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Teachers' Consistency of Emotional Support Moderates the Association Between Young Children's Regulation Capacities and Their Preschool Adjustment

Craig S. Bailey[1], **Ashlin R. Ondrusek**[2], **Timothy W. Curby**[3], **Susanne A. Denham**[3]

[1]Yale Child Study Center

[2]Yale School of Public Health

[3]George Mason University

Abstract

Objectives: Preschool teachers' consistency of warm, sensitive, and responsive interactions with children may be more important than average levels and may moderate the association between children's cognitive and emotion regulation and their preschool adjustment.

Methods: A sample of 312 boys and girls aged 32 to 68 months in 44 classrooms at 16 privately-funded centers and Head Starts completed assessments of emotional and cognitive regulation and were rated by their teachers using measures of social-emotional functioning. Teacher-child interactions were rated for emotional support. Multilevel structural equation modeling was used to simultaneously explore three aspects of preschool adjustment.

Results: Children who were the least regulated were more adjusted to preschool in classrooms where teachers were more consistent in their emotional support, over and above mean emotional support and after controlling for child- and preschool-level covariates.

Conclusions: Consistency matters for children's preschool adjustment perhaps even more so than average levels of emotional support.

Keywords

consistency of emotional support; emotional support; preschool; preschool adjustment; executive control; emotion regulation

Consistency is a pillar of *attachment theory* (Ainsworth, 1978): when children have caregivers who are consistent in their warmth, sensitivity, and responsiveness, they are more likely to trust others and feel supported in their exploration of the world for optimal development. Conversely, when children are in excessively noisy or stimulating environments with disorder and unpredictable routines, they struggle to trust others and feel

Correspondence concerning this article should be addressed to Craig Bailey, Yale Child Study Center, 350 George Street, Floor 3, New Haven, CT 06511. craig.bailey@yale.edu.

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supported, which has been shown to negatively contribute to their cognitive and emotional regulation capacities putting them at increased risk for developing behaviors perceived as problematic or challenging (Evans et al., 2005; Valiente et al., 2007). Decades of research on parent–child attachment has provided insight into the ramifications of early caregivers' establishment of attachment relationships with young children and their social, emotional, and cognitive functioning with research suggesting that warm, sensitive, and responsive parents tend to have children who have better relationships with their parents and peers, who know more about emotion, and who score higher on tests of cognitive and language performance (e.g., Lieberman et al., 1999; Laible & Thompson, 1998; Waters et al., 2000). Thus, early caregivers' close, supportive relationships with young children contribute vitally to the development of long-term behaviors, influencing children's social and emotional learning, language development, and even adult health outcomes (Domitrovich et al., 2007; Greenberg et al., 2017; Immordino-Yang et al., 2019; Spilt et al., 2015; van IJzendoorn et al., 1995).

In the classroom context, research shows that teachers who are warm, sensitive, and responsive are more likely to have students who meet the social, emotional, and academic demands of school (Curby et al., 2009; Mashburn et al., 2009). For example, greater emotional support in early childhood classrooms has been associated with children's school adjustment, including fewer behavioral and internalizing problems as well as higher levels of social competence (Curby et al., 2013; Domínguez et al., 2011; Duncan & the National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2003). Recently, along with investigating teachers' overall level of emotional support, education researchers have begun quantifying the degree to which early childhood teachers are consistent in their emotional support; this dimension of consistency holds promise as an important predictor of child outcomes (Brock & Curby, 2014; Curby et al., 2013; Zinsser et al., 2013). In early childhood, children's skills in regulating their thoughts, attention, and feelings are crucial to their social and academic success in school (Denham, 2006; Graziano et al., 2007; Howse et al., 2003; Thompson & Raikes, 2007); consistency in the classroom may be especially important for children at risk for difficulties in these areas. The purpose of this study is to explore the extent to which teachers' *consistency* of emotional support moderates the association between preschooler's cognitive and emotion regulation capacities and their adjustment to preschool.

Consistency of Emotional Support

When children form secure attachments with parents, they are more motivated than their peers without secure attachments to take risks and try new things, are more engaged in and excited about learning, and are more supported in their exploration of themselves and the world, ultimately leading to social, emotional, and cognitive competencies (Laible & Thompson, 1998; Raikes & Thompson, 2008; van IJzendoorn et al., 1995; van Ijzendoorn et al., 1999). Attachment has been operationalized over many decades of theory and research (e.g., The Strange Situation and The Attachment Q-sort), and consequently, many parenting interventions focus on the qualities of warmth, sensitivity, responsivity, and emotional safety as a means of preventing or ameliorating negative outcomes and boosting children's skills and well-being (Bakermans-Kranenburg et al., 2003). Naturally, the principles of attachment

have been incorporated into classroom practices, informing a climate of safety, security, and trust within teacher-child interactions (Hamre et al., 2008). Indeed, there is a strong rationale that teachers form attachment relationships with their students, and the qualities of this relationship, operationalized in the education literature as *emotional support*, are predictive of children's social and academic success (Commodari, 2013; Howes, 2000). The qualities associated with teachers' emotional support for children parallel those established by Ainsworth and colleagues regarding development of secure attachment, including warmth and respect, awareness and responsivity, and flexibility and autonomy support, and consistency (1978).

When considering attachment in the classroom, emotional support is a valuable factor to consider. Higher levels of emotional support are associated with children's higher levels of social competence, increases in autonomy, and decreases in internalizing and externalizing behaviors (Curby et al., 2009; Domínguez et al., 2011; Duncan & [NICHD] Early Child Care Research Network, 2003; Mashburn et al., 2008). Research also shows that when teachers are *less* emotionally supportive, students may have to rely more on their own abilities to succeed (Bailey et al., 2016; Buyse et al., 2008; Domínguez et al., 2011). For instance, Bailey and colleagues (2016) found that preschool children who struggle to regulate their emotions in classrooms with lower levels of emotional support were less adjusted to preschool than their peers who were more regulated or in more supportive classrooms. Similarly, children were found to exhibit fewer positive learning behaviors when they exhibited higher levels of externalizing behavior, but only when they were in classrooms with lower emotional supports; their peers who similarly struggled with externalizing but were in classrooms with higher emotional supports exhibited more positive learning behaviors (see also, Domínguez et al., 2011).

