

The economic costs linked to adverse childhood experiences in Europe



Adverse childhood experiences (ACEs) are well established to be associated with mental and physical health problems.^{1,2} Although few would disagree that preventing ACEs is essential for children's welfare, from a policy perspective, understanding the economic costs of ACEs can incentivise governments to invest in preventative interventions.

In *The Lancet Public Health*, Karen Hughes and colleagues³ estimated the annual health and financial burden linked to ACEs for 28 European countries. The authors first calculated country-level population attributable fractions (PAFs) of 12 health outcomes due to ACEs from (1) pooled estimates of the associations between ACEs and health outcomes, and (2) estimates of the prevalence of ACEs within each country. For each country, the authors then applied the PAFs to the total economic costs of each health outcome and summed the costs of all ACE-associated outcomes. The annual health costs associated with ACEs were very high, ranging from US\$0.1 billion in Montenegro to \$129.4 billion in Germany. Furthermore, across all 28 European countries, the total ACE-attributable costs exceeded 1% of national gross domestic product (GDP), ranging from 1.1% (Sweden and Turkey) to 6.0% (Ukraine).

This comprehensive, rigorously conducted study makes three important contributions to the field. First, the study provides up-to-date meta-analyses of the associations between ACEs and 12 health outcomes. Second, it provides estimates of the prevalence of ACEs across 28 European countries, based on the best available evidence. Third, and most notably, it provides estimates of the health costs associated with ACEs for 28 European countries, to inform national policy making around ACE interventions. When interpreting these findings, however, it is important to keep two points in mind.

First, these results represent the health costs associated with ACEs, rather than the costs directly caused by ACEs. Most available studies that were used to derive the pooled estimates of the associations between ACEs and health outcomes were cross-sectional and relied on retrospective reports; meaning

that observed associations might be inflated by recall bias.⁴ The available studies also did not fully account for confounding factors that might partly explain the associations between ACEs and health outcomes, such as genetic risk of health problems.⁵ Notably, quasi-experimental studies have suggested that the associations between childhood adversities and health outcomes are substantially attenuated after applying more stringent control over confounders.^{6,7} Therefore, the health costs that are directly caused by ACEs might be lower than the health costs associated with ACEs. To estimate the economic burden caused by ACEs, future studies are needed to test the relationships between ACEs and health using causal inference methods.

Second, the accuracy of the cost estimates depends on the accuracy of the estimated prevalence of ACEs within each country. The prevalence estimates are likely to be more accurate for countries for which data from large, representative samples were available, such as the UK, Sweden, and Denmark ($n > 64\,000$). However, as discussed by the authors, for some other countries (particularly those in eastern Europe), prevalence data were only available from single studies comprising comparatively small ($n < 1500$), non-representative samples. For these countries, the estimated ACE-associated costs might therefore be less accurate, but nevertheless provide a best estimate that is based on available data. This uncertainty highlights the need for future research to accurately estimate the prevalence of ACEs in countries with little available data, using nationally representative samples and high-quality assessments.

How can this study inform economic decision making? Although the estimates presented here reflect the health costs associated with ACEs, if we make a cautious assumption that the health costs caused by ACEs represent a proportion of the ACE-associated costs, that would still be an immense economic burden (eg, half of the ACE-associated costs would still exceed 0.6% of the 28 European countries GDP). Furthermore, as noted by the authors, the total economic burden of ACEs is likely to also include costs due to other ACE-associated outcomes, such as unemployment, crime, and social

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deprivation. Therefore, investing in interventions to prevent ACEs should lead to great economic benefits for European nations.

Although this study does not show which ACEs are associated with the highest health costs (given the use of an ACE score indexing cumulative exposure to different adversities), it adds to evidence showing that children exposed to multiple ACEs have the highest risk of costly health problems.^{1,2,8} Therefore, interventions that help prevent various ACEs (eg, parenting support programmes⁹) or address risk factors for multiple ACEs (eg, socioeconomic deprivation¹⁰) are worthwhile targets for investment. Although the COVID-19 pandemic has presented serious economic challenges to nations, policy makers must not reduce expenditure on programmes to prevent ACEs. This study suggests that investing in ACE prevention strategies should provide considerable future returns for governments, as well as crucially help ensure that children have a safe and supportive start to life.

I declare no competing interests.

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