

The developing brain in crisis contexts



IMAGE: Courtesy of BRAC

How our brains are built

As Harvard University’s Center on the Developing Child explains, brains are built over time. Brain development begins in utero and proceeds at an astonishing rate during the early years of life, “when, more than 1 million new neural connections form every second” (“[Brain architecture](#)” 2022). During a child’s first few years is when new connections form and unused connections wither, laying the foundation for the connections that form later in life.

Both genes and experience shape a child’s developing brain. The interaction between children and their parents or caregivers is the most critical factor in healthy brain development. By providing a stable and nurturing environment and engaging in playful back-and-forth interactions, the caregiver bonds with the child and builds the groundwork for continued growth and learning. Responsive caregiving, one of the five elements of [nurturing care](#), is when the caregiver pays attention to the child’s cues and responds appropriately in a timely manner. For example, when an infant or child gestures or cries, and the caregiver responds with eye contact, words or touch, neural connections are built and strengthened in the child’s brain that support the development of communication and social skills.

However, in humanitarian contexts such as conflict or forced displacement, the caregiver experiences significant stressors that can become a barrier to engaging in this “serve and return” behavior. It is crucial that policies and programs that are part of humanitarian response strategies support the well-being of the caregiver so they have the capacity to appropriately engage with their young children and provide stable and consistent care (“[Serve and return](#)” 2022).



All biological systems in the body interact with each other and adapt to the context in which a child is developing – for better or for worse.

– NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD, 2020

Responses to stress



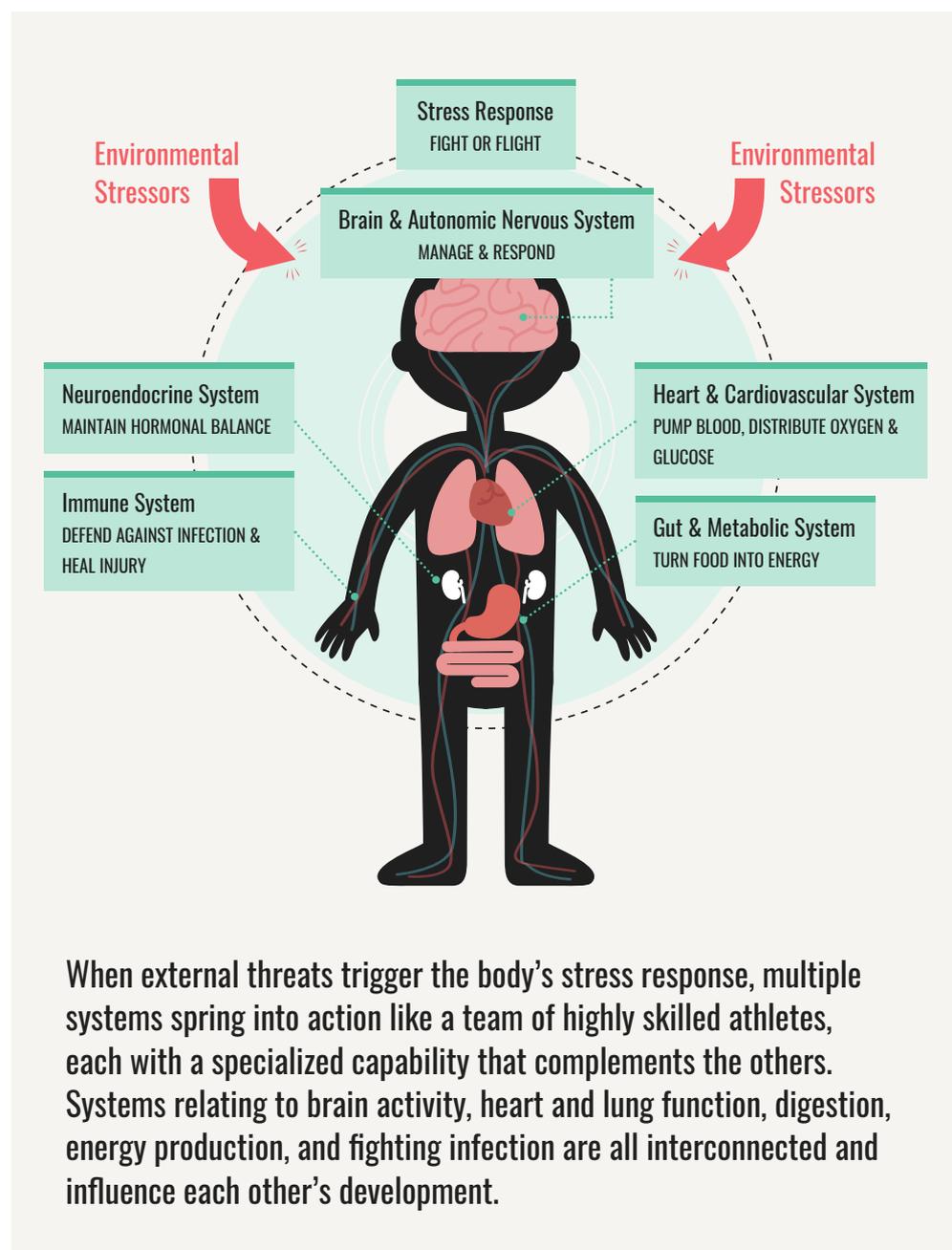
For very young children born into conflict or protracted displacement, the long-term impact of chronic stress and prolonged trauma can be devastating.

