

Could parenting programs lead to lower health care costs in future generations?

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See related research article by Temcheff and colleagues at www.cmaj.ca/lookup/doi/10.1503/cmaj.091830

How splendid that the Commission d'accès à l'information du Québec, the Régie de l'assurance maladie du Québec and the Ministère de la santé et des services sociaux allowed Temcheff and colleagues to undertake their important longitudinal study on the association between childhood aggression and use of health care in adulthood.¹

Research governance procedures in the United Kingdom would almost certainly have prevented such a study. Research ethics committees would have demanded that each participant in the Concordia Longitudinal Risk Project provide consent to enter the follow-up study and allow access to their health data. The costly and time-consuming work involved, and the possibility of a high refusal rate given this high-risk population, would have deterred most researchers, and the opportunity to do these valuable analyses and publish these important data would have been lost.

Instead, Temcheff and colleagues have been able to assemble a cohort of nearly 4000 people representing 95% of an original cohort for whom robust childhood data on aggression and linked data on use of health services were available 30 years later. Such a high recruitment rate was possible because of an "opt out" approach to parental consent. Today, only children whose parents actively consented would be able to participate in such a study, and recruitment rates would be much lower. Research governance procedures in the UK are currently being questioned,^{2,3} and some people are asking whether the protection the procedures are meant to afford research subjects justifies the profoundly negative effect they are having on research.

So what does this study show that is so important? It suggests that a proportion of health service use at age 30–40 years can be predicted from childhood behaviour independently of level of education and childhood poverty.¹ The authors have estimated that a reduction in the use of a variety of health services of about 5%–25% could be achieved by a reduction in child-

hood aggression of one standard deviation.¹ Escalating health care costs mean that all western countries are having difficulty funding their health services. The savings that could be realized by a reduction in childhood aggression are thus worth pursuing.

Without knowing the number of participants in the different groups, it is not possible to estimate the population-attributable risk of service use that is due to aggression. However, because aggressive behaviour in childhood is a determinant of educational failure, and because poverty is a risk factor for aggression, the figures presented by Temcheff and colleagues must underrepresent the total possible impact of aggressive behaviour.

The knowledge that there is a link between aggressive behaviour in childhood and health in later life is not entirely new — it has been reported in other longitudinal studies as far back as the 1990s.⁴ However, the study by Temcheff and colleagues is the first to attempt to quantify the consequences of this link in terms of the use of health services.

As the authors are at pains to show, even high-quality longitudinal studies cannot prove causality; however, given a plausible biological hypothesis and supporting data from other studies, it is appropriate to consider causality seriously. The biological hypothesis here is that childhood aggression is a response to a stressful environment, and that overexposure to stress during childhood patterns the stress response⁵ in a way that could interfere with normal physiologic processes and predispose people to lifestyles that include such risk factors as the misuse of drugs

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KEY POINTS

- Childhood behaviour problems predict use of health services later in life.
- Childhood behaviour problems may be a response to a stressful environment, which may predispose a person to unhealthy lifestyles such as misusing drugs and alcohol.
- Parenting programs improve children's behaviour, mental health and well-being, thus having the potential to improve adult health and reduce future costs of health care.

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and alcohol as a means of providing short-term relief from stress. The most influential environment for the development of aggressive behaviour in children is the home, where the quality of parent–child interaction plays a key role.⁶

I was curious, therefore, to find that the main solution on which Temcheff and colleagues focused was school-based — teaching children self care, stress management and impulse control.¹ There is good evidence that school-based programs can improve children's behaviour,⁷ but the most important interventions to prevent and treat childhood behavioural problems are parenting programs.⁸ Analysis of British cohort studies confirms that the quality of the parent–child relationship predicts health in adulthood.⁹ The knowledge that parenting programs have an impact on children's mental health and well-being has led the British government to recommend support for parenting in its latest strategies for public and mental health.¹⁰ Such policies have the potential to improve health and reduce spending on health care in the future.

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