as potential risk factors. For instance, Gould *et al* found that the parent-child relationship was a significant risk factor, even after adjusting for psychiatric disorders in younger adolescents (aged 16 years or under).² Psychological autopsies, however, carry the risk of recall biases.⁶ On the other hand, in studies using population-based registers, the assessment of mental disorders is limited to previous psychiatric contacts (inpatient admissions in this study), even though a proportion of suicide victims have no contact with mental health services.⁷

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4 Gould MS, Kramer RA. Youth suicide prevention. *Suicide & Life-Threat Beh* 2001; **31**: 6–31.

5 Schlesselman JJ. *Case-Control Studies*. Oxford: Oxford University Press, 1982.

6 Brent DA, Perper JA, Moritz G *et al*. The validity of diagnoses obtained through the psychological autopsy procedure in adolescent suicide victims: use of family history. *Acta Psych Scand* 1993; **87**: 118–22.

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