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Secure relationship with new parents reduces anxiety in adopted children

Strong adoptive parent–child bonds after institutional care promote children’s mental health later in life by influencing brain development

Philadelphia, April 2, 2019 – In children who have experienced early institutional care, a strong relationship with their adoptive parents plays a positive role in brain development and the child’s long-term mental health, according to a new [study](#), published in [Biological Psychiatry: Cognitive Neuroscience and Neuroimaging](#), published by Elsevier. Childhood is a time when parents play a central role in influencing their child’s emotional reactivity and response to stress. The study showed that children who demonstrated reduced brain activity in a region important for emotion, the amygdala, in response to their adoptive parents had lower anxiety levels later in life.

Parents have the most influence on amygdala development during childhood, and separation from parents can disrupt the positive effect. To study the impact of this parental influence on later emotion regulation in children, first author Bridget Callaghan, PhD, Columbia University, and colleagues used brain imaging to observe the amygdala response to photos of parents in children who lived in institutional care before international adoption into the United States, and compared their responses with those of children who had always lived with their biological parents.

“This remarkable study in a large sample of children who were adopted out of institutions provides new insights into how parenting can have a positive impact on brain function related to emotion processing,” said Cameron Carter, MD, Editor of *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

Although children who experienced early institutional care did not demonstrate the amygdala response that mediates the positive parental influence when looked at as a group, the researchers also looked at the individual responses of children who reported having a secure relationship with the adoptive parent: their amygdala responses predicted a greater decrease in anxiety symptoms three years later.

“A strong parent–child relationship is always important for brain and behavioral development, but the current findings suggest that such relationships may be especially important following early institutional care,” said senior author Nim Tottenham, PhD, Director of the Developmental Affective Neuroscience Lab at Columbia University.

The findings suggest that the decrease of amygdala activity in response to parents during childhood protects against later symptoms of anxiety after early separation from parents. The age at adoption didn’t have an effect on the findings, indicating the importance of the post-adoption environment in particular on long-term mental health.

"These are important findings, as they show that even following early adverse experiences, post-adoption factors can make a difference in emotional health, and highlight a neural mechanism for doing so," said Dr. Callaghan.

Focusing on a child's feelings of security with their adoptive parents after institutional care might help enhance the positive influence of parents on the amygdala development and help set up the child for healthy regulation of their own emotions later in life.

Notes for editors

The article is "Decreased amygdala reactivity to parent cues protects against anxiety following early adversity: an examination across 3-years," by Bridget Callaghan, Dylan G. Gee, Laurel Gabard-Durnam, Eva H. Telzer, Katherine L Humphreys, Bonnie Goff, Mor Shapiro, Jessica Flannery, Daniel S. Lumian, Dominic S. Fareri, Christina Caldera, and Nim Tottenham (<https://doi.org/10.1016/j.bpsc.2019.02.001>). It appears in *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, published by [Elsevier](#).

Copies of this paper are available to credentialed journalists upon request; please contact Rhiannon Bugno at BPCNNI@sobp.org or +1 214 648 0880. Journalists wishing to interview the authors may contact Bridget Callaghan, PhD, at blc2139@columbia.edu or +1 212 851 0229.

The authors' affiliations and disclosures of financial and conflicts of interests are available in the article.

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