A dimension often overlooked when considering the establishment and maintenance of an attachment relationship is *time* (Bronfenbrenner & Morris, 2006). In his well-known bioecological model of development, Bronfenbrenner notes that consistency of children's interactions (i.e., proximal processes) *within* the microsystems of home and school may be as important as the consistency *between* microsystems. We focus on micro-time of proximal processes (i.e., consistency) within the classroom context, because consistency of support/attentiveness between teacher-child interactions is a valuable consideration within the framework of attachment theory. According to Bowlby (1969), children provide their caregivers with expressions of their needs (i.e., "behavior signals," p. 243) and with attempts to engage and stay connected with their caregivers (i.e., "approach behaviour," p. 246). Attachment was described by Bowlby as the outcome of caregivers creating an emotionally safe climate/secure base (e.g., physical closeness, warm and respectful communication) as well as their responses to children's behavior signals and approach behavior within a system of competing goals (e.g., attending to personal needs, multiple children, or other adults, as well as other tasks). In this regard, *consistency* in the classroom context is the degree to which teachers maintain the same "level" of awareness and responsivity to children's expressions of their needs as well as the same level of adaptation to children's approach behaviors over the course of the day, even amongst competing demands (e.g., administrative duties, activity transitions, classroom dynamics). In other words, children

know what to expect because consistently emotionally supportive teachers do not fluctuate in their emotional support.

Recent investigations have explored the consistency of teachers' emotional support and found that the degree to which teachers fluctuate in their emotional support within a day is an important predictor of child outcomes. To capture teachers' within-day consistency of emotional support, Curby and colleagues (2013) evaluated multiple measurement cycles to capture emotional support and used this variable as a predictor of preschoolers' outcomes. In addition, they included the average across the cycles in their analyses, which is how emotional support is typically analyzed. They found emotional support consistency was better at predicting children's social and academic competencies than average levels of emotional support. In a different study, the deleterious effect of inconsistency on children's social competence and externalizing behavior was mediated by teacher-child conflict, further illuminating the role that inconsistent behavior has on children's classroom functioning (Brock & Curby, 2014). Emotional support inconsistency has also been associated with teacher stress as well as a predictor of children's anger and sadness expressions and aggression during classroom play behavior (Zinsser et al., 2013). Altogether, emotional support consistency appears to be a salient component of effective teacher–child interactions in early childhood.

Cognitive and Emotional Regulatory Contributions to Preschool Adjustment in Emotionally Consistent or Inconsistent Classrooms

Children co-construct their development with teachers. Teachers' behavior can be an important ingredient in how children think and behave, ultimately influencing classroom functioning and learning. *School adjustment* is a multidimensional construct that encompasses how well children have met the cognitive, social, and emotional demands of school (e.g., attending to instruction, meeting learning goals, sharing limited resources, delaying gratification, and effectively communicating and regulating emotions). Thus, how well children meet those demands is in part a function of their teachers' behavior (Baker, 2006).

Children who are adjusted to preschool are often described as "ready to learn" and are positive, motivated, and engaged as well as self-regulated in their learning, which is why preschool adjustment is often foundational as children transition into kindergarten and for their later school success (Blair, 2002; Paris & Paris, 2001; Pianta et al., 2009). By contrast, children who are not adjusted to preschool often engage in problematic behaviors for educators that interfere with teaching and learning, with some children forming conflictual and maladaptive relationships with teachers and peers (Birch & Ladd, 1997; Herndon et al., 2013; Shields et al., 2001). The skills needed for children to adjust to preschool are as diverse as the demands made on them in the classroom. Following directions, for example, requires executive functions like attention and working memory (Welsh et al., 2010).

Attention is a critical executive function that guides what children think about and how they ultimately learn. Thus, *executive control* (i.e., cognitive regulation) involves attending to and manipulating relevant information (i.e., working memory), shifting attention to relevant

information (i.e., set-shifting), suppressing dominant responses and activating subdominant responses by integrating behavioral control, attention, and working memory processes (Bassett et al., 2012; Bridgett et al., 2013; Denham et al., 2012; Garon et al., 2008). Children who have greater control of their executive functions typically score higher on tests of mathematics and literacy and are more adjusted to preschool (Bailey et al., 2016; Blair & Razza, 2007; Brock et al., 2009; Espy et al., 2011; McClelland et al., 2007). Similarly, *emotion regulation* happens when the intensity, duration, or type of emotion is changed, which is why meeting the emotional demands of preschool requires a young child to exercise their capacity to regulate their emotions (Campos et al., 2004; Cole et al., 2004; Denham, 2006; Thompson & Raikes, 2007). Although emotion regulation and executive control overlap due to the foundational regulatory role of attention, memory, and response inhibition, the experience of emotion activates unique pathways (Bassett et al., 2012; Blair, 2002; Brock et al., 2009; Carlson & Wang, 2007; Denham et al., 2012; Eisenberg et al., 1995; Leerkes et al., 2008).

Teachers' contribution to children's adjustment may be in how well they support children's executive control. However, Bailey and colleagues (2016) found that *mean* levels of emotional support did not moderate the association between executive control and preschool adjustment; the role of emotional support *consistency* as a moderator of executive control and preschool adjustment has yet to be explored. Within a consistently emotionally supportive environment, children are likely provided with clear examples of where to deploy their attention in part because they know what to expect of their educators, as would be the case in a classroom where a teacher models the warmth and responsiveness they want for the children in their classroom in every interaction they have.

In contrast to executive control, Bailey and colleagues (2016) found evidence that mean levels of emotional support moderated the association between emotion regulation and preschool adjustment; whether consistency moderates emotion regulation and preschool adjustment over and above mean levels has also yet to be explored. When caregivers are responsive to children's emotional needs, children learn that their negative experiences *can* change when distressed (Housman, 2017). Even when children struggle when they try and fail to successfully regulate their emotions, children can still come to internalize positive beliefs about emotion regulation effective emotion regulation strategies if they're supported along the way by caregivers. Consistency provides children with trust and assurance that their caregiver will be there for them in every situation, ultimately promoting increases in autonomy in their emotion regulation.

