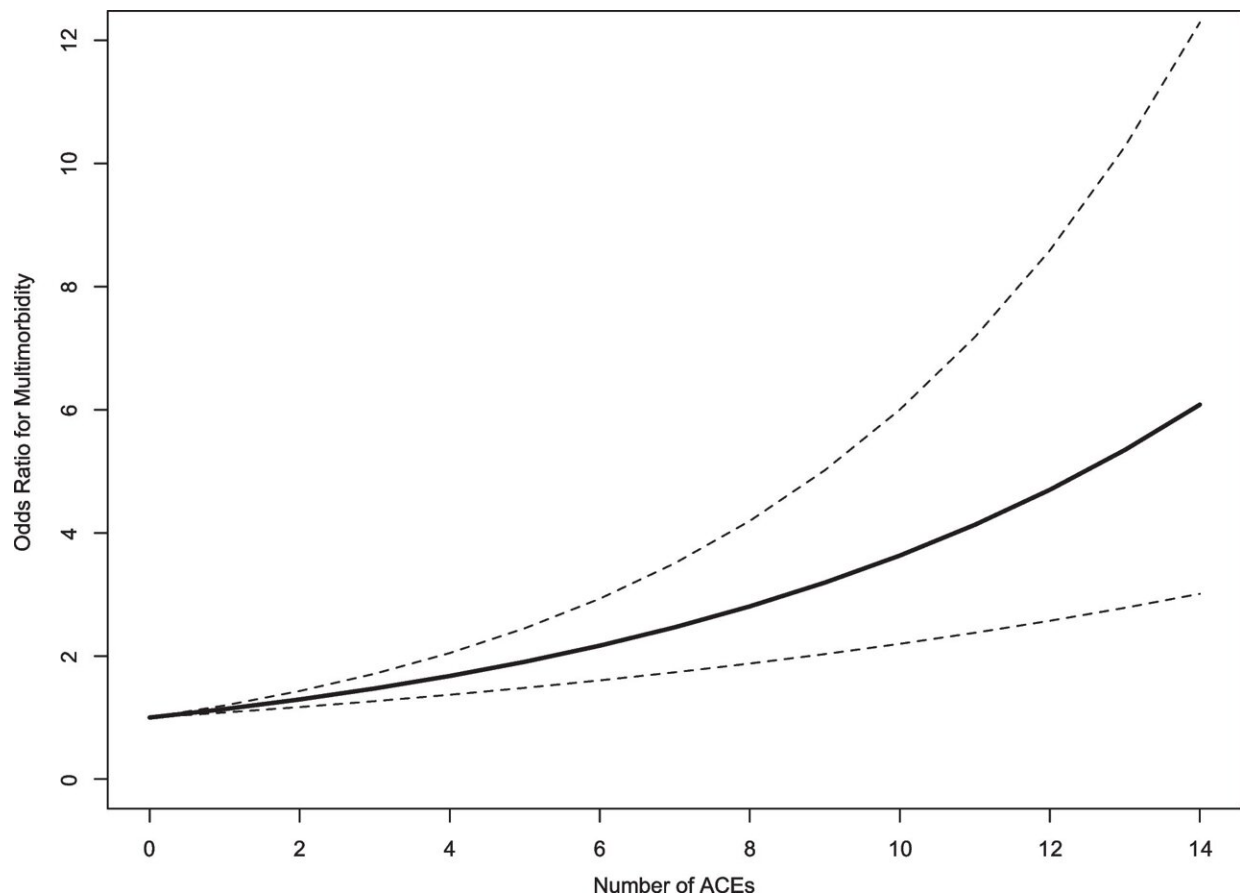


# Stressful childhood experiences linked to increased risk of multiple chronic conditions

September 6 2024, by Jessica Rorke



Dose–response meta-analysis of the relationship between adverse childhood experiences and multimorbidity. Solid black line represents the estimated relationship; dotted black lines represent the 95% confidence intervals for this estimate. Credit: *BMC Medicine* (2024). DOI: 10.1186/s12916-024-03505-w

University of Dundee research has revealed that each additional traumatic or stressful event experienced during childhood increases the odds of an individual suffering from multiple chronic conditions later in life by nearly 13%.

An adverse childhood experience (ACE) is a potentially traumatic or stressful event that occurs before the age of 18. They can include a wide variety of negative experiences, including abuse, neglect, household dysfunction, and other forms of stress such as bullying, famine or war.

ACEs have previously been associated with increased risk of many different poor health and social outcomes in adult life. However, their cumulative effect on the likelihood of someone suffering from simultaneous chronic health conditions, also known as multimorbidity, during adulthood is still unclear.

To establish the impact of ACEs on long-term health conditions, a team in the University's School of Medicine, led by Dr. Dhan Senaratne, conducted a [systematic review](#) and meta-analysis of 25 studies involving more than 370,000 people.

Dr. Senaratne, Clinical Ph.D. Fellow, said, "As global populations continue to age, we are seeing an increase in people with multiple long-term health conditions.

"The natural implication is to think that it is a problem that affects adults in mid or later life, but our research suggests that the origins may occur decades earlier in childhood.

"Data reveals that the more types of adversity you experience during your childhood, the more likely you are to have multiple long-term health conditions, or multimorbidity, when you are an adult.

"The [statistical analysis](#) revealed that for every childhood adversity you experience, the likelihood of you having multimorbidity in later life is 12.9% higher."

The [paper](#), "The impact of adverse childhood experiences on multimorbidity: a systematic review and meta-analysis," has been published in *BMC Medicine*.

Dr. Senaratne emphasized that while the research strengthens evidence supporting the lasting influence of childhood conditions on adult health and well-being, it does not establish whether ACEs are a direct cause of multimorbidity.

However, he said that future work on prevention and identification methods for ACEs may be beneficial in reducing risk for long-term health conditions.

"The increase of long-term health conditions within populations increases the complexity and cost of health care provision," said Dr. Senaratne. "If we want to address this, it may be necessary to include some strategies that also address childhood circumstances.

"There is an increased focus on developing trauma-informed models of health care, in which the impact of negative life experiences is incorporated into the assessment and management of long-term health conditions.

"However, identifying factors early in the cause of multimorbidity may help to mitigate the consequences of this developing health care crisis."

This research is part of the Consortium Against Pain Inequality (CAPE), a multicenter program of research involving researchers from the Universities of Dundee, Aberdeen, Edinburgh, Stirling, and University

College London.

CAPE is investigating how ACEs affect [chronic pain](#) using a range of different research methods.

**More information:** Dhaneesha N. S. Senaratne et al, The impact of adverse childhood experiences on multimorbidity: a systematic review and meta-analysis, *BMC Medicine* (2024). [DOI: 10.1186/s12916-024-03505-w](#)

Provided by University of Dundee

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