– [MOVING MINDS ALLIANCE, 2019](#)

Some stress is normal and unavoidable, and learning how to cope is part of healthy child development. When children have a healthy bond with caring and responsive adults, they learn to handle everyday stress and challenges. This is defined as positive stress. When adults buffer more serious adversity, such as injury, natural disaster, or the death of a loved one by helping a child adapt, this is considered tolerable stress. In those instances, nurturing care can mitigate the potentially damaging effects of heightened stress levels. However, when a young child experiences recurring, extreme, or prolonged activation of the stress response — as is common in war, extreme poverty, or abusive environments — without adult intervention or support, this is considered toxic stress which can disrupt the brain’s development ([The Impact of Early Adversity, 2007](#)).

Toxic stress affects not only the developing brain, but many other bodily systems, including the systems that regulate our heart, fight off diseases, and metabolize food to give us energy. All of these systems play a role in lifelong health and well-being, and can be impacted by adversity in childhood ([National Scientific Council on the Developing Child, 2020](#)).

IMAGE: Adapted from [Connecting the Brain to the Rest of the Body](#)



Living in conflict and crisis increases stress on children and caregivers

Young children and their caregivers living in conflict and crisis contexts are especially vulnerable to stress. Children experiencing war and natural disasters may become separated from their primary caregivers, face sexual or gender-based violence, undergo physical harm, and experience long-term negative emotional effects ([ECD in Emergencies, 2022](#)). Parents and caregivers living in conflict and crisis experience high levels of depression and other mental health issues. This means their children are at increased risk for poor mental health outcomes ([Frounfelker et al., 2020](#)).

When children feel threatened or unsafe, they can develop physical responses and coping behaviors that help them survive in the harsh conditions they are experiencing at the time. The problem is that this short-term survival comes at the long-term expense of physical and mental well-being, effective learning, and the ability to self-regulate ([National Scientific Council on the Developing Child, 2020](#)).

Children experiencing adversity are more likely to develop cognitive, behavioral and emotional difficulties, which can delay overall development. Exposure to adversity can also negatively affect a child's physical development. Science shows that many adult diseases and persistent health disparities associated with poverty, disasters, and discrimination link back to toxic stress during childhood ([Shonkoff, J et al. 2012](#)).

Adversity and psychosocial deprivation affect not only the child undergoing the trauma. There is an extended ripple effect to the child's family, its future children, and the broader community it lives in through various biological, behavioral, and socioeconomic processes. In turn, this leads to an intergenerational transmission of adversity, trauma, disadvantage, and violence. Experiences of adversity can often reinforce inequities, which threatens future stability and peace of societies ([Moving Minds Alliance, 2018](#)).



Given the high levels of exposure to trauma, stress and adversity experienced by much of the refugee and displaced population, relatively high levels of depression and anxiety have been reported by caregivers and children.

– [MOVING MINDS ALLIANCE, 2019](#)

IMAGE: Courtesy of IRC Jordan



Mitigating the negative effects of adversity

Although toxic stress is incredibly detrimental and has the potential to inflict lasting damage on a child, proven solutions exist to mitigate these risks. Early intervention and consistent nurturing care from a supportive and responsive adult caregiver can cushion the effects of toxic stress and other vulnerability caused by adversity. When children have what they need to develop well in the early years, they can thrive now and throughout their lives.

Although many forms of stress are unavoidable, a strong caregiver relationship buffers children from the effects of trauma. Young children rely on adult caregivers to develop a healthy stress response system. Therefore, quality services and programs that incorporate preventative care and the emotional and psychological support for caregivers, parents, and children are key to mitigating the effects of stress. The Nurturing Care Framework is a useful place to start. Its holistic approach allows caregivers to rebuild their capacity to provide nurturing care for their children ([Moving Minds Alliance, 2019](#)).

