Improving Child Care Quality:
A Validation Study of the Virginia Star Quality Initiative

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Project Description.

Over the last decade, states have dramatically expanded the implementation of Quality Rating and Improvement Systems (QRIS) in response to the growing need to assess and improve the quality of early childhood education (ECE) programs. The quality ratings of ECE programs are the key output of QRIS, yet there is little empirical evidence as to whether these ratings relate to child outcomes.

The present study validates the rating system in Virginia's QRIS, the Virginia Star Quality Initiative (VSQI), by examining associations between 71 targeted prekindergarten programs in the VSQI and growth in pre-literacy skills across early childhood.

Research questions.

- *Do programs' ratings relate to children's pre-literacy skills upon school entry?*
- *Do programs' ratings relate to growth in pre-literacy skills from pre-kindergarten to kindergarten?*
- *How to center and child characteristics vary by star rating?*

Sample.

Our sample includes 2805 children in 71 pre-kindergarten programs in Virginia. The 71 programs were located predominately in urban neighborhoods (70%). In terms of the VSQI star-ratings, 8 were 2-star programs (11%), 38 were 3-star programs (54%), and 25were 4-star programs (35%), with no 1-star or 5-star programs (with 1 indicating low quality and 5 indicating high quality). Fifty-four percent of the children were non-white, 50% were boys, 7% had disabilities at prekindergarten entry, and 8% had limited English Proficiency.

Methods.

Key measures:

VSQI Ratings: VSQI assesses program quality based on four quality standards: (1) staff education and qualifications; (2) teacher-child interactions (measured by the CLASS) ; (3) structure (i.e. staff-to-child ratio); and (4) environment and instruction (measured by the ECERS-R). Standard 2, the interaction standard area, is weighted 1.5 times more than the other three standards. The scores from each of the standards are summed and converted to stars based on predetermined cut-points.

Child Outcomes: Teachers assessed children's pre-literacy skills using the Phonological Awareness Literacy Screening (PALS) across four time points: fall and spring of prekindergarten, and the fall and spring of kindergarten.

Community and neighborhood characteristics. 2000 U.S. Census data was aggregated based on defined boundaries set by the state. Then we aggregated block census data within a two-mile radius of the center in order to capture neighborhood characteristics, including median household income; racial make-up; education level, and percent of single mother households.

Analytic Plan:

To answer the first research question, we employ a two-level model to account for the hierarchical data structure where children are nested in higher-level groups (i.e. programs) with community fixed effects. To answer the second research question, we account for individual-specific growth by employing three-level hierarchical linear modeling techniques, which combine longitudinal and multilevel features to adjust for variation between and within children and schools.

Progress Update.

Key findings:
- Lowest rated programs served a greater proportion of children from disadvantaged neighborhoods and more African American children.
- Higher rated programs served more Hispanic and LEP children
- Program's star quality ratings were not associated with children's pre-literacy scores
- Star-ratings were associated with growth in the pre-kindergarten year, such that 3-star and 4-star programs had sharper growth in the prekindergarten year compared to children in 2-star programs

Overall, findings indicate that quality ratings are associated with growth in the prekindergarten year: children in higher-rated prekindergarten programs have sharper literacy growth in the preschool year compared to children in lower rated programs. Literacy growth in prekindergarten is partly explained by differences among children who attend higher and lower rated programs. The benefits of attending a higher-rated program fade out by kindergarten.

Implications for policy/practice
Quality Rating and Improvement Systems have dramatically expanded over the last decade. In the Virginia Star Quality Initiative, the evidence that higher star ratings are related to stronger growth in children's pre-literacy skills is encouraging. Yet the magnitude of the association is attenuated after accounting for selection factors, and the relations to children's literacy skills fade out by the kindergarten year, suggesting that much more work is needed to understand how to best assess and define quality in a policy context. The question remains whether there are missing components of quality or ways in which Virginia can aggregate program's performance that may more strongly predict children's literacy skills.

Implications for research
The evidence that star ratings modestly predict growth in prekindergarten, with the association fading out in the next year, indicates that the ratings may not be meeting their potential as robust and lasting predictors of development. Future work on QRIS should include simulations of the weighting structure and aggregation techniques, as well as the relative contribution of each quality standard to outcomes. In some sense, validation work may be a bit premature without better understanding the validity of individual quality standards along with other components of QRIS. In order to ensure that QRIS are employed with the greatest validity, administrators of QRIS would greatly benefit from a tool that not only highlights the relation between quality standards and outcomes, and associated effect sizes, but also suggested aggregation techniques and cut-points, reliability recommendations, and data collection suggestions. Much more work is needed in validating ratings, examining selection, and understanding effects on parental selection. Given the demand and public attention for high quality care, evaluations on the effectiveness of QRIS become ever more pressing.

For more information:

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Key Topics Please select all that apply and briefly describe/explain. This information will be used internally in planning the CCPRC Annual Meeting.	
Child Care Subsidy Policies & Practices e.g., How do policies and practices influence parents' child care decisions, parental and/or child outcomes, providers' behavior, access to quality child care?	
Collaboration, Integration, & Linkages e.g., What are characteristics of different types of collaborations? What are reasonable outcomes to expect? What are we learning from coordination across different systems? What is the value added of effective collaborations at the state and local levels?	
Quality Frameworks How well are QRIS living up to promise of improved outcomes at the systems, provider, family and child levels? How are they influencing parent decisions, professional development, workforce issues? What are we learning about collaborative professional development strategies and effective targeting of quality resources?	**This project directly addresses the issue of whether QRIS ratings relate to child outcomes, and discusses the challenges and future directions for this type of validation research.**
Parents & Families What do we know about parent decision-making and how it is influenced by issues such as culture, employment, subsidy policies? What other family-level constructs are relevant to child care policies/practices?	
Other (please describe)	