Classroom quality and children’s academic skills in child care centers: Understanding the role of teacher qualifications

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A B S T R A C T

This study examines the associations of teachers’ levels of education and professional training with observed classroom quality and children’s school readiness in community-based child care centers. Prior research provides mixed evidence about whether teachers’ education predicts early childhood education (ECE) classroom quality and children’s outcomes. Data are drawn from a Midwestern study of community child care centers (typically private pay non-profit or for-profit child care centers that are not directly funded by government programs) and the children ages 3–5 in their care (N = 189 centers and 661 children). This study takes advantage of a very detailed set of teacher training measures that includes information on education degrees, ECE credit-based training, and placement on the state’s 17-level professional career ladder (the Registry). Using these measures, the current study is able to examine whether variations in degrees and ECE credit-based training for teachers predict observed classroom quality and children’s school readiness skills. Analyses control for a rich set of variables, including children’s demographic information and fall assessment scores, teachers’ work-related characteristics (e.g., motivation for ECE work), and classrooms and programs’ features. Results from regression models suggest few associations between teachers’ education level, ECE credits, or level on the professional career ladder and observed classroom quality. The key exception is that teachers who do not have any post-secondary education and training in ECE are in classrooms of significantly lower quality compared with teachers who have a college degree. Results from hierarchical linear models indicate that teachers’ education does not predict children’s early academic skills.

1. Introduction

Many 3- to 5-year-old children attend some type of early care and education (ECE) program in the United States. In 2012, about 64% of preschool age children experienced non-parental child care on a regular basis (National Center for Education Statistics, 2013). Children who attend center-based ECE programs have higher levels of school readiness than those who experience only parental or other informal child care (Burchinal, Magnuson, Powell, & Hong, 2015). Despite the potential importance of ECE for children’s development, research finds that the quality of children’s experiences varies across programs and across classrooms within center-based programs. Moreover, the average quality of ECE is typically described as mediocre at best (Zellman & Fiene, 2012). Concerned that ECE programs do not sufficiently support children’s early learning, researchers and policymakers have turned their attention to improving ECE quality with the hope that higher-quality ECE would better support children’s early academic and social skills (Burchinal et al., 2016).

An important focus of the efforts to raise ECE quality has been to improve teacher preparation and qualifications. This effort was fueled by the recognition that teacher quality, including content knowledge and practice skills, are the cornerstone of providing children with positive interactions and enrichment experiences that support their learning (NAEYC, 2016). In recent years, policymakers and accrediting organizations have set higher educational standards and benchmarks for publicly funded programs, and have provided funding for professional development opportunities and grants to offset costs associated with improving teachers’ education or credentials (Ackerman, 2004; IOM & NRC, 2015; Pianta, Barnett, Burchinal, & Thornburg, 2009). For example, the National Association for the Education of Young Children accreditation standards require that all lead teachers have a minimum of an associate’s degree or equivalent (NAEYC, 2016). The Improving Head Start for School Readiness Act of 2007 required that by September 2013, at least 50% of the teachers in center-based programs have at minimum a bachelor’s or advanced degree in ECE (Office of Head Start, 2008). Finally, among 39 states that have established a child care
Quality Rating and Improvement System (QRIS), virtually all include staff education or training as part of the ECE program quality rating indicators (The Build Initiative & Child Trends, 2014). Given the increased standards and opportunities, the overall education level of ECE teachers has increased substantially over the past 20 years (Bassok, Fitzpatrick, Loeb, & Paglayan, 2013).

The recent empirical research, however, has provided little evidence to support the conclusion that higher levels of teachers’ education predict better classroom quality or greater gains in school readiness among children (Early et al., 2006; Early et al., 2007; Mashburn et al., 2008). The lack of association has puzzled scholars and led to additional questions about whether and how teachers’ education is associated with classroom quality or children’s outcomes. This study contributes to the literature by estimating the associations between teachers’ education degree, ECE credits, and level on a professional career ladder and observed classroom quality as well as children’s outcomes in a recent sample of community-based child care centers (typically private pay non-profit or for-profit child care centers that are not directly funded by government programs).

2. Background

2.1. ECE quality and teacher qualifications

High-quality ECE experiences have the potential to improve young children’s early academic skills and learning-related behaviors, especially for children from disadvantaged backgrounds (Burchinal et al., 2015). Informed by attachment and cognitive constructionist theories, high-quality ECE is characterized by the warm and responsive teacher-child interactions as well as age-appropriate cognitive stimulation and learning activities (Burchinal et al., 2015). The nature of the interactions that children have with teachers and peers as well as their engagement in activities is typically described as “process” quality, because it is defined by what happens in a classroom or care setting on a regular basis. Process quality is differentiated from what scholars refer to as structural quality, defined by the program and classroom built environment, usually including measures of group size, child-teacher ratios, staff education, and other program policies (La Paro, Pianta, & Stulman, 2004; Mashburn et al., 2006).

