

Transition Practices and Children's Development During Kindergarten: The Role of Close Teacher-Child Relationships



Najia Zulfiqar, Jennifer LoCasale-Crouch, Beverly Sweeney, Jamie DeCoster, Kathleen Moritz Rudasill, Colin McGinnis, Ibrahim Acar, and Kathleen Miller

Abstract Children's early school success is critical, and evidence suggests that when kindergarten teachers provide more transition practices as children prepare to enter kindergarten, they show improved outcomes in kindergarten. Positive teacher-child relationships may be a link between transition practices and children's school success. Here we examine whether teacher-child closeness mediates between kindergarten teachers' use of transition practices and children's academic and social growth during kindergarten. Data for this study came from the National Center for Early Development and Learning's (NCEDL) Multi-State Study of Pre-Kindergarten. Children from 240 pre-K classrooms from six states were followed from pre-K to kindergarten. For this study, 730 children were included and were ethnically diverse: 40% White, 24% Black/African-American, and 26% Latinx. Three main findings emerged: (1) teacher-child closeness was predictive of children's growth in multiple academic and behavioral outcomes in kindergarten; (2) transition practices were positively related to teachers' perceptions of closeness with children in kindergarten; and (3) teacher-child closeness mediated the association between transition practices and children's academic and behavioral outcomes. Implications are discussed.

Children's early school success is consistently linked to favorable long-term outcomes (e.g., Jordan, Kaplan, Ramineni, & Locuniak, 2009; Locuniak & Jordan, 2008; Vitaro, Brendgen, Larose, & Tremblay, 2005). Investments in preschool to improve children's potential to do well seem to matter initially, especially for children most at risk for school difficulties, but effects diminish with time, even as

N. Zulfiqar

University of Haripur, Haripur, Khyber Pakhtunkhwa, Pakistan

J. LoCasale-Crouch · B. Sweeney · J. DeCoster

University of Virginia, Charlottesville, VA, USA

K. M. Rudasill (✉) · C. McGinnis · K. Miller

University of Nebraska-Lincoln, Lincoln, NE, USA

e-mail: krudasill2@unl.edu

I. Acar

Istanbul Medipol University, Istanbul, Turkey

early as kindergarten (Lipsey, Hofer, Dong, Farran, & Bilbrey, 2013; Magnuson, Ruhm, & Waldfogel, 2007). Reynolds, Magnuson, and Ou (2008) suggested that gains made in preschool might be sustained when kindergarten environments are of high quality and well aligned with the preschool environments.

Preschool to kindergarten transition practices are a way to promote the alignment of environments through the provision of familiar routines, expectations, and activities. The examples of such activities include holding a kindergarten orientation for children and their families on what to expect in kindergarten, having children visit their new classroom and teacher prior to the start of school, or inviting kindergarten teachers to visit preschool classrooms. Previous research suggests that these kinds of effective transition experiences from preschool to kindergarten benefit children academically and socially (LoCasale-Crouch, Mashburn, Downer, & Pianta, 2008; Schulting, Malone, & Dodge, 2005), resulting in learning skills needed to succeed in school (Heckman & Masterov, 2007; Magnuson et al., 2007).

Although practices used to promote effective transitions are associated with positive child outcomes (LoCasale-Crouch et al., 2008; Schulting et al., 2005), the pathways through which transition experiences lead to benefits for children are unclear. One possible link between transition practices and children's school success might be the positive relationship between children and their new teachers, which have been established as an important factor for both children's short- and long-term academic and social outcomes (Hamre & Pianta, 2001; O'Connor & McCartney, 2007). Thus, we examine whether teacher-child closeness mediates the association between kindergarten teachers' use of transition practices and children's academic and social growth over the kindergarten year.

Kindergarten as a Critical Period for Children's School Success

Some theorists have suggested that kindergarten serves a "critical" period for children's school success (e.g., Entwisle, 1995; Rimm-Kaufman & Pianta, 2000) and a number of empirical studies support this. For example, multiple studies show children's kindergarten proficiency in reading and mathematics predicts academic success in later grades (Jordan et al., 2009; Locuniak & Jordan, 2008; Morris, Bloodgood, & Perney, 2003; Schatschneider, Fletcher, Francis, Carlson, & Foorman, 2004). In addition, children's social skills in kindergarten relate to the long-term positive outcomes such as high school completion (Vitaro et al., 2005).

