

CHILD DEVELOPMENT

Parental stress shapes emotion processing

“attention to emotion is a critical gateway through which children learn about the world”

Infants whose parents experience increased stress might demonstrate altered threat processing, according to new research from *Developmental Psychobiology*. This suggests that the effect of environmental factors such as parental stress on children's threat processing emerges earlier than has previously been assumed.

Faster responses to threatening facial configurations predicts future anxiety in children. Thus, understanding just how early attention bias to threat emerges is important because it may allow targeted interventions at critical developmental junctures to reduce children's anxiety. “We decided to look into the role that negative parenting factors may have on infants' attentional biases to threat,” says

Jessica Burris, the lead author on the study. For example, caregivers who experience more daily hassles and stress might project this stress onto their children, affecting how those children perceive emotional input.

The data presented in this paper were part of a large, multisite project called the Longitudinal Anxiety and Temperament Study, which followed infants and their caregivers from four to twelve months of age. The aim of this project was to understand how attention biases to threat, and associated neural and behavioural correlates, emerge and change from infancy through toddlerhood.

In this specific study, infants were presented with images of faces depicting neutral, happy or angry expressions. Researchers measured how long it took for infants to fixate on a given face for 100 ms. The number and intensity of parental daily hassles and parental anxiety were also assessed using validated self-report measures. Parenting hassles include events that commonly occur in families with small children, such as dealing with whining. Parents reported how frequently such hassles occurred, and how intense the hassles had been for them over the past six months. “We hypothesized that infants developing in high-stress households, or with parents who are dealing with high levels of daily hassles, may be exposed to greater negative affect in their daily lives.”

The researchers found that infants whose parents reported a low or average intensity of daily hassles showed no difference in the time to fixate on threatening faces compared to neutral or happy faces. However, when parents reported a high intensity of daily hassles,

four-month-old children were faster to fixate on angry faces than neutral or happy faces. However, over the course of the first year of life, these children become progressively slower to fixate on threatening facial expressions, and this effect was not mediated by parental anxiety.

Importantly, the children in this study were younger than those in previous work, and the findings “speak to change over time in the first year of life in response to environmental factors related to parenting stress,” says Burris. Furthermore, as attentional bias to threat might be an early predictor of future anxiety, this work suggests that very early interventions — even in the first four months of life — may be warranted for children whose parents experience significant stress.

The authors have already collected an additional year of data on these children, and plan to analyse how children's attention biases to threat change throughout the second year of life. The researchers also plan to explore how other factors related to parental stress, including socioeconomic and community factors, influence infants' attentional bias to threat. “We know that attention to emotion is a critical gateway through which children learn about the world,” says Burris. “Understanding the way the environment impacts that gateway will help us better understand markers of risk for atypical development down the line.”

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