

Abuse found to increase risk for cardiovascular disease among women with HIV

March 21 2024



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A study by Allison Appleton, Mark Kuniholm and Elizabeth Vásquez in the School of Public Health's Department of Epidemiology and Biostatistics is the first to establish a connection between physical and sexual abuse and cardiovascular disease among women living with HIV. Their work is [published](#) in the journal *AIDS*.

According to Appleton, previous studies have found that a history of abuse is associated with a higher risk of [cardiovascular disease](#) among [women](#) generally, and other studies have established that women living with HIV are more likely to experience abuse. No prior studies, however, have examined the abuse-associated risk of cardiovascular disease among women living with HIV.

"Although we know that experiencing adverse events like abuse can contribute to poor health outcomes later in life, having additional vulnerabilities, like positive HIV status, can further magnify the risk. That's why it is important that we study the impact of these adverse events on vulnerable populations and not just the general population," Appleton said.

The researchers used over 20 years of prospective life course data from the [Multicenter AIDS Cohort Study and the Women's Interagency HIV Study](#) to look at the effects of abuse on risk for cardiovascular disease and compared the results for women living with HIV to women who are HIV-negative. They then calculated 10-year risk scores for [myocardial infarction](#), coronary death and other atherosclerotic events.

This led to the discovery that experiencing childhood or adult [sexual abuse](#) increased the risk of cardiovascular disease among women living with HIV.

Adult sexual abuse was associated with higher risk than childhood abuse. Childhood [physical abuse](#) was not found to be associated with an increase in cardiovascular disease risk for either study group, though this may be due to the limitations of the study and not a reflection of the true association.

The study also identified potential biological pathways that link the experience of abuse to the development of chronic diseases.

"Experiencing abuse can lead to health conditions and behaviors such as depression, smoking and hepatitis-C infection," Appleton said. "These can in turn put additional stress on the cardiovascular system and can eventually manifest as cardiovascular disease. Living with HIV adds additional complications, potentially putting these women at even greater risk than their HIV-negative peers."

Appleton and her colleagues highlight the importance of social epidemiology in identifying groups that are at greatest risk of experiencing negative health outcomes.

"In medicine and [health research](#), we tend to emphasize biological [risk factors](#) over social ones," she said. "This work demonstrates why we need to think more broadly about how life experiences can trigger biological pathways to disease, especially chronic disease."

Determining which risk factors are most relevant for vulnerable populations can lead to better clinical outcomes, but only if physicians are aware of these risk factors and evaluate patients accordingly. Appleton noted that medical management of patients living with HIV tends to focus on current health behavior and lifestyle factors rather than life history. Risks associated with earlier exposures are rarely considered.

"What this study suggests is that managing comorbidities with a trauma-informed care lens for women living with HIV and women at high risk of acquiring HIV may help prevent and reduce cardiovascular disease," Appleton explained. "As lifespans continue to improve for people living with HIV, clinicians and researchers alike should consider abuse history in clinical encounters and in the study of disease cause and progression."

More information: Allison A. Appleton et al, Life course history of physical and sexual abuse is associated with cardiovascular disease risk among women living with and without HIV, *AIDS* (2023). [DOI: 10.1097/QAD.0000000000003822](https://doi.org/10.1097/QAD.0000000000003822)

Provided by University at Albany

Citation: Abuse found to increase risk for cardiovascular disease among women with HIV (2024, March 21) retrieved 27 April 2024 from <https://medicalxpress.com/news/2024-03-abuse-cardiovascular-disease-women-hiv.html>

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