The enduring effect of early life adversities on health trajectories

Published Online
September 29, 2021
https://doi.org/10.1016/
S2468-2667(21)00187-0

See Articles page e826

In this issue of *The Lancet Public Health*, Naja Rod and colleagues report on their national cohort study of over half a million young Danes (aged 0–15 years) who had more than 3·8 million hospital treatment episodes.[1] The findings generated from this major epidemiological investigation show the profound degree to which early life adversities detrimentally affect health outcomes among children, adolescents, and young adults.[1] This investigation overcomes some of the limitations of previously published studies, such as those that investigated a single early life adversity indicator that might not have a causal influence on subsequent health risks.[2] Harnessing Denmark's extensive inter-register linkages, the researchers examined three domains of early life adversity—poverty, loss or threat of loss, and family dynamics—in relation to likelihood of subsequently receiving hospital treatment across the full diagnostic spectrum. Such a comprehensive study provides new insight into the relative effect of early life adversity on health systems, and it also indicates how individual adversities combine synergistically to increase risks.

Although register-based studies minimise biases due to selection and attrition, they are somewhat restricted because only those indices that are captured in routinely collected administrative records are available for analysis. Thus, certain crucially important early life adversities, such as bullying, victimisation, and domestic violence, typically cannot be examined in these studies. In this Danish investigation, elevated risks were observed across the comprehensive array of disease categories examined, and during early and later childhood as well young adulthood. The greatest excess hospital treatment rate linked with a high level of early life adversity was for injuries and poisonings in those aged 16–24 years. Such robust evidence for the relationship between early life adversity and heightened health need enduring into adulthood, and how the strength of this association is proportional to the degree of adversity experienced, firmly bolsters the rationale for proactive societal investment to prevent and ameliorate early life adversities to subsequently reduce intergenerational health inequalities.[3,4]

The reported findings pertain to a high-income country that is among the least unequal worldwide.[5] Therefore, they probably represent a best-case scenario, with starker inequalities of this nature likely existing in poorer and more unequal societies. In low-income and middle-income countries, early life adversities are generally more prevalent and much more severe, and health-care infrastructures are far less developed or are inaccessible to marginalised families. Replicating this Danish study in low-income and middle-income countries would, however, be infeasible because the required infrastructures to support interlinked population-based data systems are not yet in place. In most high-income countries, injuries and poisonings are the main cause of death at a young age beyond infancy until early adulthood, and this Danish study's findings clearly show the degree to which the likelihood of hospital treatment following these events is socially patterned. Given that risks are modifiable at an individual, household, and environmental level, injuries and poisonings are one of the most preventable of public health challenges, and yet, their prevention is rarely prioritised by policy makers.[6] Further research on the mechanisms linking specific early life adversity exposures and serious injury or poisoning incidents is also needed. Modelling the economic impact of exposure to early life adversity at the family, community, and health-care provider levels, as well as evaluating the effectiveness of primary and secondary interventions, would also likely be an influential lever for policy change.

The findings reported by Rod and colleagues indicate that early life adversities are an important determinant of life course health inequalities that endure into adulthood. As the authors argue, hospitals can serve as an entry point for identification of major social problems and of children who could benefit from additional support. However, accessibility to hospital services is greatly restricted in many countries and so the health needs of vulnerable youngsters might be largely met in the community, or not at all. As well as access barriers, pathways to hospital treatment oftentimes reflect problematic familial circumstances, such as instances in which children are admitted for

predominantly social reasons. The needs of the most vulnerable youngsters, including those who do not present to hospitals, must therefore be adequately met upstream otherwise we potentially risk widening existing inequalities. Accessing hospital services has, however, become even more challenging due to the sustained impact of the COVID-19 crisis, which has widened existing health inequalities considerably.[7] Thus, in the UK for instance, by June, 2021, the BBC reported that general practitioners were becoming overwhelmed by levels of patient demand,[8] and that paediatric emergency departments were struggling to cope with the volume of children presenting with mild respiratory conditions.[9] Furthermore, the provision of children's mental health services was deemed to be inadequate even before the pandemic's onset.[10] Therefore, as the acute phase of the public health emergency recedes and societies begin to rebuild post-pandemic, proactive intervention with disadvantaged children, marginalised families, and deprived communities, and effective multi-sectoral collaboration, is imperative.

AJ is a trustee of the Mental Health Foundation and Samaritans. JM and RTW declare no competing interests. The views expressed are those of the author(s) and not necessarily those of the National Institute for Health Research or Department of Health and Social Care.

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