How the humanitarian sector can better support children and caregivers



Rather than developing new programs and delivery mechanisms, the humanitarian sector can integrate ECD programs into existing services.

The humanitarian sector can play a critical role in supporting young children and their families. Because the emotional, mental, and physical state of the caregiver has direct implications on how well they can care for children, it is important to deliver programs and services that support caregiver mental health and wellbeing, as they may be coping with trauma, depression, or anxiety themselves. In some cases, it is necessary to supplement parental or family caregiving with other types of caregiving support, such as childcare, when parents do not have capacity for responsive caregiving due to their own stress.

Rather than developing new programs and delivery mechanisms, the humanitarian sector can integrate ECD programs into existing services. Quality ECD services focus on the five components set out in the [Nurturing Care Framework for Early Childhood Development](#): good health, adequate nutrition, responsive caregiving, security and safety, and opportunities for early learning (UNICEF et al., 2020).¹ While no single sector can effectively respond to the comprehensive needs of young children and families, full-scale integration may not always be feasible. Building on existing sector-specific services and delivery platforms that already reach young children, caregivers, and families can be a pragmatic and cost-effective way forward ([Moving Minds Alliance 2019](#)). The Nurturing Care Framework is an important lens through which humanitarian actors can ensure services to families and young children take into account the developmental needs of this age group.

IMAGE: [Nurturing Care Framework for Early Childhood Development](#)



¹ While the UN's [Nurturing Care Framework](#) concentrates "on what nurturing care looks like at the beginning – from pregnancy to age 3 – recognizing that this is a period of rapid development and when the foundation for later health and wellbeing is laid" – the concept of nurturing care applies to the entire life course, including young children up to 8 years old.

Examples of Entry Points for Integration

 Health	 Nutrition	 Child protection	 Education
<ul style="list-style-type: none">• Ensure health services are available in spaces frequented by mothers and young children• Provide mental health and psychosocial support to parents/caregivers, as well as children	<ul style="list-style-type: none">• Deliver simple messages on infant stimulation and ECD in places mothers and caregivers wait to receive nutritional assistance• Create a space with play materials for caregiver-child play sessions at food distribution sites	<ul style="list-style-type: none">• Support caregivers to identify symptoms of stress in their children, build coping capacities, and respond appropriately without violence to challenging behavior	<ul style="list-style-type: none">• Promote positive social interaction, play-based learning, movement, and mindfulness in structured learning spaces, in the home, and in the broader community

By neglecting to address both the fundamental need for nurturing care in the first years of life and the long-lasting impact of excessive stress on the developing brain, many of our current humanitarian response strategies leave young children, their families and communities at risk for poor outcomes. The next few factsheets will dive deeper into the above entry points and talk about specific sectors and ways the humanitarian response can tangibly support children and caregivers to strengthen young children’s brain development and provide a healthy foundation for early development.

References and further reading

- [“Brain Architecture.”](#) Center on the Developing Child website, Harvard University, 2022.
- [Early Childhood Development and Early Learning for Children in Crisis and Conflict.](#) Bouchane, K, Yoshikawa, H., Murphy, K., and Lombardi, J. Background paper to the [2019 Global Education Monitoring Report](#), UNESCO, 2018.
- [ECD and Early Learning for Children in Crisis and Conflict.](#) Moving Minds Alliance, 2018.
- [ECD in Emergencies: Thriving through Crisis by Playing and Learning.](#) UNICEF, 2022.
- [In Brief: Connecting the Brain to the Rest of the Body.](#) National Scientific Council on the Developing Child, 2020.
- [Nurturing care for children living in humanitarian settings.](#) UNICEF, International Rescue Committee, WHO, ECDAN and the Partnership for Maternal, newborn & Child Health, 2020.
- [“Serve and Return.”](#) Center on the Developing Child website, Harvard University, 2022.
- [Supporting the Youngest Refugees and Their Families.](#) Moving Minds Alliance, 2019.
- [The Impact of Early Adversity on Child Development \(InBrief\).](#) Center on the Developing Child website, Harvard University, 2007.
- [The lifelong effects of early childhood adversity and toxic stress.](#) Shonkoff, J. P., Garner, A. S., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, & Section on Developmental and Behavioral Pediatrics. *Pediatrics* vol. 129,1, 2012.

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About Moving Minds Alliance

The Moving Minds Alliance is a growing collaborative network of 26 member organizations globally, focusing on early childhood in crisis contexts.

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