

# Why war's emotional wounds run deeper for some kids and not others

'Environmental sensitivity' raises PTSD risk for Syrian refugee kids  
BY

**BRUCE BOWER**

8:00AM, APRIL 28, 2019



**PRIMED FOR PTSD** The horrors of Syria's war take the biggest emotional toll on refugee children who are highly sensitive to their environment and encountered few adversities before the war, a study finds. Here, young refugees play outside tents at a Lebanese camp.

BILAL HUSSEIN/ASSOCIATED PRESS

After her husband's death in Syria's civil war, Amouna Sharekh Housh gathered her eight children and headed for safety in the neighboring country of Lebanon. At the Lebanese border, Islamic State militants demanded that Housh hand her children over to them. She refused, even when an ISIS soldier put a gun against the head of her then 9-year-old son, Manar. After passing through that hellish checkpoint, the still-intact family moved into a Lebanese refugee camp. Their house was a tent. Food was scarce, and sanitation was absent.

A year later, the entire family was struggling. Once-calm children were now jittery and emotionally volatile. Manar's condition had taken a particularly bad turn. He suffered from post-traumatic stress disorder, a condition that includes having tormenting thoughts and dreams about distressing events, feeling detached from others, staying in a constant state of high alert for potential dangers and reacting violently to minor frustrations. Housh shared her family's trials with workers at a Beirut therapy and vocational training center run by the New York City-based nonprofit Art of Hope, and gave them permission to tell her story on the organization's website.

Housh's family represents one drop in a sea of tears pouring out of Syria. Since civil war erupted in early 2011, the U.N. High Commission on Refugees estimates that more than 5 million Syrians have fled the country; another 6.6 million people displaced from their homes are still living in Syria. UNHCR has registered about 1 million Syrian refugees in Lebanon, more than half of whom are 17 or younger — though the Lebanese government pegs the total number of Syrian refugees there at more than 1.5 million.

Her family also highlights another sad fact of war: Everyone suffers, but some more than others.

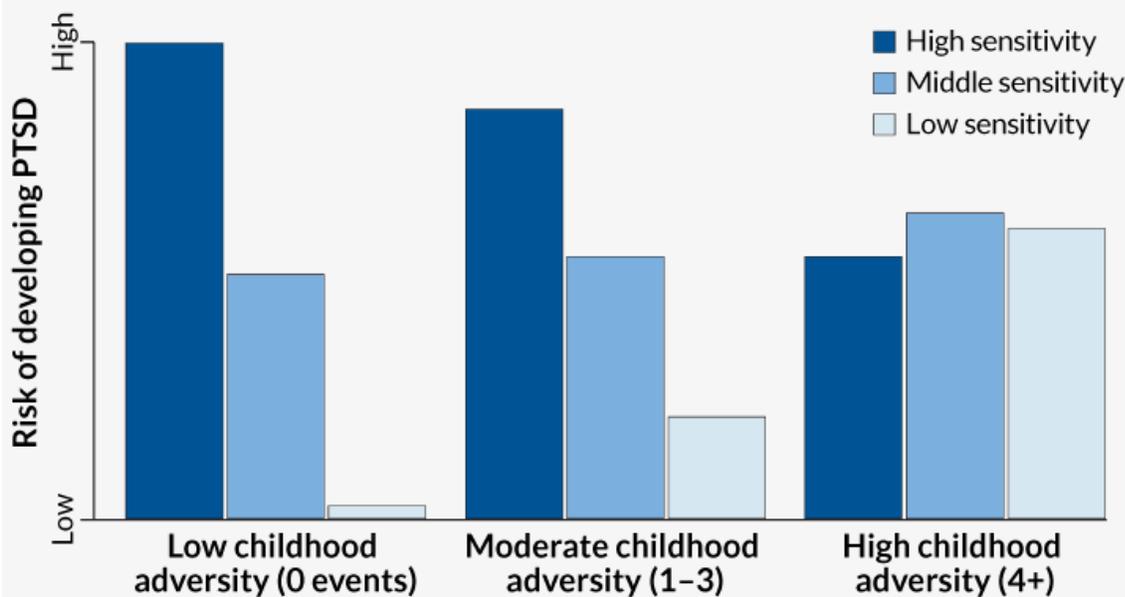
Most people who live through violent conflict and other extreme traumas experience emotional turmoil, but don't develop PTSD. A minority, like Manar, suffer severe psychological wounds that don't heal without outside help. Even then, there are no guarantees.

A new investigation conducted with Syrian refugee youngsters in Lebanon offers a peek at [why some kids emotionally rebound while others wilt](#) in the face of wartime horrors. Children fleeing war zones are especially likely to develop PTSD if, before military conflict turned their worlds upside-down, two factors were in play, say Lebanese psychiatrist Elie Karam and his colleagues. First, PTSD-prone youngsters grew up especially aware of and responsive to good and bad aspects of their families, schools and neighborhoods. Second, those "environmentally sensitive" kids encountered few or no early adversities, such as serious physical illness or constantly fighting parents.

