

Early life stressors adversely influence brain development

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New brain imaging evidence was advanced in a series of presentations at the recent meeting of the American College of Neuropsychopharmacology supporting the long-held belief that stressful early life experiences, such as preterm birth, poverty and lack of familial support, adversely affect brain development. Using functional brain imaging, the speakers focused on how these stressors affect the development of vulnerable brain areas that mediate emotional responses and mood.

Two studies provided evidence that early life stress associated with [poverty](#) and lack of familial support may put youth at high-risk for developing depression. The first was from Dr. Erika Forbes (U Pittsburgh), who found that poverty and mothers with depressed mood led the [prefrontal cortex](#) of boys and girls to be less responsive to rewards later in life, leading the author to conclude that lower response to reward may predict higher vulnerability to depression in children raised under socially challenging conditions. Also, less emotional support from mothers during childhood predicted adolescent girls' depression via [brain](#) response to reward. Deanna Barch (Wash U) also examined the impact of poverty and maternal support on brain function in a longitudinal study of children 2-6 years of age who were re-examined annually for 11 yr. with 3 neuroimaging episodes interspersed. Lower socioeconomic status was associated with behavioral depression and reduced volume of the cerebral cortex, hippocampus and amygdala. Conversely, positive maternal [support](#) appeared protective, and mitigated this adverse effect of poverty on [brain development](#) in preschool

children.

The final two presentations investigated the impact of [early brain development](#) on subsequent emotional and behavioral functioning. Cynthia Rogers (Washington U St Louis) examined children who were born prematurely (gestational age

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