

Classroom Age Composition and Children's Cognitive and Socio-Emotional Growth: The Implications of Classroom Quality and Teacher Qualifications
Kelly M. Purtell, The Ohio State University

Introduction

- Over 75% of children in Head Start are in mixed-age classrooms (e.g., 3- and 4-year olds) and the practice is common in many other types of center- and family-based care.
- Despite the widespread nature of this practice, we know little about its' associations with preschool children's development.
- Furthermore, these associations likely vary across classroom, but we do not know the role that classroom quality and teacher characteristics play in them.
- We investigated 3 questions:
 - What is the association between the age of classroom peers and children's academic growth and social behavior development across one year of Head Start?
 - Are these associations moderated by classroom quality?
 - Are these associations moderated by teachers' education and experience?

Methodology

- We used data from the Family and Child Experiences Survey (FACES 2009), a nationally representative sample of children in their first year of Head Start. Our sample included 2,829 children in 486 classrooms.
- This is the first national dataset to include information of the ages of all children in the classroom, which was reported by teachers (proportion age 3, age 4, age 5).
- Children were directly assessed using the Peabody Picture Vocabulary Test, Woodcock-Johnson Letter-Word Identification subtest, Woodcock-Johnson Spelling subtest Math: Woodcock-Johnson Applied Problems.
- Teachers reported on children's behavior problems and social skills, as well as on their own education and experience.
- We also include a wealth of classroom- and child-level covariates in our models.
- Our focal models are regression-based with interaction terms for our moderators and sampling weights applied.

Findings: What We Have Learned

- When 4-year-old children were in classrooms with higher proportions of 3-year olds, they demonstrated less gains in literacy and math skills across the year. 3-year olds academic gains were unrelated to the age of their classmates, as was social behavioral development for both the older and younger children.
- When 4-year olds were in classrooms with a lower proportion of 3-years, high classroom quality was linked with greater gains in literacy. However, when 4-year olds were in classrooms with a higher proportion of 3-year olds, classroom

quality was unrelated to their gains in language and literacy. A similar pattern emerged for math.

- Teacher experience did not moderate relations between age composition and child outcomes.
- Teacher education did moderate relations between composition and literacy gains for 4-year olds, such that the negative associations between higher concentrations of 3-year olds in the classroom and 4-year olds' literacy development was only present when the teacher did not have at least an associate's degree. However, this pattern did not emerge for math.

Implications for Policy and Research

- Although mixed-age environments may have positive benefits for preschool-aged children, the current work shows that there are also potential negative consequences, especially for older children in the classroom.
- Future research needs to identify the factors within a mixed-age classroom that promote positive development for children of all ages.
- Future research should also incorporate a wider range of children's outcomes to capture developmental processes that may be positively influenced by mixed-age peers, such as the development of leadership and empathy.
- Teachers may benefit from training or professional development that focuses specifically on how to navigate challenges associated with mixed-age classrooms.

Publications:

Ansari, A., Purtell, K. M., & Gershoff, E. T. (2016). Classroom age composition and the school readiness of three- and four-year old children in the Head Start program. *Psychological Science*, 27, 53-63. <https://doi.org/10.1177/0956797615610882>

Purtell, K. M., & Ansari, A. (forthcoming). Classroom age composition and preschoolers' school readiness: The implications of classroom quality and teacher qualifications. *AERA Open*.

Contact info:

Kelly Purtell

The Ohio State University

purtell.15@osu.edu

(614) 688-1896

Presentation Citation:

Purtell, K. M. (2018). *Classroom age composition and children's cognitive and socio-emotional growth: The implications of classroom quality and teacher qualifications*. Presentation at the 2018 Child Care and Early Education Policy Research Consortium Annual Meeting.

This research was supported by a grant from the American Educational Research Association which receives funds for its "AERA Grants Program" from the National Science Foundation under NSF Grant #DRL-0941014. Opinions reflect those of the author(s) and do not necessarily reflect those of the granting agencies.