

Some women could be more susceptible to PTSD than others, study finds

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Childhood trauma is known to increase the risk of post-traumatic stress disorder (PTSD) in adulthood, especially for women, but the biological reasons for this correlation remain largely unknown. In a new study from

the University of Missouri, researchers have proposed a solution to this mystery in the form of a model that could help psychiatrists better understand the far-reaching impacts of early trauma on women, while also clarifying why not all women with traumatic childhoods develop PTSD. Due to hormonal differences between the sexes, the study focused only on women.

The model describes how the body's main stress response system can be damaged by trauma or abuse during childhood, resulting in a diminished ability to fight off stress and greater susceptibility to PTSD later in life. In some women, however, the system remains relatively intact, leading researchers to develop a concept of "resilience."

"Our model indicates some women are biologically more resilient than others to PTSD," said Yang Li, a postdoctoral fellow in MU's Sinclair School of Nursing. "Normally, the body's stress response system is regulated by two hormones: cortisol, which floods the body in response to a stressful event, and oxytocin, which brings cortisol levels back down once the stressor has passed. That system can break down in response to trauma, leaving [cortisol levels](#) unchecked and keeping the body in a stressed and vulnerable state. But when those hormones continue to regulate each other properly, even in the presence of trauma, they serve as barriers against PTSD."

Li and her colleagues tested their model by analyzing results from a pre-existing study of women with trauma exposure that also recorded [hormone levels](#). This analysis provided important data that both supported and improved the model, especially in regards to women with the dissociative subtype of PTSD, a serious variant of the disorder that can disrupt one's sense of self and surroundings.

Women with the dissociative form of PTSD experienced a more pronounced alteration in both cortisol and oxytocin levels, indicating the

body's stress-response system functioned less effectively in these women. The study's findings supported the idea that, when functioning well and interacting properly, the two hormone systems are markers of resilience in those who have had trauma exposures but do not develop PTSD. That information could prove valuable to psychiatrists looking to identify the origin of a patient's struggles with [trauma](#).

"It is important to understand that [childhood trauma](#) has extensive effects that can follow people throughout their lives," Li said. "PTSD might surface in response to a specific event in adulthood, but what we are seeing suggests that in many cases, the real root of the problem is in the damage caused during childhood."

As more research fills in the gaps in scientists' understanding of PTSD, having a biological understanding of a [women's](#) susceptibility to the disorder could also open up new avenues of treatment, Li said.

The study, "Exploring the mutual regulation between oxytocin and cortisol as a marker of resilience," was published in *Archives of Psychiatric Nursing*.

More information: Yang Li et al. Exploring the mutual regulation between oxytocin and cortisol as a marker of resilience, *Archives of Psychiatric Nursing* (2018). [DOI: 10.1016/j.apnu.2018.11.008](https://doi.org/10.1016/j.apnu.2018.11.008)

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