The Present Study

The purpose of this study is to test an underexplored aspect of teachers' creation and maintenance of attachment relationships in preschool classrooms: their *consistency* of emotionally supportive interactions. We extend the work of Bailey and colleagues (2016) into the exploration of consistent emotional support as a moderator of the association between children's cognitive and emotion regulation and their preschool adjustment.

Method

Participants and Procedure

As reported elsewhere (see Bailey at al., 2016), the present study includes a sample of 312 3 and 4 year olds (50% female) living in a suburban southeastern United States in 2009. On average, children were 54 months old (*SD* = 7.82, *min–max* = 32–68) or about 4 and a half years old. Most children were non-Hispanic or Latino (76%), with 14% classified as Hispanic or Latino; 10% of parents did not report their child's ethnicity. These rates matched population estimates at the time of data collection showing 14% Hispanic or Latino (Pickford-Cahill et al., 2008). With respect to race, parents reported most of the children as White or Caucasian (52%), followed by Black or African American (31%). Our sample underrepresented White or Caucasian children, estimated at 70% in the population, and overrepresented Black or African American, estimated at 10% in the population (Pickford-Cahill et al., 2008). Only 2% of parents in the sample reported children as Asian, Native American, or Pacific Islander compared to 18% in the population (Pickford-Cahill et al., 2008); 15% of parents did not report their child's race. About half of families reported lower maternal education attainment with either no high school or GED equivalent (8%) or at least a high school or GED equivalent (41%). By contrast, the other half were college educated with a two-year (14%), four-year (20%), or graduate degree (15%); 2% of families did not report maternal education.

Children were in 44 preschool classrooms, of which 10 (23%) were federally-funded Head Start classrooms and the remaining 34 (77%) were not publicly-funded and considered "private" classrooms. Although various restrictions did not allow us to collect family income, population estimates from 2008 show median family income at $126,910 with about 5% of the population below $21,200, the national poverty threshold for a family of four; our sample may thus slightly overestimate low-income children attending Head Start given below-poverty threshold eligibility criteria. All teachers reported they were female. Most teachers indicated they were White (50%). Over a third of teachers indicated they were African American (36%), followed by less than 9% or less identifying as Asian, Hispanic or Latino, or American Indian/Alaskan Native; 5% of teachers did not report a race or ethnicity. One quarter of teachers had a high school diploma, GED, or some college, whereas the remaining 70% of teachers had an associate's degree/Child Development Associate or higher; 5% of teachers did not indicate a level of education. Teachers were evenly split in their experience with 34% between 1 and 6 years, 34% between 7 and 12 years, and 27% with at least 13 years of experience.

With approval from the university's institutional review board, teachers and families were consented to participate in the study in the fall of the academic year. Teachers were consented via recruitment events whereas families were consented during child pick up and drop off. As part of the consenting process, both teachers and families completed demographic questionnaires. Classrooms were observed mid-year for emotional support. In the spring, trained research assistants assessed children's cognitive and emotion regulation. Teachers completed questionnaires asking about children's school adjustment in the spring.

Measures

Preschool Adjustment

Preschool Learning Behaviors Scale (PLBS).: A teacher-report measure, the PLBS (McDermott et al., 2002) measures the behaviors associated with children's learning aggregated into three subscales: Competence Motivation (11 items, e.g., "takes refuge in helplessness;" α = .86), Attention/Persistence (nine items, e.g., "doesn't stick to activities as expected;" α = .86), and Attitude Toward Learning (seven items, e.g., "aggressive or hostile when frustrated;" α = .75). For each of the 29 items, teachers rate children on the degree to which a statement *Most often applies* (2), *Sometimes applies* (1), or *Doesn't apply* (0). PLBS items are reversed if necessary and averaged within each subscale. These factors were uncovered using factor analysis (McDermott et al., 2002). The PLBS, and its predecessor the Learning Behaviors Scale, have been used successfully with several diverse samples and tend to associate with play behaviors, behavior problems, self-regulation, and vocabulary (Fantuzzo, Perry, & McDermott, 2004; McDermott et al., 2002).

Social Competence and Behavior Evaluation (SCBE-30).: A teacher-report measure, the SCBE-30 (LaFreniere & Dumas, 1996) measures children's social-emotional adjustment in school along three 10-item subscales: Angry/Aggressive (e.g., "irritable, gets mad easily" and "defiant when reprimanded;" α = .94), Cooperative/Sensitive (e.g., "taken other children's viewpoints into account" and "negotiates solutions to conflicts;" α = .85), and Anxious/Withdrawn (e.g., "remains apart, isolated from the group" and "timid, afraid, avoids new situations;" α = .85). For each of the 30 items, teachers rate children using Likert-type scaling on the degree to which statements about behaviors and qualities along with anchors ranging from *Not much like this child* (1) to *Very much like this child* (5). SCBE-30 items are averaged within each subscale. Developed from the SCBE-80, the three SCBE-30 factors were discovered using factor analysis, and the validity of the SCBE-30 has been previously shown with normative, clinical, and cross-cultural samples and associates with aspects of emotional competence (Denham et al., 2003; LaFreniere & Dumas, 1996).

Teacher Rating Scale of School Adjustment (TRSSA).: A teacher-report measure, the TRSSA (Birch & Ladd, 1997) measures children's aspects of children's adjustment to school along four subscales: Cooperative Participation (eight items, e.g., "follows teacher's directions" and "uses classroom materials responsibly"; α = .92), Self-Directedness (nine items, e.g., "self-directed child" and "seeks challenges;" α = .88), School Liking (five items, e.g., "likes to come to school" and "enjoys most classroom activities;" α = .75), and Comfort with Teacher (five items, e.g., "is slow to warm up to teacher" and "initiates conversations with teacher;" α = .70). For each of the 52 items, teachers rate the degree to which each statement about children *Doesn't apply* (0), *Applies sometimes* (1), or *Certainly applies* (2). TRSSA items are averaged within each subscale. Validity has been established for the TRSSA in socioeconomically and ethnically diverse samples and associates with social competence and language development (Buhs & Ladd, 2001; Ladd, Birch, & Buhs, 1999; Ladd et al., 1997).