### **Two-way risks**

High environmental sensitivity and low or moderate levels of prewar adversity (dark blue bars at left and middle) resulted in an especially high likelihood of Syrian refugee youngsters developing PTSD. High levels of prewar adversity resulted in comparable levels of PTSD, regardless of how high or low refugee children scored on a test of environmental sensitivity (bars at right).

## Variations in kids' PTSD risk based on childhood adversity and environmental sensitivity



E.G. KARAM ET AL/BJPSYCH 2019

“Highly sensitive children who are sheltered from early adversities end up being least prepared to cope with wartime experiences,” says Karam. He is the president of the Institute for Development, Research, Advocacy and Applied Care, or IDRAAC, a nonprofit mental health organization in Beirut.

Karam’s study, slated to appear in the *British Journal of Psychiatry*, joins a growing effort to examine how environmental sensitivity, a trait that varies from one person to another, affects well-being and mental health. This line of research builds on long-standing observations of two types of youngsters. So-called “[orchid children](#)” benefit greatly from nurturing surroundings, and do particularly badly when neglected or treated harshly (*SN Online*: 4/6/11). “Dandelion children” do pretty well in both good and bad environments, and don’t dramatically profit from enriched surroundings.

A new research review led by psychologist Corina Greven of Radboud University Medical Center in Nijmegen, the Netherlands, concludes that a [person’s environmental sensitivity](#) hinges on a genetic tendency to think about personal and social experiences in great depth, develop a heightened sense of empathy and quickly feel overstimulated by various sensations. In the *March Neuroscience & Biobehavioral Reviews*, the scientists say that this trait is best classified as sensory processing sensitivity.

In one measure of the trait’s prevalence, surveys conducted among British children and adults have found that between 20 percent and 35 percent score high on a scale of sensory processing sensitivity. A comparable proportion scores low. The rest, ranging from 41 percent to 47 percent, score in between the orchid and dandelion ranges.

## Sheltered shock

No prevalence estimates exist for environmental sensitivity in war-ravaged countries such as Syria. But Lebanon's unprecedented influx of refugee youngsters inspired Karam and his colleagues to determine whether environmental sensitivity, childhood adversities and war experiences — either alone or in concert — up the odds of these children developing PTSD. Karam's team is the first to study environmental sensitivity as a potential contributor to this severe anxiety disorder.

A total of 549 Syrian refugee youngsters, ages 7 to 17, participated in the study with their parents' consent. Volunteers were students in 31 Beirut-area schools also attended by Lebanese students. IDRAAC clinicians trained 48 schoolteachers to administer questionnaires to Syrian students. Those surveys assessed 20 PTSD symptoms, 25 types of war exposure (from being unable to leave home because of shooting and bombings to witnessing people getting tortured or dying) and 29 childhood adversities (including frequent fights between parents, physical abuse and a lack of food or other basic needs).

Finally, a 12-item questionnaire measured environmental sensitivity. On a scale of zero to 6, students rated the extent to which, for example, they find it unpleasant to have a lot going on at once, love nice smells, feel uncomfortable when hearing loud noises and dislike changes in their lives. Higher scores indicated greater environmental sensitivity.

### Sensitive subjects

Here are some of the [12 questions](#) used to assess environmental sensitivity in Syrian refugee children and teenagers. The youths were asked to rate their agreement with each statement on a scale of zero to 6, with higher overall scores indicating a greater tendency to be affected by external sensations and events.

- Some music can make me really happy.
- I love nice tastes.
- Loud noises make me feel uncomfortable.
- I get nervous when I have to do a lot in little time.
- I love nice smells.
- I don't like it when things change in my life.

*Source: A. Nocentini, E. Menesini and M. Pluess/Clinical Psychological Science 2018*

Not surprisingly considering what they'd endured, many students showed some signs of PTSD. But those who scored low in environmental sensitivity and reported few childhood hardships seemed most resilient, exhibiting few PTSD symptoms. Hardest hit were highly sensitive children who reported few childhood adversities.

In between were those who had faced many childhood misfortunes, defined as four or more such hardships. Those war refugees exhibited a moderate number of PTSD symptoms regardless of whether they scored high, low or somewhere in the middle on environmental sensitivity.

That finding underscores how even temperamentally resilient youngsters can crumble in the face of too many misfortunes. “A child who scores low on environmental sensitivity may not be affected much by war exposure unless already traumatized in their family environment,” Karam says.

In short, temperament and background can mix in different ways to affect kids’ reactions to war. Highly sensitive youngsters who grow up with manageable levels of family troubles learn coping skills that they can then apply to war experiences, the researchers suspect. Being sheltered from early difficulties leaves the same children psychologically defenseless when war strikes.

