

# Incarceration of a family member during childhood associated with heart attacks in men

February 4 2016

---

A parent's incarceration has immediate, devastating effects on a family. Now, Virginia Tech and University of Toronto researchers say there may be a longer term risk: Men who as children experienced a family member's incarceration are approximately twice as likely to have a heart attack in later adulthood in comparison with men who were not exposed to such a childhood trauma.

The study, by Bradley White, an assistant professor with the Virginia Tech Department of Psychology, and Esme Fuller-Thomson at the University of Toronto's Factor-Inwentash Faculty of Social Work, was published in the March issue of the [\*Journal of Criminal Justice\*](#).

"The strong association we found between incarceration of [family members](#) during childhood and later [heart attack](#) among [men](#) aged 50 and older remained even after adjustments for many known risk factors for heart attack such as age, race, income, education, smoking, physical activity, obesity, high alcohol consumption, diabetes and depression," said White, lead author on the study, and a faculty member with the Virginia Tech College of Science.

The investigators were so surprised at the magnitude of the association for men from the first data set they analyzed that they later replicated the analyses using a second large survey.

Data came from two national surveys headed by the U.S. Centers for Disease Control and Prevention in conjunction with various state and local health agencies: A 2011 Behavioral Risk Factor Surveillance System sample with approximately 15,000 adults, and a 2012 BRFSS sample with more than 22,000 respondents.

Senior co-author Fuller-Thomson, who holds the Sandra Rotman Endowed Chair at the University of Toronto, reported "the findings were very consistent in the two samples indicating a strong association for men and no association for women."

Instances of a family member's incarceration during a study participant's childhood was relatively rare, with only about one in every 50 older adults in either survey reporting this adverse childhood experience.

Because of limitations in the survey, this research was unable to determine exactly which family member was incarcerated. However, based on prior studies, White said the vast majority of U.S. prison inmates are men, most of whom are fathers to children under 18. Further, crime details—violent or non-violent—and length of the prison sentences were not available in the survey.

"Such factors might impact the relationship between exposure to family member incarceration and later heart attack risk," he added.

"Previous studies have indicated that the incarceration of a parent plays havoc with the stability of housing, employment, and parental marital relationships, and result in considerable social and familial stigma," White said. "Parental incarceration also is associated with psychosocial maladjustment and mental disorders in children, including delinquency and conduct problems. However, less attention has been paid to the long-term physical health outcomes of the children as they grow up."

"Potential explanations warranting future research include the role of cortisol—the 'flight or fight' hormone," Fuller-Thomson said. "Some earlier research suggests childhood adversities may change the ways individuals react to stress across the life course and this can impact the production of cortisol."

Cortisol also has been linked to the development of cardiovascular disease in separate medical studies.

The study was not designed to differentiate why men, but not women, experienced higher odds of heart attack later in life. However, results suggest—but not yet confirm—reaction and life alterations may be gender-specific, said Fuller-Thomson.

Fuller-Thomson said that boys appear to be particularly sensitive to adverse childhood experiences.

She reported, "In my earlier research on the long-term consequences of childhood maltreatment, we found [childhood sexual abuse](#) was linked to heart attack for men but not women."

She added that the psychosocial impact on boys whose fathers are incarcerated may be greater than for girls because boys and men are less likely to seek counseling following psychological traumas, and thus may have more difficulty coping.

White and Fuller-Thomson were joined in the study by Lydia Cordie-Garcia, a University of Toronto graduate student. They hope future surveys will gather more information—which family member is incarcerated, nature of the crime, and approximate timing of incarceration—to better understand the potential role of these factors in long-term health outcomes of children impacted by family member incarceration.

Provided by Virginia Tech

Citation: Incarceration of a family member during childhood associated with heart attacks in men (2016, February 4) retrieved 27 April 2024 from <https://medicalxpress.com/news/2016-02-incarceration-family-member-childhood-heart.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.