Student-Teacher Relationship Scale (STRS).: A teacher-report measure, the STRS (Pianta & Steinberg, 1992) measures qualities of the relationship between children and their

teachers along three subscales: Conflict (13 items, e.g., “This child remains angry or is resistant after being disciplined,” and, “Dealing with this child drains my energy;” α = .86), Closeness (11 items, e.g., “I share an affectionate, warm relationship with this child,” and, “This child values his/her relationship with me;” α = .84), and Dependent (four items, e.g., “This child is overly dependent on me,” and, “This child reacts strongly to separation from me;” α = .76). For each of the 28 items, teachers rate using Likert-type scaling on the degree to which statements of their relationship with individual children align with anchors ranging from *Definitely does not apply* (1) to *Definitely applies* (5). STRS items are averaged within when subscale and reversed when necessary. The STRS has been normed for children ages four to nine and can be used to better understand the nature teacher-child relationship as well as to predict grade retention in elementary school and academic and behavioral aspects of school adjustment (Birch & Ladd 1997, 1998; Darling & Steinberg, 1993; Hamre & Pianta, 2001; Fabiano et al, 2010; Saft & Pianta, 2001; Pianta & Nimetz, 1991; Pianta & Steinberg, 1992).

Cognitive and Emotion Regulation

Shortened Preschool Self-Regulation Assessment (PSRA).: A direct-child assessment, the PSRA (Smith-Donald et al., 2007) measures multiple dimensions of children’s executive control or their cognitive ability to self-regulate using a variety of age-appropriate tasks. The current study uses a shortened three-task version (i.e., Pencil Tap, Toy Wrap, and Toy Sort) of the original ten-task PSRA (Smith-Donald et al., 2007). Each task captures a different dimension of children’s cognitive regulation: (a) holding rules in working memory, inhibiting the dominant response, and executing the desired rule-based subordinate response (Pencil Tap); (b) delaying gratification through dominant, attention-driven response by controlling attention (Toy Wrap); (c) inhibiting the dominant response and executing a rule-based subordinate response (Toy Sort).

For Pencil Tap, research assistants ask children to tap a pencil two times when the research assistant taps his or her pencil one time and one time when the research assistant taps his or her pencil two times. Pencil Tap is scored as the percent correct (M = 57.38%, SD = 38.89%, *range* = 0.00–100%). For Toy Wrap (also known as Toy Peak), research assistants ask children to not peek as the research assistant loudly wraps an enticing toy behind the child. Toy Wrap is scored as the latency in seconds to children’s first peak (M = 43.34, SD = 33.69, *range* = 1.00–60.50). For Toy Sort, research assistants provide children with thematically-related toys, but ask them to sort the toys instead of playing with them. Toy Sort is scored as the latency in seconds to finish sorting the toys (M = 92.63, SD = 27.18, *range* = 32.00–121.00).

Coming from a long history of direct child assessments that capture related skills, such as delay of gratification tasks (see Murray & Kochanska, 2002) and compliance (see Brumfield & Roberts, 1998), the PSRA tasks have altogether been shown to relate to aspects of young children’s adjustment to school and self-regulation as well as classroom engagement (Bassett et al., 2012; Denham et al., 2015; Denham et al., 2012; Rimm-Kaufman et al., 2009). After assessment training, intraclass correlations (ICCs) were used to compute

research assistant's inter-rater reliability with a master coder for the Pencil Tap (ICC = .95, $p < .001$), Toy Wrap (ICC = .79, $p < .001$), and Toy Sort (ICC = .97, $p < .001$),

PSRA Assessor Report (PSRA-AR).: Following the PSRA direct child assessment, research assistants rated children's attention, emotion, and behavior during the PSRA tasks using a 28-item measure known as the known as the PSRA-AR, an adaptation of the Leiter-R social-emotional rating scale and the Disruptive Behavior-Diagnostic Observation Schedule coding system (Smith-Donald et al., 2007). The current study operationalizes emotion regulation using three items: Reluctance (i.e., *Child never exhibits active defiance* = 0, *Child says "no" but then follows examiner's initial request; assessor does not have to "say it again"* = 1, *Child tests limits but responds to examiner's prompt or restatement of request* = 2, *Child actively, directly refuses to comply with assessor's request or direction* = 3), Passively Noncompliant (*Child hears requests and responds appropriately* = 0, *Child seems slow to comply; assessor does not restate request, but wonders if child heard* = 1, *Child ignores examiner but responds to prompt when assessor repeats request/directive* = 2, *Child appears not to hear instruction, even when assessor repeats request* = 3), and Even Keel (*Child becomes very sad, frustrated or silly, and has difficulty regaining self-control* = 0, *Child becomes sad, frustrated, or silly and needs prompt from assessor but is able to calm down* = 1, *Child becomes briefly sad, frustrated, or silly, but quickly calms without help from adult assessor* = 2, *Child highly regulated; never becomes sad, frustrated, or silly* = 3). After assessment training, research assistants achieved adequate inter-rater reliability with a master coder (ICC = .72, $p < .01$). Emotion regulation during a performance assessment using the PSRA-AR was found to predict low income children's internalizing behavior (McCoy & Raver, 2011).

Mean and Consistency of Emotional Support

Classroom Assessment Scoring System (CLASS).: Classrooms were rated by research assistants four times during a two-hour window using the CLASS (Pianta et al., 2008). Ten dimensions corresponding to three domains were rated on a Likert-type scale (1, 2 = *low*, 3–5 = *mid*, 6, 7 = *high*). The focus of the present study is on the domain of Emotional Support, which has four measured dimensions: Positive Climate, Negative Climate (reversed), Teacher Sensitivity, and Regard for Student Perspectives. The *Mean Emotional Support* was calculated by averaging the dimensions within each observation cycle and then averaging the four cycles ($\alpha = .87$). Following (Brock & Curby, 2014; Curby et al., 2013; Zinsser et al., 2013), *Consistency of Emotional Support* was calculated by averaging the dimensions within each observation cycle and calculating the standard deviation across the four cycles. Research assistants were deemed reliable if they scored within one scale point of a master coder at least 80% of the time on a five-video test. Twenty percent of classrooms were live double-coded with an overall ICC of ($ICC_{mean} = .80$, *range* = .69–.88).