Many children, however, have trouble during the transition to kindergarten. For example, Rimm-Kaufman, Pianta, and Cox (2000) found that among a nationally representative sample of kindergarten teachers, nearly half of teachers reported half of their class or more exhibited adjustment problems such as difficulties following directions, inadequate academic performance, and trouble working independently. Among these, approximately one-sixth of children displayed even more serious adjustment problems (Rimm-Kaufman et al., 2000). Additionally, struggles at kin-

dergarten entry are more pronounced for children living in poverty (Halle et al., 2009). Growth trajectory analyses suggest that children who are behind academically or socially in early grades are at a distinct disadvantage in later grades than their counterparts (McClelland, Acock, & Morrison, 2006) and are at risk for adjustment problems (Hamre & Pianta, 2001).

Conceptualizing an Effective Transition to Kindergarten

Although some have conceptualized school readiness as a set of prerequisite skills that a child possesses upon entry to kindergarten, scholars such as and Ramey and Ramey (1999) considered this view inadequate because of its disproportionate focus on children's skills. Recent school readiness models employ an ecological approach to account for the dynamic contexts in which children are situated and the amount of support they receive in terms of positive teacher-child relationships (Downer, Driscoll, & Pianta, 2006; Mashburn & Pianta, 2006). The most effective transition practices are those that foster connections between systems, for instance, connections between children and kindergarten teachers, particularly prior to kindergarten entry, between preschool and kindergarten teachers, and between teachers and families (Rimm-Kaufman et al., 2000). Recognizing that child, family, and school factors are interconnected and interdependent, Rimm-Kaufman and colleagues (2000) contend that adults need to work to align experiences during the transition period in ways that promote children's successful adjustment to kindergarten.

Transition Practices Associated with Kindergarten Success

When children experience the described transition practices, better adaptation to kindergarten occurs, especially for those at social and economic risk (LoCasale-Crouch et al., 2008; Schulting et al., 2005). For example, as a part of the 1986 Head Start national transition initiative to implement 15 comprehensive programs, Hubbell and colleagues (1987) found that children who experienced more transition activities (based on teacher report) were better adjusted at the beginning of school in terms of self-confidence, liking of school, overall happiness, and reduced stress. Schulting et al. (2005), controlling for family socioeconomic status, found that the number of transition activities implemented at the beginning of kindergarten predicted children's academic gains and family involvement across the kindergarten year, especially for children in low-income families. These findings suggested that providing a smooth transition experience may have a moderating role between poverty and child outcomes. Similarly, LoCasale-Crouch et al. (2008) found that transition practices initiated prior to kindergarten were associated with teacher-reported high levels of children's school readiness, especially among children from low-income families.

Although evidence suggests that the use of transition activities is associated with beneficial child outcomes, the processes through which they work are unclear. There seems to be at least two potential pathways through which transition activities and child outcomes are related. First, transition activities promote aligned environments and experiences between preschool and kindergarten, providing continuity conducive to children's successful adjustment and continued learning (Bogard & Takanishi, 2005; Kagan & Kauerz, 2007). Studies have shown that activities that foster alignment, such as preschool and kindergarten teacher collaboration and alignment of curricula and support services, are particularly important for beneficial transition outcomes (Ahtola et al., 2011; LoCasale-Crouch et al., 2008). This evidence suggests that children who experience a consistent and stable learning environment across settings reap long-term benefits including positive cognitive, social, and academic outcomes (Reynolds & Temple, 1998). In other words, transition activities are effective when they are part of a systematic effort to align standards, curricula, and assessments between preschool and kindergarten settings (Bogard & Takanishi, 2005; LoCasale-Crouch et al., 2008).

A second potential pathway by which transition practices support children's school success is through enhanced and early development of relationships with kindergarten teachers (Hamre & Pianta, 2001; Jerome & Pianta, 2008; Rimm-Kaufman & Pianta, 2000). Teacher-child relationships are an important element of children's school experience, and close relations have been attributed to supportive functions such as facilitating positive affect and attitude toward school, fostering communication with teachers allowing for greater involvement in the classroom, and forming a secure base to explore the classroom environment (Birch & Ladd, 1997). Similarly, positive relationships have been shown to serve as a protective mechanism for a child's social and academic development providing a foundation on which later behaviors can be modeled (Baker, 2006; Birch & Ladd, 1997; Pianta, La Paro, Payne, Cox, & Bradley, 2002). This study will examine whether close relationships may be the mechanism through which transition practices improve children's academic and social development.

