

Parenting stress can weaken mother-child communication

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Excessive parenting stress can block maternal sensitivity. Picture: Flickr

Mothers who reported higher levels of parenting stress had less synchrony in brain activity with their child, than those who reported lower levels of parenting stress, researchers have found.

Excessive parenting stress can block maternal sensitivity, lead to reactions that punish the child and negatively affect the parent-child relationship in the long term.

"Our study shows that parenting stress may very well weaken mother-child communication early in the process of social interaction. Our observations likely stem from the stressed mother's reduced ability to share her child's perspective," said study senior author Gianluca Esposito, assistant professor at Nanyang Technological University, Singapore.

"This inability to appreciate the child's viewpoint may reduce the quality of parental engagement and undermine the mother-child relationship in the long run," Esposito said.

According to the study, when the parent and child show highly similar brain activity in the same areas of the brain i.e. greater synchrony, it suggests both are highly tuned in to each other's emotional states.

The study, published in the journal *Scientific Reports*, analysed the brain activity of 31 pairs of mother and children from Singapore while they were watching children's animation clips together.

The researchers used functional Near-infrared Spectroscopy (fNIRS) caps as a non-invasive way to measure brain activation based on blood concentration levels in the brain.

Before starting the experiment, mothers answered a questionnaire that aims to measure parenting stress.

The mother-child pairs then wore the fNIRS caps with the child sitting on the mother's lap while both watched animation clips from *Brave*, *Peppa Pig* and *The Incredibles* together.

The research team compared the mother's and child's brain activity to calculate brain-to-brain synchrony and found that for those parents reporting higher levels of parenting stress, the degree of mother-child synchrony in part of the prefrontal cortex was diminished, compared to those parents reporting lower stress who had better synchrony.

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