Data Analysis

All analyses were run in Stata 16.1 and consisted of preliminary analysis and primary analysis. Preliminary analyses included (a) a Confirmatory Factor Analysis (CFA) to replicate prior work and to provide reliability statistics for the current study (e.g., Bailey

et al., 2016; Herndon et al., 2013); (b) descriptive statistics to describe the study sample and variables (i.e., valid cases and percent missing, means, standard deviations, minimum and maximum, skewness and kurtosis coefficients, reliability coefficients, and intraclass correlation coefficients); (c) = correlations among study variables. We report ω (see also, McDonald's Omega; McDonald, 1999) derived from a CFA as it is unbiased with congeneric items and is considered a more accurate representation of realistic outcomes than α, which assumes tau-equivalency (Padilla & Divers, 2016). Omega also does not assume that error scores are uncorrelated or does not assume normality (Sijtsma, K., 2008; Trizano-Hermosilla & Alvarado, 2016). A CFA was run, originally reported by Bailey and colleagues (2016) and others (see also, Herndon et al., 2013), with 19 items and subscales representing aspects of preschool adjustment and cognitive and emotion regulation from the PLBS, SCBE-30, TRSSA, STRS, PSRA, and PSRA-RA (see Table 1 for items and loadings). The model used maximum likelihood with the expectation-maximum algorithm (Graham, 2009). Covariances among item errors were allowed when constructs between measures were similar in interpretation (e.g., Angry/Aggressive and Conflict/Anger), which improved the fit of the final model. To simplify the primary analysis, factor scores for each of the five latent variables were estimated using empirical Bayes means based on the distributions of the parameter estimates providing a more accurate representation of the latent constructs than simply averaging or regression-based approaches (Estabrook & Neale, 2013).

Primary analyses were a series of Multi-Level Structural Equation Models (ML-SEM) and answered whether teachers' consistency of emotional support moderates the association between children's cognitive and emotion regulation and their preschool adjustment after controlling for average levels of emotional support and other key covariates. Although computationally complex, ML-SEM provided several advantages in the present study. First, ML-SEM can account for nested data structures, and in our case, estimates the variance between children, classrooms, and preschools. Second, ML-SEM has the potential to simultaneously estimate associations with multiple correlated outcomes simultaneously (McCoach et al., 2007). In addition to estimating between-outcome covariances, we used Wald χ^2 tests of joint statistical significance across outcomes to assess the omnibus pattern of parameter coefficients. Third, use of maximum likelihood estimation estimates parameters even in the presence of missing data (Allison, 2003). Missing data were not higher than 2% across all variables (see Table 2), but reasons for missingness included teachers not completing questionnaires, children moving, or frequent absence. Little's missing completely at random test was conducted revealing data could be considered to be missing completely at random, χ^2 (158) = 141.70, p = .82.

Three models were tested in the ML-SEM framework. First, an unconditional model estimated child-, classroom-, and preschool-level variance components for each of the three preschool adjustment outcomes derived from the CFA (i.e., Positive/Engaged, Independent/Motivated, and Connected/Prosocial). Next, a main effects model included child-level covariates (i.e., child age, child gender), a preschool-level covariate (i.e., private child care/Head Start classroom designation), and child-level main effects (i.e., emotion regulation and cognitive regulation), and classroom-level main effects (i.e., mean emotional support and consistency of emotional support). The moderation model answered the primary

research question and included the interactions between consistency of emotional support X emotion regulation and consistency of emotional support X cognitive regulation. Given the conceptual similarity between mean emotional support and emotional support consistency and the likely shared covariance (i.e., teachers who score higher in emotional support likely tend to be more consistency in their emotional support), we also ran an alternative model *without* mean levels of emotional support. Coefficients differed by about 1% and were therefore not reported from this alternative model. Thus, the final reported model represents consistency of emotional support X emotion regulation and consistency of emotional support X cognitive regulation *after accounting for variance in mean levels of emotional support*.

In addition to χ^2 , Akaike's Information Criteria, Bayesian Information Criteria, two pseudo-R^2s were used to evaluate model for our primary analyses. The first represents the proportion of residual variance explained between models (i.e., pseudo-$R^2_{between}$; Snijders and Bosker, 2012). The second is the proportion of variance in the predicted scores divided by the predicted score variance and total residual variance (i.e., pseudo-R^2_{within}; Nakagawa & Schielzeth, 2012). While technically distinct, both indicators typically although not always converge, but are nonetheless individually valuable (LaHuis et al., 2014).

Results

Preliminary Analyses

The CFA revealed that the measurement model estimating latent preschool adjustment factors, cognitive regulation, and emotion regulation fit the data reasonably well, Root Mean Square Error of Approximation = .08, $p < .001$, Comparative Fit Index = .89, Tucker-Lewis Index = .88, $R^2 = 1.00$. Summary statistics in Table 2 revealed study variables were normally distributed and all composites, including the three preschool adjustment outcomes (i.e., Positive/Engaged, Independent/Motivated, and Connected/Prosocial), emotion and cognitive regulation, and mean emotional support, were adequately reliable given a threshold of .70 with at least 48% common shared variance (Brunner & SÜß, 2005; see Table 2).

Child-level associations in Table 3 revealed that the three preschool adjustment variables were strongly correlated. Child emotion and cognitive regulation were also moderately, positively correlated. Associations among the covariates tended to be weak, whereas associations between the covariates, predictors, and children's preschool adjustment varied from weak to moderate. Classroom-level mean emotional support and consistency of emotional support associations were moderate. Importantly, this means that teachers who scored higher in emotional support also tended to be consistent.

Primary Analyses

Fixed and random effects are listed in Table 4 and model fit indices are listed in Table 5. The unconditional model using ML-SEM revealed similar patterns (see variance components in Table 4) as univariate preliminary ML analyses (see variance components in Table 2 and correlations in Table 3). Next, the main effect model fit the data well (see Table 5). Across outcomes, the model explained 23% of the variance. Only gender, Head Start or private preschool designation, and cognitive emotion regulation were jointly statistically significant

from zero across the preschool adjustment outcomes, χ^2 (3)$_{\text{Joint Wald Tests}}$ = 7.84–55.14, *p*s <.001–.049; age, maternal education, average emotional support, consistency of emotional support, and emotion regulation were not jointly statistically significant, χ^2 (3)$_{\text{Joint Wald Tests}}$ = 0.83–7.12, *p*s =.068–.842. Girls in general were more adjusted to preschool than boys and consistently scored above the mean on the preschool adjustment outcomes with boys consistently scoring below the mean, M_{girls} = 0.15–0.20, M_{boys} = −0.17–−0.09, *b*s = 0.24–0.37, *p*s < .001. Children in Head Starts were more adjusted to preschool than children in private preschools and consistently scored above the mean on preschool adjustment outcomes with private outcomes scoring below the mean, $M_{\text{Head Start}}$ = 0.17–0.40, M_{private} = −0.22–−0.07, *b*s = 0.24–0.62, *p*s < .001. Children's cognitive regulation was significantly and positively associated with out of the three preschool adjustment outcomes, *b*s = 0.13–0.24, *p*s = .001–.140.

