

Testing Thresholds of Quality on Child Outcomes Globally and in Subgroups: Secondary Analysis of QUINCE, Early Head Start and Midwest Child Care Research Consortium Quality Rating Systems Pilot Data

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Project Description: The purpose of this project is to examine relations between quality measures and child outcomes within QUINCE and Early Head Start data, examining for both linear and nonlinear associations. When nonlinear relations are found, we do additional analyses to determine where cut points are located and whether quality above and below the cut point differentially relates to outcomes.

Research questions:

1. Are relations between quality and child outcomes linear or nonlinear?
2. If nonlinear, what are critical cut points or thresholds?
3. Can reliable factors within Rating Scale and CIS measures be identified?
4. Do the relations hold for selected subgroups?

Sample: QUINCE and Early Head Start data are used as they have similar measures of quality and comparable measures of outcomes. In each data set we include only subjects who have been with a provider for at least 6 months. Assessments in EHS are at 14, 24, 36 and 60 months and in QUINCE in the preschool range.

Methods: Quality measures are Rating Scale measures and the Caregiver Interaction Scale. Child outcomes include a range of child assessments in multiple domains. For analyses, we use first GAM analyses to determine linearity or non-linearity. Following GAM analyses, where non-linear relations are found, we then conduct spline analyses to test whether the segments are different from each other and for which segments the relations between quality and child outcomes are significant. For factor work, we used Confirmatory Factor Analyses techniques.

Progress Update: We have completed GAM and spline analyses for EHS and are now proceeding with QUINCE. For EHS we found a combination of linear and nonlinear relations that differed by center and family child care and child age. Relations for cognitive measures tended to be linear and for non-cognitive tended to be nonlinear for younger children in centers while more relations were nonlinear for older preschool age children regardless of setting. We hope to have QUINCE and subgroups completed by November. Factors are interesting but not strong and reliability is debatable.

Implications for policy/practice: Thresholds work has many implications for Quality Rating Systems and for targeting resources to improvements where they are more likely to change the outcomes.

Implications for research: Thresholds work is fairly limited and the stakes involved with any identified threshold are great so it is important when results converge or do not. More research is needed in this area but to date, the findings are not clear across all studies.