Teacher-Child Relationships and Children's School Success

Ample research shows that close teacher-child relationships are a strong predictor of both short- and long-term academic and social outcomes from early childhood through adolescence (Ladd & Burgess, 2001; O'Connor & McCartney, 2007). Closeness refers to relationships that are warm, contain open communication, display positive affect between student and teacher, and exhibit comfort in the student's ability to approach the teacher (Pianta, Steinberg, & Rollins, 1995; Sabol & Pianta, 2012). Children with close relationships with their teachers demonstrate higher academic performance, better social skills, and fewer instances of externalizing behaviors (Ladd & Burgess, 2001). For example, Pianta and Stuhlman (2004) reported that teacher-child closeness was consistently associated with children's improved social and academic skills in preschool, kindergarten, and first grade. In

another study, pre-K children showed more gains in academic and social skills when they experienced closer teacher-child relationships (Howes et al., 2008). Further, Graziano, Garb, Ros, Hart, and Garcia (2016) recently found that teacher-child closeness during preschool was predictive of teacher-reported kindergarten readiness and lower academic impairment (Graziano et al., 2016).

Evidence suggests that teacher-child relationship quality remains relatively stable across the elementary school years (O'Connor, 2010; Rudasill, 2011). According to, consistency in teacher-child relationship quality also predicts children's social and academic development beyond early schooling. O'Connor and McCartney (2007) found associations between the quality of teacher-child relationships from preschool through third grade and children's third grade academic achievement. Similarly, in a longitudinal study of children in kindergarten through fifth grade, Maldonado-Carreño and Votruba-Drzal (2011) found that teacher-child relationship closeness was stable across elementary grades and that increases in teacher-child relationship closeness were associated with improvements in teacher-reported academic skills and reductions in behavior problems. Furthermore, evidence suggests that high-quality teacher-child relationships are protective for children at risk for school failure. For example, early childhood teachers' reports of their relationships with individual children were related to future referrals for special education (Pianta et al., 1995), behavioral problems in elementary school (Hamre & Pianta, 2001), peer relationships (Birch & Ladd, 1997), and achievement (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002).

McCormick, O'Connor, Cappella, and McCloskey (2013) found a positive link between kindergarten teacher-child closeness and first-grade math and reading achievement among low-income, racial/ethnic minority students attending urban schools. Interestingly, Gini, Sagi-Schwartz, Mark, and Aviezer (2014) found that teachers' perceptions of their relationships with first-grade students were related to their evaluations of student's academic performance, which were, in turn, related to student's perceptions of their (a) overall school experience, (b) academic abilities, (c) academic effort, and (d) quality of their relationships with their teachers. Additional research showed that teacher-child relationship quality in kindergarten predicted children's concurrent academic competence, which, in turn, predicted academic competence during first grade (Portilla, Ballard, Adler, Boyce, & Obradovic, 2014) and second grade. As such, research suggests positive kindergarten teacher-child relationships are important and salient contributors to child school success beyond the kindergarten year.

The Current Study

Given evidence that teacher-child relationship closeness is a unique predictor of academic and social outcomes and the use of transition and alignment practices that foster connections are also associated with such outcomes, it seems reasonable that teacher-child closeness is a mechanism by which transition activities are related to children's social and academic development during kindergarten. In this study, we

examine the pathway linking transition activities to child outcomes through teacher-child closeness. We hypothesized that the predictive power of transition practices to children's academic and social development in kindergarten is mediated by the teacher-child relationship closeness fostered by those practices.

Method

Participants

Data for this study came from the National Center for Early Development and Learning's (NCEDL) Multi-State Study of Pre-Kindergarten. During the 2001–2002 school year, NCEDL selected 240 pre-K classrooms from six states, including 960 children, who were followed from pre-K to kindergarten. The six states selected for participation in this study were among states that had committed significant resources to pre-K initiatives and that served at least 15% of their 4-year-old children in state-funded pre-K programs. One classroom in each center/school was selected at random for participation in this study, and from each class, four children were randomly selected from all eligible children in selected classrooms. For purposes of this study, one child per kindergarten classroom was randomly selected for inclusion in this study, resulting in 730 children who went to unique or independent kindergarten classrooms from those of their pre-K peers.