The moderation model also fit the data well (see Table 5). Across outcomes, the model explained 25% of the variance or 2% more than the main effect model. Of the six interaction effects estimated, five were statistically significantly with similar patterns among preschool adjustment components similar for emotion regulation by emotional support consistency, *b*s = −1.22–−0.28, *p*s =.007–.427, and cognitive regulation by emotional support consistency, *b*s = 0.40–0.65, *p*s =.005–.023. Note that for both sets of emotion and cognitive regulation by emotional support consistency interaction effects, the strongest effect was with the positive and engaged component of preschool adjustment, followed by the independent and motivated and the connected and prosocial component of preschool adjustment.

As shown in Figures 1 and 2 across two out of three preschool adjustment outcomes, the strength of the main effect for emotion regulation was apparent: children were *not* sufficiently adjusted to preschool when rated higher or lower in emotion regulation, $b_{\text{simple slopes}}$ = 0.04–0.10, *p*s < .194–.662). However, the emotion regulation by preschool adjustment association effect depended on the classroom the child was in, and specifically, on teachers' consistency of emotional support. Children rated as lower in their emotion regulation tended to be the most positive and engaged (i.e., Figure 1) and independent and motivated (i.e., Figure 2) when in classrooms with teachers observed as consistent in their emotional support. But their more emotionally regulated peers tended to be less positive and engaged (i.e., Figure 1) in classrooms with teachers consistent in their emotional support, $b_{\text{simple slopes}}$ = −0.21, *p*s = .009; this same negative association was found for independent and motivated (i.e., Figure 2), but the effect was not statistically significant, $b_{\text{simple slopes}}$ = −0.11, *p*s = .170. In addition, children rated lower in their emotion regulation tended to be the least positive and engaged (i.e., Figure 1) and independent and motivated (i.e., Figure 2) when in classrooms with teachers observed as inconsistent in their emotional support. By contrast, children rated higher in their emotion regulation in these inconsistent classrooms tended to be more adjusted to preschool, $b_{\text{simple slopes}}$ = 0.29–0.31, *p*s < .001. That is, when children struggled to regulate their emotions, they did best in classrooms with *consistent* rather than *inconsistent* emotionally supportive teachers, but the effect of the classroom mattered *less* if children were more emotionally regulated for their positivity and engagement and not at all for their independence and motivation.

As shown in Figures 3–5 across all three outcomes, the strength of the main effect for cognitive regulation was apparent: children were more adjusted to preschool when scoring higher in cognitive regulation, $b_{\text{simple slopes}} = 0.16–0.26$, ps < .001–.035. But the strength of the cognitive regulation by preschool adjustment association varied by teachers' consistency of emotional support. Children were the *most* adjusted to preschool when scoring high in cognitive regulation and in classrooms with teachers who were consistent in their emotional support; but children were also the *least* adjusted to preschool in classrooms when scoring lower in cognitive regulation in these same classrooms with teachers consistent in their emotional support, $b_{\text{simple slopes}} = 0.25–0.36$, ps < .001. Furthermore, the strength of the cognitive regulation to preschool adjustment association was weaker in classrooms with teachers inconsistent in emotional support. That is, children's cognitive regulation mattered the most in classrooms with *consistent* compared to *inconsistent* emotionally supportive teachers.

Discussion

The purpose of this study was to explore whether teachers' consistency of emotional support moderated the association between preschooler's emotion and cognitive regulation capacities and their adjustment to preschool. We draw on prior work demonstrating that teachers' consistency of emotional support in preschool settings predicts concurrent and future child outcomes, over and above mean levels of emotional support (Brock & Curby, 2014; Curby et al., 2013; Zinsser et al., 2013). This line of research highlights the role of the children's skills embedded within the qualities of their environment, specifically teacher-child interactions (Bailey et al., 2016; Brock & Curby, 2016).

In brief, we found evidence that teachers' consistency of emotional support moderated the associations between children's cognitive and emotion regulation capacities and their adjustment to preschool. The effect was stronger for the emotion regulation association than cognitive regulation association, but the cognitive regulation by emotional support consistency interaction was found as statistically significant across all three preschool adjustment components compared to two for the emotion regulation by emotional support consistency interactions.

The Contribution of Emotion Regulation in Classrooms with Consistent Emotional Support

Emotion regulation appeared only to matter for children's preschool adjustment when teacher-child interactions were considered. However, the pattern was stronger and across more aspects of preschool adjustment: when children struggled to regulate their emotions, they were more adjusted to preschool in classrooms with teachers who were consistent in their emotional support. But with higher levels of emotion regulation, teachers mattered less. Importantly for interpretation of the emotion regulation by emotional support consistency interaction, the effect was over and above variance associated with cognitive regulation and mean levels of emotional support.

These findings underscore what attachment theory has suggested for decades: children need consistency from their caregivers (Ainsworth et al., 1978; Bowlby, 1969). What this study adds, however, is evidence from the preschool classroom for the importance of

consistent warm, sensitive, and responsive teacher-child interactions. These findings also align with the goodness-of-fit theory about how the degree to which children excel depends on an individual child's fit with the environment—different children need different things from their caregivers (Thompson, 2000; Vitiello et al., 2012). In our study, we found that children who struggled to regulate their emotions need consistency in the emotional support they receive from their teacher-child interactions. Especially for children who struggle to regulate their emotions, children's attention may be stressed in inconsistent environments. Chaotic environments negatively contribute to children's psychological distress (Valiente et al., 2007). In an unpredictable environment, children may struggle to attend to any one task (Plebanek & Sloutsky, 2017). According to resource depletion theory, children may deploy their attention away from self-regulating their experiences to predicting concurrent and future interactions with caregivers in emotionally inconsistent classrooms. Our results extend these ideas to suggest that the support children need must be consistent, and perhaps consistency may be important above the level itself all. Simply put, children who need regulatory support when they are angry, sad, or exuberant should know what to expect from their caregivers; they need to know they can depend on and trust their teachers to be there.

