

Lifetime exposure to sexual assault and other traumatic stress may harm stroke recovery

February 1 2024



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Stressors and traumatic events experienced over the course of a lifetime may negatively impact subsequent stroke recovery; specifically, stroke survivors exposed to sexual assault at any point in their life had poorer

physical functioning and cognitive outcomes one year after a stroke, according to a preliminary study presented at the [American Stroke Association's International Stroke Conference 2024](#), held in Phoenix, Feb. 7–9.

"It is important to know what has happened to a patient in their life when taking care of them post-stroke," said lead study author E. Alison Holman, Ph.D., a professor of nursing and [psychological science](#) at the University of California, Irvine.

"Screening for lifetime stress and trauma is important when caring for a patient who has had a stroke because those experiences often have far-reaching impact and may predict how well a person does over time."

Researchers examined data from the STRONG (Stroke, sTress, RehabilitatiON, and Genetics) study to investigate specific types of stressors that may contribute to adverse physical function and [cognitive outcomes](#) one year after stroke.

In the STRONG study, stroke survivors were assessed four times during the year. Assessments included the Lifetime Stress and Trauma Exposure survey, completed approximately 90 days after the stroke.

Participants reported their lifetime exposure to 31 different types of stressful and/or traumatic events, including witnessing a loved one being injured or killed; [sexual assault](#); divorce; emotional and physical abuse in childhood; and poverty. Additionally, one year after the stroke, participants were assessed for physical function and cognitive abilities.

The researchers evaluated the relationships among lifetime stress and trauma exposure and functional and cognitive outcomes among 763 stroke survivors, average age of 63 years.

The analysis found:

- Sexual assault was the traumatic event most strongly associated with a moderate decrease in the ability to perform activities of daily living and lower scores on the modified Rankin Scale (describes a person's ability to function) and Telephone Montreal Cognitive Assessment scores one year after stroke, after controlling for age, gender, race and National Institutes of Health stroke scale score (a measure of stroke severity) three months after a stroke.
- Other adverse experiences—witnessing a family member be injured or killed; going through a divorce; and/or suffering childhood [physical abuse](#)—were also independently associated with a moderate decrease in ability to perform daily living activities one year after stroke.
- These associations remained even when early post-stroke acute stress levels were accounted for in the analysis.
- In contrast, taking care of a seriously ill loved one was associated with better scores on the Telephone Montreal Cognitive Assessment. Holman noted that people taking care of others are more actively engaged in everyday life, which may keep the mind sharper.
- Women were significantly more likely to report being sexually assaulted and having a seriously ill loved one.

Holman emphasized that [health care professionals](#) should be aware of the potentially lasting physical health impact of sexual assault and other traumatic events that occur over the course of a person's life.

Understanding that these prior life experiences can shape how patients respond to a subsequent stroke may encourage more compassionate communication.

"Bad things happen to people, so the goal is to intervene in the

immediate aftermath of the stroke to prevent its worst effects. We should be able to use this information to allocate resources in a targeted way to provide better support for people during post-stroke recovery," she said.

"Health care professionals can use psychological first aid strategies to support the patients' basic needs, help them cope and refer them to resources such as a support group or community agency. Sometimes just acknowledging the experience is itself freeing."

"This study raises our awareness of how important it is to manage stressors and to increase our physical and mental resilience," said Randi Foraker, Ph.D., M.A., FAHA, vice chair of the American Heart Association's Epidemiology & Cardiovascular Stroke Nursing Prevention Science Committee, and professor of medicine, Institute for Informatics, Data Science and Biostatistics and director, Center for Population Health Informatics at Washington University in St. Louis, School of Medicine, Missouri.

"Some of the ways we can bolster our resilience and our wellness is to engage in mindful meditation, social engagement and physical activity. As clinicians, researchers and caregivers, we need to make sure we are giving stroke survivors their best chance at living longer, healthier lives." Dr. Foraker was not involved in the study.

Study details and background:

- The study included 763 [stroke survivors](#) (average age of 63; 41.3% female; 60.9% white adults).
- The STRONG study was conducted at 28 stroke centers across the U.S. from 2016-2021.
- The current study findings build on the STRONG study, led by Holman and her colleague Steven Cramer, M.D., that was

previously published in the American Heart Association's *Stroke* journal ([Sept. 2023](#)), which also suggested that cumulative traumatic stress exposure impairs recovery from stroke.

The main study limitations were that patients with a severe stroke and those who did not speak English were excluded, so we do not know whether the findings would apply to those patients.

Additional research is needed to investigate the potential mechanisms that link these [traumatic events](#) to worse outcomes after stroke. Holman suggests it is important to examine both psychological and physiologic processes that may explain the findings.

More information: Abstract poster WMP31:
www.abstractsonline.com/pp8/#!/...42/presentation/2570

Provided by American Heart Association

Citation: Lifetime exposure to sexual assault and other traumatic stress may harm stroke recovery (2024, February 1) retrieved 27 April 2024 from
<https://medicalxpress.com/news/2024-02-lifetime-exposure-sexual-assault-traumatic.html>

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