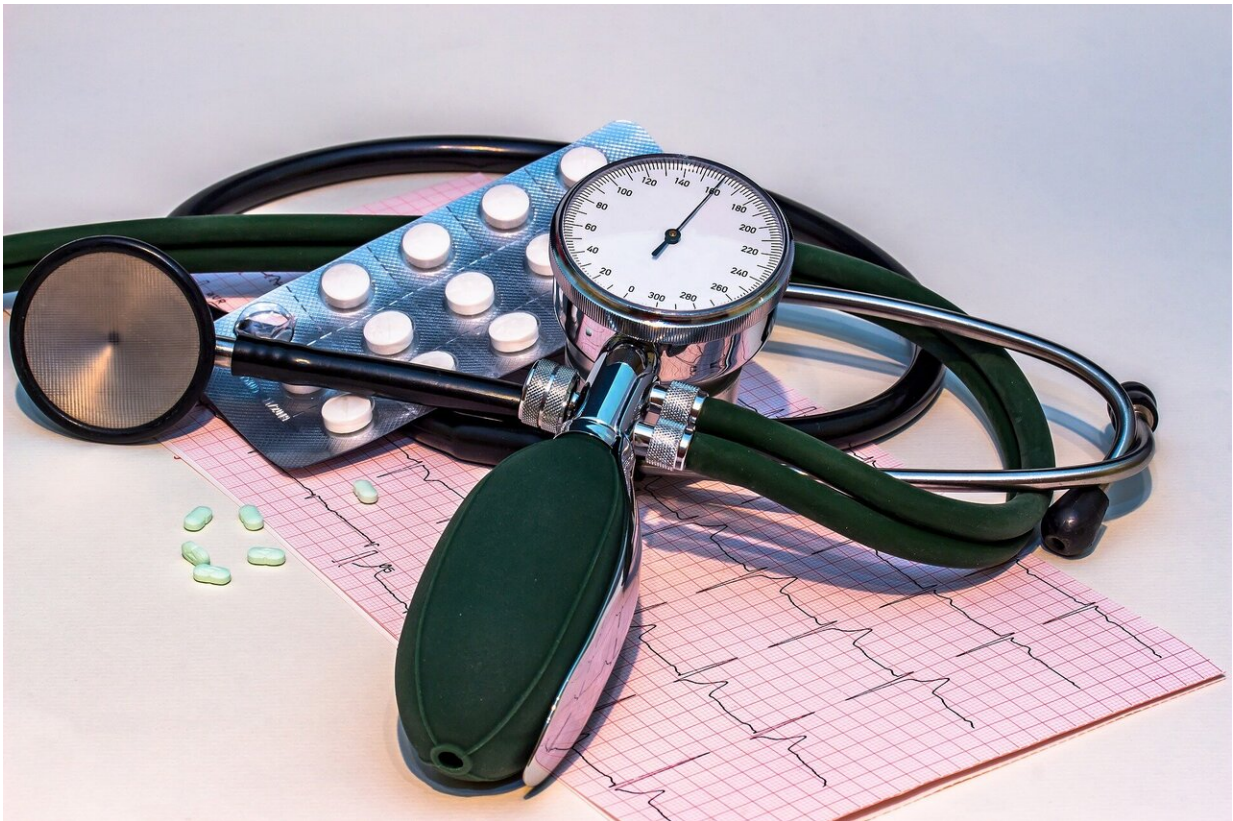


Women's experiences of sexual assault and harassment linked with high blood pressure

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Women who had ever experienced sexual violence in their lifetime—including sexual assault and workplace sexual harassment—were more likely to develop high blood pressure over a

seven-year follow-up period, according to findings from a large, longitudinal study of women in the United States. The research, funded by the National Institutes of Health and published in the *Journal of the American Heart Association*, indicated that sexual violence was a common experience, affecting more than 20% of the women in the sample.

"Our results showed that women who reported experiencing both sexual assault and workplace [sexual harassment](#) had the highest risk of hypertension, suggesting potential compounding effects of multiple sexual violence exposures on women's [cardiovascular health](#)," said Rebecca B. Lawn, Ph.D., of the Harvard T. H. Chan School of Public Health, Boston, lead author on the study.

Lawn and colleagues analyzed associations between lifetime exposure to sexual violence and [blood pressure](#) while accounting for the possible impacts of exposure to other types of trauma. For data, the researchers used the Nurses' Health Study II (NHS II), a longitudinal study of adult women in the U.S. that began in 1989 with 115,000 nurses enrolled.

Over time, the NHS II has collected data on a wide range of sociodemographic, medical, and behavioral variables. As part of a 2008 NHS II sub-study, a subgroup of participants reported whether they had ever experienced sexual harassment at work (either physical or verbal) and whether they had ever experienced unwanted sexual contact. They also reported exposure to other traumas, such as an accident, disaster, or unexpected death of a loved one.

Lawn and colleagues analyzed the NHS II sub-study data, excluding those participants who already had a diagnosis of high [blood](#) pressure or were taking medication for high blood pressure from their analyses. They also excluded women who had a history of cardiovascular or cerebrovascular disease. The final sample consisted of 33,127 women

who were ages 43 to 64 in 2008.

The NHS II data indicated that experiences of sexual violence were common: about 23% of the women had experienced sexual assault at some point in their life and 12% had experienced workplace sexual harassment. About 6% of women had experienced both.

About 21% of the women reported developing high blood pressure over the follow-up period, from 2008 to 2015.

Compared with women who had never experienced any type of trauma, women who had experienced sexual assault at any point in their lifetime were more likely to develop high blood pressure, as were women who had experienced workplace sexual harassment. Women who had experienced both sexual assault and harassment had the highest risk of developing high blood pressure.

These associations remained even after the researchers accounted for various health behaviors and conditions. Across analyses, the researchers found that links between non-sexual traumatic experiences and high blood pressure were inconsistent.

The researchers note that the risk for high blood pressure associated with lifetime sexual violence is similar in magnitude to associations with other factors that have received more attention, such as exposure to sexual abuse as a child or adolescent, sleep duration, and exposure to environmental pollutants.

Previous research suggests that stressful or traumatic life experiences, including exposure to sexual violence, are associated with both [mental health problems](#) and physical health problems such as cardiovascular disease. Previous research has also shown that having high blood pressure increases a person's likelihood of cardiovascular disease.

Further examining links between sexual violence and blood pressure could shed light on the broader impacts of sexual violence on health and reveal possible avenues for clinical intervention.

Strengths of this study include the fact that the researchers were able to examine multiple types of sexual violence and a range of other possible variables, including other types of trauma. However, the researchers note some limitations of the NHS II data that should be addressed in future research, including limited self-report measures for both sexual violence and hypertension that did not capture details regarding severity and timing. They also note that although the NHS II sample is relatively large, it consists of mostly non-Hispanic white women, all of whom share the same profession. As such, the results may not generalize to other populations.

"This study highlights why it's important for health research to examine [women's](#) experiences of [sexual assault](#) and workplace sexual harassment. Future research can build on these findings to determine whether [sexual violence](#) and [high blood pressure](#) are causally linked and identify possible underlying mechanisms," said Laura Rowland, Ph.D., a program chief in the Division of Translational Research at the National Institute of Mental Health (NIMH).

More information: Sexual violence and risk of hypertension in women in the Nurses' Health Study II: A 7-year prospective analysis, *Journal of the American Heart Association* (2022).

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