

First Grade Classroom-Level Adversity: Associations with Teaching Practices, Academic Skills, and Executive Functioning

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Direct associations emerged between classroom-level adversity (CLA) and controlling instruction (positive), classroom management, and academic instruction (both negative). In addition, CLA was related to 1st grade (G1) literacy (but not mathematics) directly and indirectly via classroom management (negatively) and controlling instruction (positively). There was a negative direct longitudinal association between CLA and 3rd grade (G3) executive functioning, and indirect associations with G3 literacy and mathematics through G1 teaching practices and literacy.

Authors: Tashia Abry, Kristen L. Granger, Crystal I. Bryce, Michelle Taylor, Jodi Swanson, & Robert H. Bradley

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The authors examined direct and indirect associations between 1st grade (G1) classroom-level adversity (CLA), G1 teaching practices, and student academic skills and executive functioning in G1 and 3rd grade (G3). Direct associations emerged between CLA and controlling instruction (positive), classroom management, and academic instruction (both negative). In addition, CLA was related to G1 literacy (but not mathematics) directly and indirectly via classroom management (negatively) and controlling instruction (positively). There was a negative direct longitudinal association between CLA and G3 executive functioning, and indirect associations with G3 literacy and mathematics through G1 teaching practices and literacy.

- As part of young children's microsystems, the early elementary classroom (including the peer context) plays a formative role in shaping academic and cognitive development.
- Collective characteristics of the students in a classroom group (such as academic skills, aggression, and internalising behaviours) have explained unique variations in developmental outcomes (beyond that explained by said characteristic) and other individual, family, and teacher factors at the student level.
- Theoretical propositions and limited empirical research indicate teaching practices as potential mechanisms that transmit the influence of collective student characteristics.
- Transactional and person-environment systems perspectives posit that learning and development stem from interactions and relationships between an individual and other actors within a system, such as those occurring within a classroom between and among individuals, their peers and the teacher(s).

Classroom management

- High quality classroom management can be defined as teachers' effectiveness in preventing disruption, maintaining and regaining order, navigating transitions, and promoting student attention and productivity.

Controlling instruction

- Controlling instruction encompasses both directive and rigid approaches that lack individualisation and minimise student autonomy, expression, and peer interactions.



The study

The present study examined G1 CLA, a classroom-level index of multiple child and family risk factors affecting the student group.

Research questions:

1. *Is G1 CLA directly related to observed G1 teaching practices?*
2. *Is G1 CLA directly or indirectly associated with directly assessed student literacy and mathematic skills in both G1 and G3 and executive functioning in G3?*

The study participants consisted of 1073 children. Teachers reported CLA. Teachers' classroom management, controlling instruction, and amount of academic instruction were assessed

by trained independent observers. Children's literacy, mathematic skills, and executive functioning were directly assessed by trained research personnel.



Findings

- G1 CLA was significantly negatively related to G1 classroom management and academic instruction, and positively related to controlling instruction.
- G1 CLA was negatively associated with G1 literacy skills.
- Classroom management and controlling instruction were positively related to literacy skills, suggesting possible indirect effects of CLA on literacy through these teaching practices.
- G1 CLA directly predicted G3 executive functioning.
- Significant indirect associations emerged between G1 CLA, G1 management and controlling instruction, G1 literacy, and G3 literacy and mathematics.



Implications

- Higher CLA was directly negatively related to classroom management and academic instruction, and positively related to controlling instruction.

- CLA indirectly influenced students' literacy and mathematics concurrently and longitudinally through influence on teaching practices.
- In the presence of the indirect associations, G1 CLA was directly and negatively related to G1 levels of student literacy and G3 levels of executive functioning.
- Teachers in higher-adversity classrooms were less effective in preventing disruption and maintaining and regaining order in their classrooms.
- The classroom context in the first years of schooling has a lasting influence on executive functioning beyond concurrent later-grade classroom milieus.
- G1 may function as a sensitive period for the formation of this important cognitive skill set.
- Both teachers and students may benefit from the purposeful diffusion of higher-adversity classroom compositions where possible.
- Teachers and students in higher-adversity classrooms may benefit more from investment compared to teachers working with more advantaged groups.