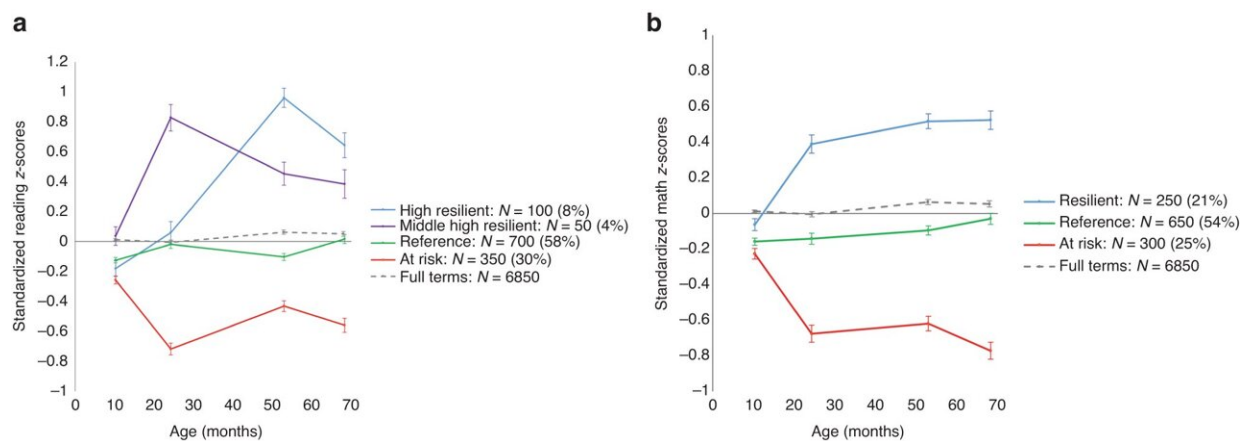


Sensitive parenting and preschool attendance may promote academic resilience in late preterm infants

August 29 2023



Developmental trajectories of late preterm infants from infancy to kindergarten academic achievement. a) Late preterm reading trajectories. b) Late preterm math trajectories. Credit: *Pediatric Research* (2023). DOI: 10.1038/s41390-023-02756-2

Late preterm infants, or infants born 34 0/7 and 36 6/7 weeks of gestation, are the majority of infants born preterm, and are at greater risk for academic delays compared to full term infants.

Certain factors, including a low level of maternal education, prenatal tobacco use, twins/multiple gestation and male sex increased the risk for

deficits in math and reading by kindergarten for late preterm infants, a new study finds.

However, sensitive parenting and preschool enrollment are two possible ways to counter the risk of being born late preterm, and to promote academic resilience.

"Our findings highlight an opportunity for pediatric providers to offer prevention strategies to parents of late preterm infants to mitigate academic risk, and promote academic resilience through sensitive parenting." said lead author Prachi Shah, M.D., a developmental and behavioral pediatrician at University of Michigan Health C.S. Mott Children's Hospital.

Pediatricians can foster sensitive parenting through the promotion of early relational health, where parents provide a safe, stable and nurturing relationship with their children.

"We found that early sensitive parenting experiences were associated with early academic success for late preterm infants," Shah said.

The results are published in *Pediatric Research*.

Tracking academic trajectories

Data for the study was collected as part of the [Early Childhood Longitudinal Study, Birth Cohort](#). This nationally representative long-term study sponsored by the United States Department of Education has followed thousands of children since birth in 2001.

Researchers tracked academic trajectories for 1,200 late preterm infants over time using developmental assessments recorded at nine months and 24 months followed by reading and math scores at preschool and

kindergarten timepoints.

Most late preterm infants displayed early reading trajectories at or above the average compared to full term infants but had lower mean math scores at all time points with the greatest performance gap in kindergarten.

While it is unclear exactly why late preterm infants exhibit vulnerability in math development but not reading, researchers suggest the difference could be a result of unique brain development characteristics including structural changes in neural pathways related to visuo-constructive skills.

Risk and resilience

Suboptimal academic trajectories among late preterm infants were associated with both psychosocial risk factors—less than [high school](#) maternal education—and biological risk factors—a twin or multiple pregnancy, prenatal tobacco use or male sex.

Increased academic risk in late preterm infants could be related to functional differences in neural connectivity or to sex-related differences that contribute to differences in learning and academic achievement. However, the exact mechanism is unclear.

Results suggest that parents of late preterm infants can foster more optimal early academic outcomes with interventions which promote parental sensitivity in early childhood. Preschool enrollment combined with developmental support prior to school entry can also help reduce academic risks, and support early academic achievement.

This is the first study to examine academic trajectories of late preterm infants from infancy to kindergarten along with the associated predictors of academic resilience and risk, says Shah.

"Now that we have identified patterns and predictors of reading and math skill development, we can help inform pediatric guidelines to help late [preterm infants](#), who are the majority of infants born [preterm](#), thrive in the period before kindergarten," Shah said.

More information: Prachi E. Shah et al, Developmental trajectories of late preterm infants and predictors of academic performance, *Pediatric Research* (2023). [DOI: 10.1038/s41390-023-02756-2](https://doi.org/10.1038/s41390-023-02756-2)

Provided by University of Michigan

Citation: Sensitive parenting and preschool attendance may promote academic resilience in late preterm infants (2023, August 29) retrieved 29 April 2024 from <https://medicalxpress.com/news/2023-08-sensitive-parenting-preschool-academic-resilience.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--