Conceptually, it is widely argued that structural quality has indirect effects on children which operate through process quality. In other words, structural quality is thought to affect children by facilitating better (or worse) interactions and experiences in classrooms (NICHD ECCRN, 2002). Because teachers’ educational qualifications are viewed as a good proxy for their skills, it is often considered as one of the most important dimensions of structural quality (Blau, 2001). Effective teachers are responsive to children’s emotional needs and have substantive knowledge about children’s developmental trajectories and learning processes. They also develop positive attitudes and knowledge about developmentally appropriate practices (Resnick, 2010; Wen, Elicker, McMullen, 2011). As a result, it is assumed that more educated teachers possess a repertoire of teaching and classroom management skills that enable them to implement classroom activities and to foster child-initiated academic and socio-emotional learning (Sheridan, Edwards, Marvin, & Knoche, 2009).

In the field of ECE, three components of professional development are central to the education and training of teachers – formal education, credentialing, and in-service training (Maxwell, Field, & Clifford, 2006a). Formal education, the most studied component, in the form of course credits or degrees (sometimes with attention to majors) may be either pre-service, before teachers are in the field, or post-service, when they are working as teachers. In general, formal education courses focus more on the broad and foundational knowledge related to ECE, including theories in child development, skill-specific content (e.g., literacy or math), pedagogy, curriculum and teaching strategies, as well as the diversity of children’s needs (Bowman, 2011).

The two less studied forms of ECE professional development are credentialing (including licenses and professional certificates) and in-service training such as workshops, short non-credit training courses, and other supports such as technical assistance and coaching (Maxwell, Field et al., 2006). Credentials are validated against a set of formal criteria, and the most common ECE credential is the Child Development Associate (CDA) (Maxwell, Field et al., 2006). In-service training often provides materials that are closely related to specific ECE teaching practices and populations including assessment and evaluation, implementation of curriculum, behavior management, child abuse, and family services (Maxwell, Field et al., 2006; Sheridan et al., 2009). Some state child care licensing systems mandate annual professional development for teachers as well as require a minimum number of in-service training hours (Whitebook, 2014).

2.2. Linking teachers’ education to classroom quality and children’s outcomes

Teacher qualifications are measured with a broad range of indicators across studies, but much of the existing research on the role of teachers’ education in producing classroom quality and children’s learning has focused on ECE teachers’ completed degrees (Tout, Zaslow, & Berry, 2006). When studied, in-service training programs are most often evaluated wholesale as an intervention for quality improvement, rather than a component of teachers’ overall educational qualifications (Hindman & Wasik, 2012; Powell, Diamond, Burchinal, & Koehler, 2010; U.S. Department of Education, 2010).

In the 1990s, studies of community child care programs found positive associations between teachers with more education and specialized training in ECE and observed classroom quality (Burchinal, Cryer, Clifford, & Howes, 2002; Cassidy, Hestenes, Hedge, Hestenes, & Mims, 2005; NICHD ECCRN, 2002; Phillips, Mekos, Sarr, McCarthy, & Abbott-Shim, 2000). For example, Burchinal and colleagues (2002) found that teachers who had a bachelor’s degree (BA) and those who attended workshops (regardless of their education levels) were associated with significantly higher classroom quality measured by the Environmental Rating Scales and the Caregiver Interaction Scale. Among studies that examined children’s outcomes, higher levels of teachers’ education were linked to better school readiness skills (Burchinal et al., 2002; Loeb, Fuller, Kagan, & Carrol, 2004; NICHD ECCRN, 2002).

The findings that teachers’ formal education predicts observed classroom quality and children’s outcomes have not been consistently replicated in more recent studies. Studies using data collected from state pre-K and Head Start programs have found that having a teacher with a higher education level, including a BA degree, is not associated with higher observed classroom quality, with just a few exceptions (Early et al., 2006; Mashburn et al., 2008; Pianta et al., 2005). For example, in an analysis of seven studies (Early et al., 2007), only two studies (i.e., Early Head Start and NICHD) found positive associations between teachers’ educational attainment and classroom quality, and one study found a negative association. The broad conclusion from this work was that having a BA degree did not confer any advantages in terms of observed classroom quality when compared with lower levels of formal education (Early et al., 2007).

Recent studies also found that higher levels of teachers’ education and training were not associated with better school-readiness outcomes for children (Early et al., 2006; Mashburn et al., 2008; Pianta et al., 2005). In a meta-analysis by Early et al. (2007), only two studies showed positive associations between teachers’ education and children’s reading or math skills, and no studies found relations between teachers’ education and children’s language skills. With the most recent evidence of largely null associations, several scholars have argued that typical higher education degrees, specifically BA degrees, do not provide improved classroom environments or lead to improved children’s outcomes (IOM & NRC, 2015).
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