### **Steeled for resilience**

Karam’s results go beyond previous evidence that childhood adversities generally set kids up for emotional troubles when traumatic events strike later. Those studies didn’t account for differences in how orchid and dandelion children respond to life’s bad turns.

Consider one earlier example of a link between childhood hardships and later trauma-induced disturbances. In the six months after the September 11, 2001 World Trade Center attack in New York City, public schoolchildren there who reported a history of traumas, such as being hurt in a violent attack or having lived in a war zone, displayed [elevated rates of depression and anxiety disorders](#), including PTSD. New York University professor of psychology and public policy J. Lawrence Aber coauthored that investigation, which appeared in the May 2005 *Archives of General Psychiatry*.

That study couldn’t explain, however, why some youngsters who encountered early adversities suffered serious mental problems after the twin towers fell, while others forged on relatively unscathed. Newly reported PTSD risks among Syrian refugee children “help us appreciate that orchid and dandelion children respond to war and other adversities in different ways,” Aber says.

It appears likely that highly sensitive Syrian refugee youngsters gained some sort of protection against PTSD from having dealt with earlier problems at home and elsewhere, says child psychologist Jay Belsky of the University of California, Davis. “It is almost like those with a supportive early life have not been steeled against adversity. So if they are environmentally sensitive and then get exposed to war, they are truly vulnerable,” Belsky suggests.

Psychologist Michael Pluess of Queen Mary University of London, a coauthor of Karam’s paper who has also collaborated on research with Belsky, agrees. Highly sensitive children may benefit from manageable challenges that don’t become overwhelming, suggests Pluess, who directed the development of the [environmental sensitivity scale](#) that was administered to Syrian refugee children.

That’s plausible, Aber says, but research to confirm that possibility hasn’t yet been conducted. And tracking orchid and dandelion children before, during and after an armed conflict is a tall order.



**ART OF WAR** A Syrian refugee child given a chance to draw at a Lebanese mental health center depicted mourners standing at a dead person's coffin.

JANE BARLOW/PA WIRE/ASSOCIATED PRESS

### The long view

Situated across the border from Syria's violent chaos, Karam's team can't conduct such an investigation. But the researchers have begun a long-term study to untangle how environmental sensitivity and early adversities promote or deter mental problems in Syrian refugee children. Many Syrians who have fled their country live in tent communities on Lebanon's Beqaa Plain, near the Syrian border. Since 2018, Karam's group has recruited more than 1,000 children and teenagers living in those camps into a study that will last at least four years. Researchers will regularly assess each youngster's family situation, current and past adversities and emotional support available from family and friends. Participants' environmental sensitivity will also be tracked over time.

Saliva and hair samples from volunteers will enable investigators to monitor stress hormone levels and compare kids' genetic makeups.

Karam plans to examine whether self-reported early adversities heralded the appearance of any particular coping skills in highly sensitive refugee children. He also wants to see if extremely sensitive kids acquired special stress resistance following positive experiences, such as spending their early years with supportive parents.

In the meantime, his team is offering psychological treatment to refugee youngsters in the study displaying signs of PTSD and other emotional problems. Getting parents' consent for such treatment is challenging. Although people everywhere can be reluctant to seek mental health

care, Syrian refugees in Lebanon tend to have little education and no knowledge of what mental health workers do.

“Some parents come forward to get treatment for their children, but many don’t,” Karam says. In a sea of tears, small victories count for a lot.

### Citations

E.G. Karam *et al.* [Role of childhood adversities and environmental sensitivity in the development of post-traumatic stress disorder in war-exposed Syrian refugee children and adolescents](#). *British Journal of Psychiatry*. Published online January 11, 2019. doi:10.1192/bjp.2018.272.

C.U. Greven *et al.* [Sensory processing sensitivity in the context of environmental sensitivity: a critical review and development of research agenda](#). *Neuroscience & Biobehavioral Reviews*. Vol. 98, March 2019, p. 287. doi:10.1016/j.neubiorev.2019.01.009.

A. Nocentini, E. Menesini and M. Pluess. [The personality trait of environmental sensitivity predicts children’s positive response to school-based antibullying intervention](#). *Clinical Psychological Science*. Vol. 6, November 2018, p. 848. doi:10.1177/2167702618782194.

C.W. Hoven *et al.* [Psychopathology among New York City public school children 6 months after September 11](#). *Archives of General Psychiatry*. Vol. 62, May 2005, p. 545. doi:10.1001/archpsyc.62.5.545.

### Further Reading

B. Bower. [Genetic roots of ‘orchid’ children](#). Science News Online, April 6, 2011.

<https://www.sciencenews.org/article/war-emotional-wounds-ptsd-syria-refugee-children>