The sample included a diverse group of children and classrooms. Slightly less than half of the children (40%) are identified as European American, and approximately one quarter of the sample are identified as either Hispanic/Latino (26%) or African-American (24%). More than half of the sample (57%) came from families that were poor, defined as those having an annual family income less than or equal to 150% of the federal poverty guidelines for the given family's size. Almost one quarter of the classrooms were short-day programs, and the child-adult ratio was 8 is to 1. For kindergarten teachers, nearly the entire sample (96%) reported possessing a BA and a credential to teach kindergarten children. Kindergarten teachers averaged nearly 8 years of experience teaching their current grade, with a range of 0–47 years of experience.

Measures

Kindergarten Transition Practices A list of common and/or known supportive transition activities was included as part of kindergarten teacher survey, which was modified from a previous NCEDL kindergarten transition study. Teachers reported at the beginning of the school year whether or not they engaged in specific practices to support children's successful transition to kindergarten. Activities were limited to those that required an actual connection between the teacher and child/family before school started and included (1) phone calls to children or families, (2) visits by

incoming kindergartners to my class, (3) visits to children or families at home by me or other kindergarten staff, (4) a spring orientation about kindergarten for children, (5) a spring orientation about kindergarten for parents, (6) an individual meeting with parent(s), and (7) an open house for parents and children. Teachers' responses were summed to create a seven-item transition activity composite index ($Mean = 2.63, SD = 1.71$).

Teacher-Child Closeness Teachers completed the Student-Teacher Relationship Scale (STRS; Pianta, 2001), a widely used scale assessing teacher perceptions of the quality of their relationships with specific students that yields closeness and conflict scores. The STRS predicts academic and social functioning in prekindergarten through the elementary grades (Hamre & Pianta, 2001). In the current study, only closeness scale from the STRS was completed for the study child as an indicator of the teacher-child relationship quality. Scores ranged from 1 to 5, with 5 indicating higher ratings. On average, teachers rated their relationships with study child as close ($M = 4.25, SD = 0.66$).

Early Academic Skills The Woodcock-Johnson-III Psychoeducational Battery (WJ-III; Woodcock, McGrew, & Mather, 2001) is a widely used, individually administered assessment battery that measures general cognitive abilities and achievement in individuals from age 2 through adulthood. Raw scores from the Letter-Word and Applied Problem subscales were used in this study. The Letter-Word Identification subscale assesses decoding aspect of reading by asking children to identify and pronounce isolated letters and words. Applied Problems subscale assesses children's mathematical reasoning, achievement, and knowledge. This validated measure has been widely used with children (e.g., LoCasale-Crouch et al., 2008).

The Academic Rating Scale (ARS; Perry & Meisels, 1996) measures teachers' perceptions of children's skills for math and language and literacy. It has been widely used and validated (e.g., Baker, Tichovolsky, Kupersmidt, Voegler-Lee, & Arnold, 2015). For the current study, the kindergarten teachers completed ARS during fall 2002 and spring 2003. Teachers rated a child's proficiency in nine skills such as speaking, listening, early reading and writing for language and literacy (nine items) and math skills (seven items) on 5-point rating scale (1 = not yet; 2 = beginning; 3 = in progress; 4 = intermediate; and 5 = proficient). Example item for the language and literacy subscale is "produces rhyming words," and for the Mathematical Thinking subscale is "shows an understanding of the relationships between quantities." The internal consistency (alpha) for the scales was >0.90 .

Social Competence and Problem Behaviors Kindergarten teachers completed the Teacher-Child Rating Scale (Hightower, 1986), a widely used behavioral rating scale that reflects seven elements of social and emotional competencies on two broad scales of social competence and behavior problems. They used four scales for social competence and three scales for problem behaviors. Teachers rated the social competence of study children individually using a 5-point rating scale on how well statements described the child (1 = not at all; 2 = a little; 3 = moderately well; 4 = well; and 5 = very well). Example items of social competence subscale include

“participates in class discussions,” “completes work,” and “well-liked by classmates.” Similarly, teachers rated behavior problems of children individually using a 5-point rating scale (1 = not a problem; 2 = mild; 3 = moderate; 4 = serious; and 5 = very serious problem). Example items of behavior problem include “disruptive in class,” “anxious,” and “difficulty following directions.” For this instrument, authors report test-retest validity between 0.61 and 0.91 and internal consistency ranging from 0.85 to 0.95.