The Contribution of Cognitive Regulation in Classrooms with Consistent Emotional Support

There was a main effect between children's cognitive regulation and their school adjustment; our findings support previous literature in which executive function is predictive of preschool success (Blankson et al., 2017; Willoughby et al., 2012). Furthermore, we found that teachers' consistency of emotional support moderates the association between children's cognitive regulation and components of their preschool adjustment. What was surprising was that the strength of the cognitive regulation by preschool adjustment association *increased* as consistency increased; the opposite was also true in that children's cognitive regulation mattered less for their preschool adjustment in inconsistent compared to consistent classrooms.

Being in an emotionally inconsistent environment may afford some children the cognitive and emotion regulatory practice they need. Importantly, analyses were multivariate in that the moderation of children's executive control/emotion regulation and components of their preschool adjustment was simultaneous, which means that effects were unique to cognition/executive aspects relative to emotional/behavioral aspects of children's functioning (i.e., *over and above* variance associated with their levels of emotion regulation). Interestingly, Brock and Curby (2016) suggest that inconsistent emotionally supportive interactions tax children's attentional networks (see also, Commodari, 2013). The current study's use of executive control (i.e., cognitive regulation)—which purports to tap into variance associated with children's attentional networks (Fritz et al., 2007)—may shed some light on this mechanism and what it means for children in classrooms with inconsistent teachers or consistent teachers. Our mixed findings suggest that if attentional networks are indeed under stress, *some* children may do better cognitively at the expense of their emotion regulation whereas other children may do better emotionally at the expense of their cognition and bandwidth. Overall, when it comes to cognitive regulation and preschool adjustment,

cognitive regulation appears to be the most important factor, followed by the way teachers are providing a consistently emotionally supportive environment.

Limitations

Although this study accounted for numerous child- and preschool-level covariates to address potential confounding, the design was correlational. The directionality of the effects was assumed, albeit aligned as much as possible with theory. Not only is the alternative possible —that teachers may be more consistent in their emotional support due to their students—it is likely a contributing factor to the classroom dynamic. Some studies have shown that the classroom composition matters (e.g., Partee et al., 2019; Purtell & Ansari, 2018; Reid & Ready, 2013). And most phenomena are not only complex, as we have found in our study, but also synergistic and dynamic over time. Future studies should thus incorporate longitudinal designs with appropriate analyses (e.g., cross-lagged, autoregressive modeling) that test directionality and potential synergistic nature of the teacher-child interactions over time. These and other studies should also consider how the culture of the child, their teachers, or both the child and their teacher together may moderate associations with emotional support consistency and children's preschool adjustment. For example, emerging early childhood research shows that the racial and ethnic match between teachers and their children may be important for child outcomes, especially Children of Color (e.g., Downer et al., 2016; Rasheed et al., 2020).

Another limitation is measurement. Although important, our use of ML-SEM does not make up for the quality of measurement, particularly for our indicators of cognitive and emotion regulation. Our operationalizations unfortunately do not fully capture the extent of these latent constructs (El-Den et al., 2020), meaning that our results are exploratory and may be specific to the variance captured using the PSRA and PSRA-AR rather than variance attributable to the full extent of executive control/cognitive regulation and emotion regulation. Future studies must replicate our design to fully test the contribution of teachers' emotional support consistency relative to their emotion and cognitive regulation on their preschool adjustment. Similarly, future studies should continue exploring attention as a mechanism by incorporating measures that are disaggregated from executive control (e.g., as a separate executive function).

Implications and Conclusions

Consistency is an overlooked component of teacher-child interactions despite being central to forming the secondary attachment relationships children need for success in school. Traditional operationalizations of warm, sensitive, and responsive interactions, primarily using the Emotional Support domain of the CLASS, treat variance between observations as error. This study, as well as others, shows that this variance is not simply error but in fact meaningful, perhaps more meaningful than mean levels. That is, it may be more important to have a slightly lower but consistently emotionally supportive teacher than a slightly higher but inconsistent teacher. With more attention than ever on teacher-child interactions, how, exactly, these interactions are important for children is paramount.

This study as well as others suggest that consistency of behavior—beyond routines and structure—should be incorporated and emphasized in training. Teachers may not realize how important being consistent in their emotional support is, not to mention the additional skills needed for consistency, such as their own emotion regulation and higher-order thinking. Teachers inconsistent in their emotional support are not simply emotionally incompetent (e.g., consistently low in regulating their emotions; consistently insensitive; consistently unresponsive to children's needs); rather, they are emotionally competent in some interactions but not others. The *patterns* in the variability of teachers' emotional support, yet unexplored, should be studied to unlock pathways for improvement. Inconsistent teachers may at times be calm and warm while at other times, angry and cold; they may be skilled at regulating some emotions while struggle to regulate others. The emotion recognition that likely supports emotional support consistency may also transcended the moment and include reflection of past and future situations, stressing already fully-loaded cognitive systems. And like children, teachers are products of the ecologies they navigate and must support children despite the demands of their job, including administrative duties, activity transitions, and classroom dynamics in the face of inequity. Supports for teachers to promote consistency of emotional support should therefore be systemic with an emphasis on their quality of life, well-being, and stress with programming to strengthen their own emotional competence. Incorporating consistency of warm, sensitive, and responsive interactions into teacher training may not be a paradigm shift but may nonetheless have a meaningful impact on child outcomes.

