

# Children's Emotional Wellness

Many factors before, during, and after birth can influence child health outcomes. These factors can affect outcomes such as child mental health and wellbeing.



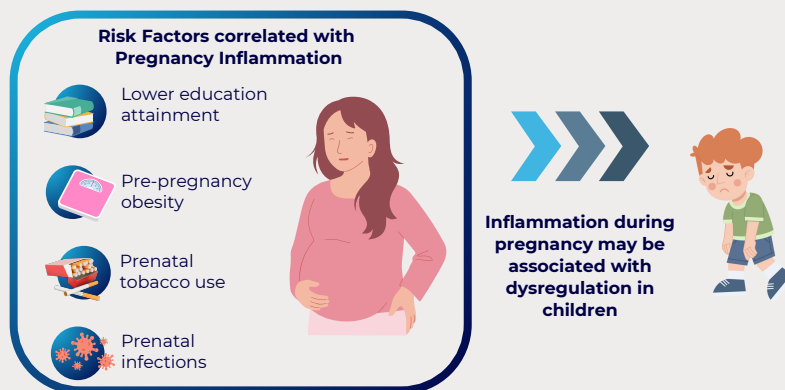
## Factors Linked to Pregnancy Inflammation May Be Associated With Dysregulation in Children

NIH ECHO Program found that several maternal risk factors linked with inflammation (like lower education attainment, pre-pregnancy obesity, prenatal infections, and prenatal tobacco use) were strongly associated with dysregulation in children, or their inability to regulate emotions and produce appropriate responses.<sup>1</sup>

Researchers used a tool called the Child Behavior Checklist (CBCL) to measure aggressive behavior, anxiety/depression, and attention problems in children.

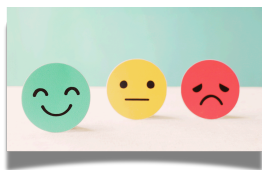
- Approximately 13.4 % of children and adolescents in the study met the criteria for the CBCL Dysregulation Profile.
- More youth with dysregulation (35%) were born to mothers with prenatal infections compared with 28% of youth without dysregulation.

Some additional maternal factors, including being overweight before pregnancy, lower education attainment, and smoking during pregnancy, were associated with higher likelihoods of childhood dysregulation. Children and adolescents who had a parent or sibling with a mental health disorder were more likely to experience dysregulation.



## Harsh Parenting and High Socioeconomic Stress May Be Associated with Higher Internalizing Problems Like Anxiety in Children

In ECHO study, researchers measured children's behaviors<sup>2</sup> and observed that children fell into three main groups based on the severity of their internalizing behaviors and how those behaviors progressed with age: 1) low, 2) Moderate-increasing, and 3) higher-increasing.



Some of the internalizing behaviors reported include feeling anxious or depressed, being withdrawn, and complaining of aches and sickness.

Study Results:

- Parents who reported more negative interactions with children in early childhood had children who were more likely to be in the group with the highest internalizing behaviors.
- Children with more socioeconomic stress in their households were also most likely to be in the highest internalizing behaviors group, as compared with both the low- and moderate-internalizing symptoms groups.
- Researchers also observed that household socioeconomic stress directly predicted children's mental health.



## ECHO Research on Positive Health

A child's sense of wellbeing, as measured by **overall health, life satisfaction, and meaning and purpose.**

Positive health is more than the absence of disease. It focuses on the whole child rather than just on one or more organs or systems.

ECHO seeks to advance scientific understanding of developmental pathways that help explain **how children can lead happy and healthy lives.**

ECHO study shows many **children and adolescents with chronic health conditions have similar levels of positive health** as other children.<sup>3</sup>

In the study, the negative association between chronic and positive health was primarily attributed to a co-occurrence depression. Of the 16 mental and physical health conditions included in this study, only depression showed a meaningful association with lower life satisfaction among children aged 8 to 17. Ninety-five percent of children with depression also had another chronic condition.

## References and Citations

1. Frazier, Jean A, et al. "Perinatal factors and emotional, cognitive, and behavioral dysregulation in childhood and adolescence." *Journal of the American Academy of Child & Adolescent Psychiatry* 62.12 (2023): 1351-1362
2. Williams, Lue, et al. "Influence of early childhood parental hostility and socioeconomic stress on children's internalizing symptom trajectories from childhood to adolescence." *Frontiers in Psychiatry* 15 (2024): 1325506.
3. Schuchard, Julia, et al. "Influences of chronic physical and mental health conditions on child and adolescent positive health." *Academic pediatrics* 22.6 (2022): 1024-1032.

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For questions on these findings or other ECHO Program activities, please email [NIHKidsandEnvironment@od.nih.gov](mailto:NIHKidsandEnvironment@od.nih.gov)