Teacher and Child Demographics The 730 kindergarten children and teachers participating in this study varied across a number of dimensions. During the fall, teachers and families of the selected children provided information on their demographics. Teachers were asked about the number of years of education they had attained, years of teaching experience, and their credentials or licenses in early childhood education. Families responded to questions about maternal education, child’s ethnicity, and family income.

Classroom-Level Quality of Teacher-Child Interactions Teacher-child interactions were rated using the Classroom Assessment Scoring System-Pre-K-3 (CLASS; La Paro & Pianta, 2000). The CLASS is an observational assessment of teacher-child interactions in classroom settings. The CLASS predicts self-regulation, social outcomes, and growth in language and literacy skills (Howes et al., 2008; Rimm-Kaufman, Curby, Grimm, Nathanson, & Brock, 2009). Because of these correlations, the CLASS assessment was used as a control variable to separate quality classroom teaching strategies from student-teacher relationships as leading to student success.

The CLASS measures three broad domains of interactions among teachers and children: emotional support, classroom organization, and instructional support. Two of these domains, emotional support and instructional support, have been identified as possible moderators between children’s risk and their academic and social success (Hamre & Pianta, 2005; Rudasill et al., 2016). The emotional support domain describes how a teacher supports the social and emotional functioning in the classroom. Some indications of an emotionally supportive classroom include a warm and accepting environment, a teachers’ sensitivity to children’s emotional cues, and multiple opportunities for children to make choices and take leadership roles (Pianta, La Paro, & Hamre, 2008). The instructional support domain assesses the ways in which teachers implement whichever curriculum they are using to effectively support cognitive and language development (Pianta et al., 2008). Instructional support is demonstrated in the classroom with scaffolding, questioning, and feedback exchanges between teachers and children (Pianta et al., 2008).

Within the three domains of the CLASS, nine dimensions of interactions were assessed using 7-point scales: (a) positive climate, (b) negative climate, (c) teacher sensitivity, (d) overcontrol (reversed), (e) behavior management, (f) productivity, (g) instructional learning formats, (h) concept development, and (i) quality of feedback. Each dimension is rated using 7-point scales with one or two indicating the classroom is low on that dimension and three, four, or five indicating that the classroom is in the mid-range and a six or seven indicating the classroom is high on that

dimension. Coders attended a 2-day CLASS training and had to pass the CLASS reliability test, which requires scoring five segments and demonstrating consistency with master codes (80% of codes within one of master code). They scored in four to six cycles with each cycle consisting of 20 min for observations and 10 min for scoring. Average scores of each dimension are determined across all cycles and composite scores given for each domain. Throughout the coding period, all coders attended weekly meetings that focused on assessing progress and reliability, as well as addressing issues of potential drift. As noted above, the negative climate score is reversed to maintain the higher scores indicating higher-quality classrooms.

During spring, the observer rated the kindergarten classroom and the teacher on nine dimensions every 30 min, throughout two observation days. Observation days lasted from the time children arrived until they started nap (in full-day programs) or left for the day (in half-day programs). As spring data collection began, data collectors' reliability on the CLASS was retested during a live visit to a classroom with a gold standard coder. Data collectors' mean weighted kappa was 0.73 on their final test. Ninety-three percent of data collectors' responses were within one scale-point of the gold standard's responses. This level of agreement was equal to or higher, on average, than that obtained in studies using these scales in kindergarten (Pianta et al., 2002). Each classroom's score is an average of its scores across two observation days.

Results

The primary aim was to test whether increases in kindergarten transition practices predict more teacher-child closeness which, in turn, leads to improvements in children's academic and social outcomes (Fig. 1). Descriptive statistics for the variables included in our models are presented in Table 1. As noted in the transition practices reported, teachers were most likely to have preschool children visit their kindergarten classroom in the spring (71%) and least likely to visit a child in their home before school starts (5%). The sample of children was from predominantly poor families evenly split between boys and girls. The sample of teachers was experienced in teaching kindergarten, and many had education beyond a bachelor's degree. On average, teachers reported engaging in a moderate amount of transition practices and reported feeling a relatively high degree of closeness with children. The children showed notable gains in the most of the assessed variables except for the Hightower problems score, which showed no change.

