

Intergenerational Transmission of Suicide Attempts and Suicides

Risks for suicide attempts are strongly transmitted, with nature and nurture contributing equally, whereas the modest intergenerational transmission of completed suicide is largely genetic.

Suicide attempts and suicides have long been known to run in families, but questions remain about the genetic versus environmental contributions to these phenomena. Investigators used Swedish national registry data on all individuals born in Sweden in 1960 to 1990 to examine the occurrence of suicide attempts and suicide deaths in biological and adoptive offspring of parents who themselves attempted or died by suicide.

The investigators looked at all combinations of suicide attempts and deaths across four types of families: intact nuclear families (n=2,175,259); families where the biological fathers never lived with the children or nearby (n=152,436); families with stepfathers (n=73,785); and families of adoptees, including both their biological and adoptive parents (n=15,624). Across these family types, suicide attempts in offspring occurred in 2.8% to 6.7%, and suicide deaths occurred in 0.3% to 1.0%. Suicide attempts were strongly transmitted (odds ratios: genes and rearing, 3.28; genes only, 1.76; rearing only, 1.89), due to similar extents from genetic and environmental factors. Transmission of suicide attempts was generally stronger to sons than daughters. Roughly 40% of genetic transmission of attempts was accounted for by a psychiatric or substance use disorder in a biological parent; no similar effects on offspring suicide attempts were seen from adoptive parents. Suicide deaths were modestly attributable to genetic factors. Although suicide attempts and deaths shared transmission risk, they did not appear to result from the same genetic liability.

COMMENT

Despite this study's enormous sample size, limitations exist, as the small numbers of suicide deaths in certain categories precluded adequate determination of contributions attributable to rearing. The findings also show that suicide attempts and suicide deaths are not different points on the same continuum of severity. When it comes to suicide attempts, both nature and nurture seem to matter.

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