



The negative impact of teachers' depressive symptoms on math gains

Research continues to show that working conditions, including pay, in early childhood education settings can result in increased depressive symptoms among teachers.

A new study led by the Early Childhood Education Institute indicates that those depressive symptoms could be manifesting in lowered math scores and reduced gains in approach to learning among children in Head Start programs.

Researchers examining the associations between teachers' depressive symptoms and teacher reports of family-teacher relationships – a predictor of gains in children's math scores over the course of a school year – found a significant association between teachers' depressive symptoms and math achievement in children participating in Head Start programs. Prior studies show that preschoolers' math ability is one of the strongest predictors of their later academic achievement.

A multilevel mediation model was used to examine direct associations between teachers' depressive symptoms and children's gains in math skills as well as the indirect associations through teacher-family relationships.

Teachers with higher levels of depressive symptoms were also found to report more negative relationships with families. And while the association between them was not linked to children's math gains, there was evidence that family-teacher relationships are indirectly linked to math skills through children's approach to learning.

Policy Implications

- ECE programs should consider systematic changes targeting programmatic elements that may induce or exacerbate teachers' depressive symptoms or negative psychological wellbeing.
- Efforts to support teacher wellbeing are likely to yield positive results in children's learning and development.
- Programs can equip teachers with coping skills to meet their own needs or build partnerships to provide counseling.

The findings in this study align with earlier studies showing an association between teacher depressive symptoms and math achievement in older children. The results also expand upon research demonstrating that teachers' wellbeing is not just associated with preschool children's social-emotional development.

There are likely systemic and structural changes, such as increased wages, more paid vacations, or leadership training focused on creating a positive workplace culture, that could be made to decrease teacher's depressive symptoms. The systematic lack of investment in ECE teachers may be affecting not only teachers' own mental wellbeing, but also the experience of families and children within ECE settings.



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This brief is taken from the journal article “Teacher Depressive Symptoms and Child Math Achievement in Head Start: The Roles of Family-Teacher Relationships and Approaches to Learning” by Shinyoung Jeon, Lieny Jeon, Sarah Lang, Kaitlyn Newell

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