The partial correlations between the number of transition activities and the teacher's perceived closeness with a child for spring outcomes, after controlling for fall outcomes, are provided in Table 2. This provides basic bivariate relations between predictor variables and changes in child outcomes over the kindergarten year. We observed a weak relationship between the transition practices and growth in child outcomes but stronger relations between teacher closeness and growth in the outcomes. All of the significant correlations were in the expected direction, where more transition practices and greater closeness were associated with increases in positive outcomes and decreases in negative outcomes.

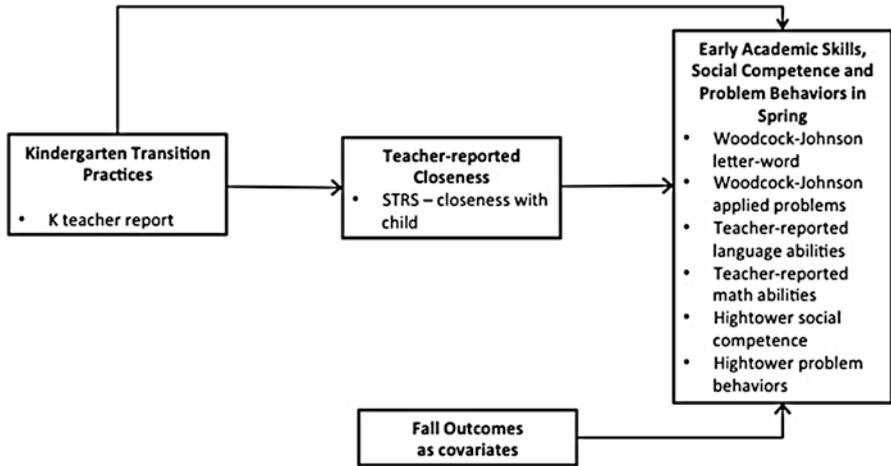


Fig. 1 Tested hypothesized effects of kindergarten transition practices on teacher-child closeness and children’s early academic skills, social competence, and problem behaviors

Table 1 Descriptive statistics for kindergarten teacher transition practices, closeness, and children’s early academic skills, social competence, and problem behaviors

Variable	Mean (SD)	Percent yes
<i>Individual transition practices</i>		
Phone call by a K teacher before school starts		26%
Visit by children to K before school starts		71%
K teacher visit to child’s home		5%
K spring orientation for children		37%
K spring orientation for parents		42%
Individual meeting before school starts		26%
Open house before school starts		57%
Total transition practices	2.64 (1.71)	
Teacher-reported closeness	4.25 (0.66)	
Child gender (coded 0 = male, 1 = female)	0.51 (0.50)	
Teacher kindergarten years of experience	8.01 (7.46)	
Teacher CLASS pre-K-3 score	4.49 (0.54)	
<i>Child outcomes</i>	<i>Fall</i>	<i>Spring</i>
<i>Early academic skills</i>		
Letter-word	351.29 (25.98)	386.41 (27.33)
Applied problems	421.82 (16.73)	436.69 (15.45)
Language and literacy	2.40 (0.92)	3.67 (0.95)
Mathematical reasoning	2.39 (0.96)	3.68 (0.92)
<i>Social competence and problem behaviors</i>		
Social competence	3.38 (0.76)	3.47 (0.76)
Problem behaviors	1.65 (0.64)	1.64 (0.65)

Table 2 Partial correlations of kindergarten teacher transition practices, closeness, and children’s early academic skills, social competence, and problem behaviors after controlling for fall

Outcomes	Transition practices	Teacher closeness
Early academic skills		
Letter-word	0.04	0.13**
Applied problems	-0.07	0.02
Language and literacy	0.08*	0.27***
Mathematical reasoning	0.09*	0.29***
Social competence and problem behaviors		
Social competence	0.05	0.26***
Problem behaviors	0.01	-0.21***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3 Standardized coefficients from the mediation model

