

# Symptoms of PTSD facilitate substance use as a coping method among children after a natural disaster, finds study

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In a survey-based study of 3rd to 12th grade students in Puerto Rico after 2017's Hurricane Maria, certain symptoms of post-traumatic stress

disorder (PTSD) were linked with a higher risk of using drugs or alcohol.

The study, which is published in the [\*Journal of Traumatic Stress\*](#), included 91,732 youths who completed a survey five to nine months after Hurricane Maria made landfall in Puerto Rico.

Associations between PTSD symptoms and [substance use](#) were examined using a network conceptualization, which views disorders as stemming from interactions between symptoms.

This approach identified irritable behavior and angry outburst symptoms of PTSD as being associated with the greatest risk for coping through substance use after a natural disaster. This association was more pronounced among youths who did not have a supportive caregiver, friend, or teacher/counselor in their life.

Two PTSD symptom clusters were identified: 1) arousal and reactivity, negative alterations in cognition and mood, and substance use; and 2) avoidance and intrusion.

Sleep disturbance and physiological reactivity to trauma reminders were identified as important bridge symptoms connecting these clusters. These findings suggest that interventions targeting sleep and physiological reactivity to trauma reminders after a natural disaster may be effective in disrupting the interaction between PTSD symptoms that maintain this disorder among youths.

"The current global climate crisis makes disaster inevitable in Puerto Rico, which can have a lasting impact on the lives of youths and the broader community," said corresponding author Alejandro Luis Vázquez, Ph.D., of the University of Tennessee.

"While it is useful to identify individual-level risk factors to guide triage intervention efforts, there is a need to address colonialist policies that have denied adequate investment and aid following natural disasters in Puerto Rico, which limits available support services and negatively impacts the mental health of youths."

**More information:** Alejandro L. Vázquez et al, A network analysis of Hurricane Maria–related traumatic stress and substance use among Puerto Rican youth, *Journal of Traumatic Stress* (2024). [DOI: 10.1002/jts.23008](https://doi.org/10.1002/jts.23008)

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