Predictor		Mediator		Outcome	β (SE)	P
K transition practices	→	Closeness			0.127 (0.034)	<0.001
		Closeness	→	Letter-word	0.081 (0.027)	0.002
		Closeness	→	Applied problems	0.004 (0.026)	0.87
		Closeness	→	Language and literacy	0.200 (0.029)	<0.001
		Closeness	→	Mathematical reasoning	0.235 (0.032)	<0.001
		Closeness	→	Social competence	0.188 (0.026)	<0.001
		Closeness	→	Problem behaviors	-0.148 (0.027)	<0.001
K transition practices	→			Letter-word	0.008 (0.024)	0.73
K transition practices	→			Applied problems	-0.055 (0.025)	0.03
K transition practices	→			Language and literacy	0.526 (0.024)	0.61
K transition practices	→			Mathematical reasoning	0.020 (0.032)	0.54
K transition practices	→			Social competence	0.001 (0.025)	0.97
K transition practices	→			Problem behaviors	0.037 (0.026)	0.17
<i>Indirect effects</i>						
K transition practices	→	Closeness	→	Letter-word	0.010 (0.004)	0.02
K transition practices	→	Closeness	→	Applied problems	0.001 (0.003)	0.87
K transition practices	→	Closeness	→	Language and literacy	0.025 (0.008)	0.001
K transition practices	→	Closeness	→	Mathematical reasoning	0.030 (0.009)	0.001
K transition practices	→	Closeness	→	Social competence	0.024 (0.007)	0.001
K transition practices	→	Closeness	→	Problem behaviors	-0.019 (0.006)	0.001

The standardized coefficients for the variables of theoretical interest in the mediation model are presented in Table 3. In each link of the model, we controlled for child gender, family poverty, mother’s education, teacher’s education, teacher’s years of experience teaching kindergarten, and classroom quality. In addition, the paths predicting spring outcomes were also controlled for with the fall scores on those outcomes, so all models were predicting growth in outcomes. Results show several significant indirect effects, such that increases in transition activities or prac-

tices were associated with increased feelings of closeness, which in turn were associated with increased scores on the WJ-III Letter-Word test, higher ratings of language and math ability, higher scores on the social competency scale, and lower scores on the behavior problems scale. The mediated effect of transition practices on growth in children outcomes was significant in each case and in the expected direction, except for the WJ-III Applied Problems measure, in which case, teacher closeness was unrelated to the Applied Problems measure.

Discussion

In this chapter, our goal was to examine teacher-child closeness as the potential lynchpin between kindergarten transition practices and children's successful academic and social adjustment in kindergarten. Indeed, the evidence from this study suggests that transition practices are helpful for fostering positive relationships between teachers and children and these relationships facilitate positive outcomes for children's development during the transition to kindergarten. Specifically, three main findings emerged from our study. First, teacher-child closeness was predictive of children's growth in multiple academic and behavioral outcomes in kindergarten. Second, transition practices were positively related to teachers' perceptions of closeness with children in kindergarten. Third, teacher-child closeness mediated the association between transition practices and children's academic and behavioral outcomes. Each of these points will be discussed below.

First, commensurate with the results from multiple studies (Graziano et al., 2016; Ladd & Burgess, 2001; O'Connor & McCartney, 2007), in this study we found a positive link between teacher-child closeness and children's academic and behavioral outcomes in kindergarten ($\beta = 0.127, p < 0.001$). That teacher-child closeness may be particularly beneficial for children during the transition to kindergarten is helpful for targeting points of intervention and professional development. Certainly, teachers can be given specific skills to manifest close or positive relationships with children, as evidenced by interventions such as Banking Time (Driscoll & Pianta, 2010) and INSIGHTS (O'Connor, Cappella, McCormick, & McClowry, 2014). For example, the Banking Time intervention works by setting aside time for children and teachers to spend together building trust and rapport. INSIGHTS is an intervention designed to facilitate better understanding of teachers and children of the underlying reasons for children's behavior, thus fostering empathy and thoughtful interactions. High-quality transition practices should promote these same attributes by giving teachers opportunities to get to know their students before the kindergarten year begins. Likewise, rising kindergarteners can get acquainted with their new teachers and classrooms and feel welcomed and comfortable on the first day of the school year.

Banking Time and INSIGHTS have proven particularly effective for children at risk due to poverty or problem behavior (Hatfield & Williford, 2017; McCormick, O'Connor, Cappella, & McClowry, 2015; O'Connor et al., 2014). For example, Hatfield and Williford (2017) found that children with disruptive behavior showed

significantly lower levels of stress across the school morning when they were in Banking Time classrooms, compared to children in business-as-usual classrooms. Similarly, children with high-maintenance temperaments (negative emotions, low regulation) showed better behavior when they were in INSIGHTS classrooms (McCormick et al., 2015). These results from experimental studies of interventions designed to promote better understanding of children by teachers support the findings reported here and highlight the value of teacher-child closeness particularly for children who may be at risk for difficulty at the transition to kindergarten.

To that end, our findings also suggest that transition practices *promote* closeness between teachers and children. Significant associations ranged from $\beta = 0.081$ and $p < 0.02$ for WJ-III Letter-Word to $\beta = 0.235$ and $p < 0.001$ for ARS Math. Perhaps because many transition practices, such as visits to families before school starts and kindergarten orientation opportunities, increase familiarity and comfort between teachers and children, teachers find that children are more likely to use them as a secure base and a positive referent. Paired with the fact that teacher-child closeness was positively linked here and elsewhere (e.g., O'Connor & McCartney, 2007) with children's academic and behavioral outcomes in kindergarten, this is a critical finding, adding to evidence supporting the importance of transition practices for children's adjustment to kindergarten. Given the ample evidence pointing to the value of teacher-child closeness for children's positive academic and behavioral outcomes in early schooling (e.g., Graziano et al., 2016), transition practices increase in value when it becomes apparent that they also improve children's positive relationships with teachers in kindergarten.

It is important to note that children's outcomes were measured via standardized assessment and teacher report. The strongest associations between transition practices and children's academic and behavioral outcomes were based on teacher report; in fact, there was no association between transition practices and children's WJ-III Applied Problems performance, and the association with children's WJ-III Letter-Word performance was the weakest of the significant associations. What this suggests is that transition practices not only allow children to be more comfortable with teachers, developing a sense of security in the classroom that allows them to maximize their learning, but that transition practices also give teachers the opportunity to get to know their students better. Indeed, transition practices provide teachers with additional contexts, often without instructional pressure, to understand their young students and appreciate the interests, challenges, and gifts they may bring to kindergarten (O'Connor et al. 2014).

Finally, results from this study show that the mechanism by which kindergarten transition practices are related to children's success academically and behaviorally is the level of closeness in the teacher-child relationship. It appears that transition practices facilitate closer relationships between teachers and children in kindergarten and these, in turn, predict better academic and social outcomes for children at this transition time. However, evidence was not found for direct main effects for transition practices on academic outcomes for students. Although not an unexpected finding, it is edifying to see that transition practices facilitate connection between children and teachers and that this connection promotes positive outcomes at the start of the academic life span.

Strengths and Limitations

There are several strengths and limitations to the current study. In terms of strengths, first, this study unveils association between transition practices and children's academic and social outcomes that supply useful guidelines for pre-K and early elementary teachers to promote close relationships with children. Second, the sample was primarily made up of children from low-income families, and the current study highlights the role of effective transition practices to promote academic and behavioral adjustment among kindergarten children from economically disadvantaged families. Third, the use of multiple measures for children's academic outcomes allows for a better understanding of children's academic achievement.

The current study, however, also has several limitations. First, there was a lack of information about the contextual factors related to classroom, school, and home that could have affected children's transition from pre-K to kindergarten as well as school success. Parents or families were only included for demographic information. It would have added more value to the study results if parents' report on transition practices and children's outcomes were included in addition to teachers' report. Further, the study heavily relied on teacher reports for the constructs of transition practices, relationship quality, and children's outcomes in school. In addition, children's perceptions of their level of closeness with their kindergarten teachers and their reactions to the transition to kindergarten would have strengthened this study.

Despite these limitations, this study adds to the growing body of evidence of ways in which young children's early school success is supported by the people that work directly with them. Collectively, the work reported herein and in the extant literature points to the importance of early teacher-child closeness for children's positive adjustment at the start of elementary school. It is critical to note that kindergarten transition practices seem to foster close relationships between children and teachers at the formal educational entry point, driving home the value of kindergarten transition practices. Thus, administrators in elementary schools could work with kindergarten teachers to establish systems for transition practices, such as kindergarten camps and home visits, so that they are manageable and attractive and having the most impact.

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