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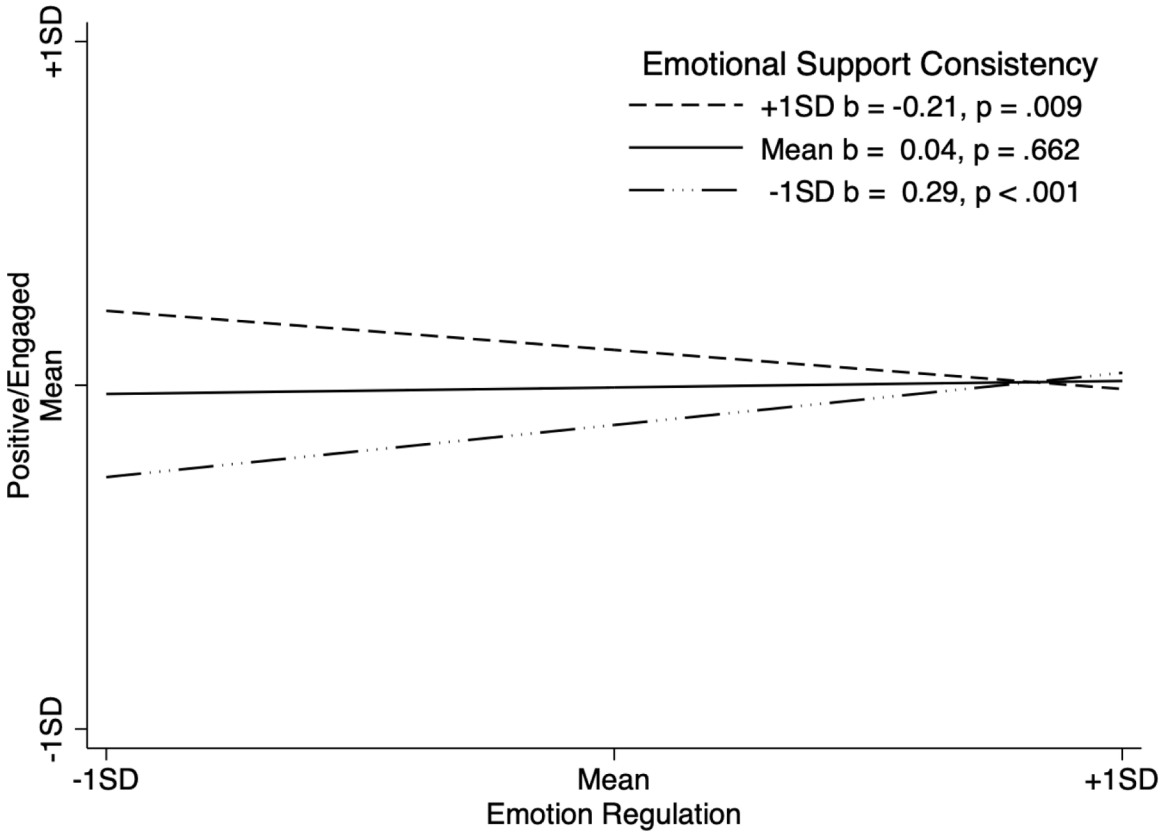

Figure 1.
Emotional Support Consistency Moderating the Association Between Emotion Regulation and the Positive/Engaged Component of Preschool Adjustment

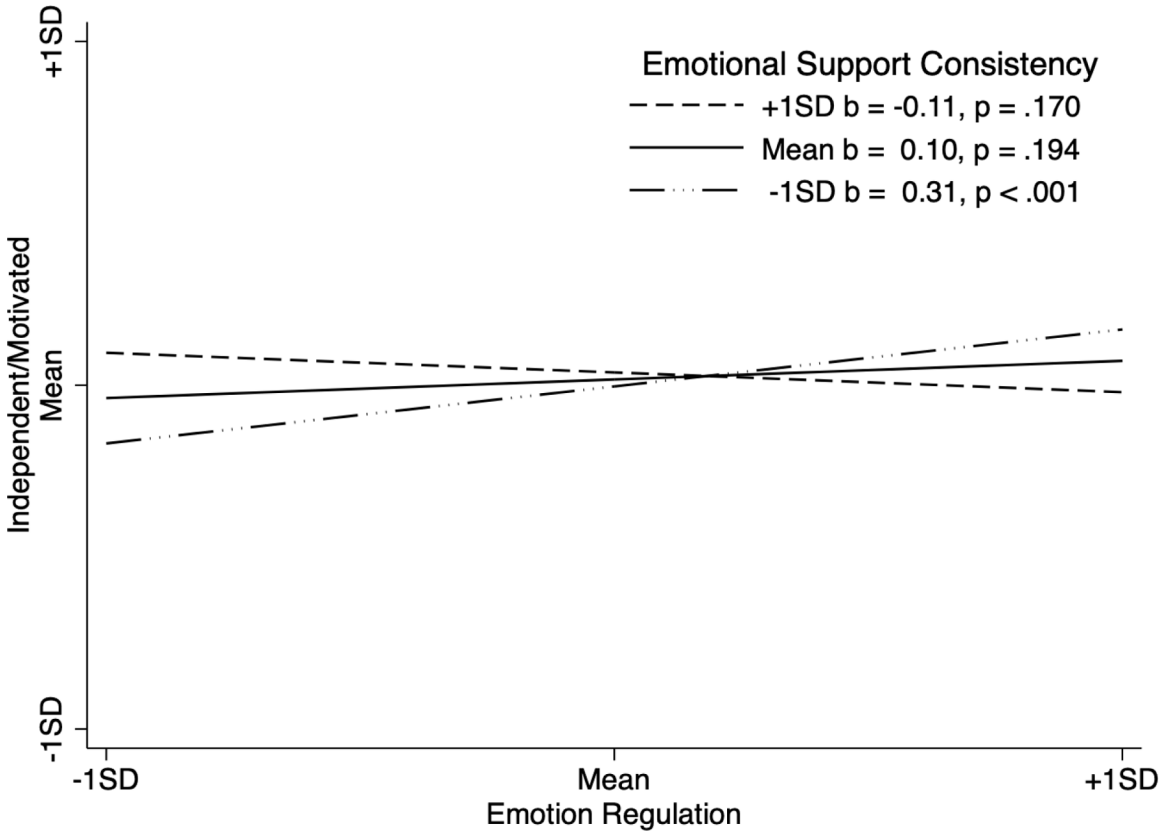

Figure 2.
Emotional Support Consistency Moderating the Association Between Emotion Regulation and the Independent/Motivated Component of Preschool Adjustment

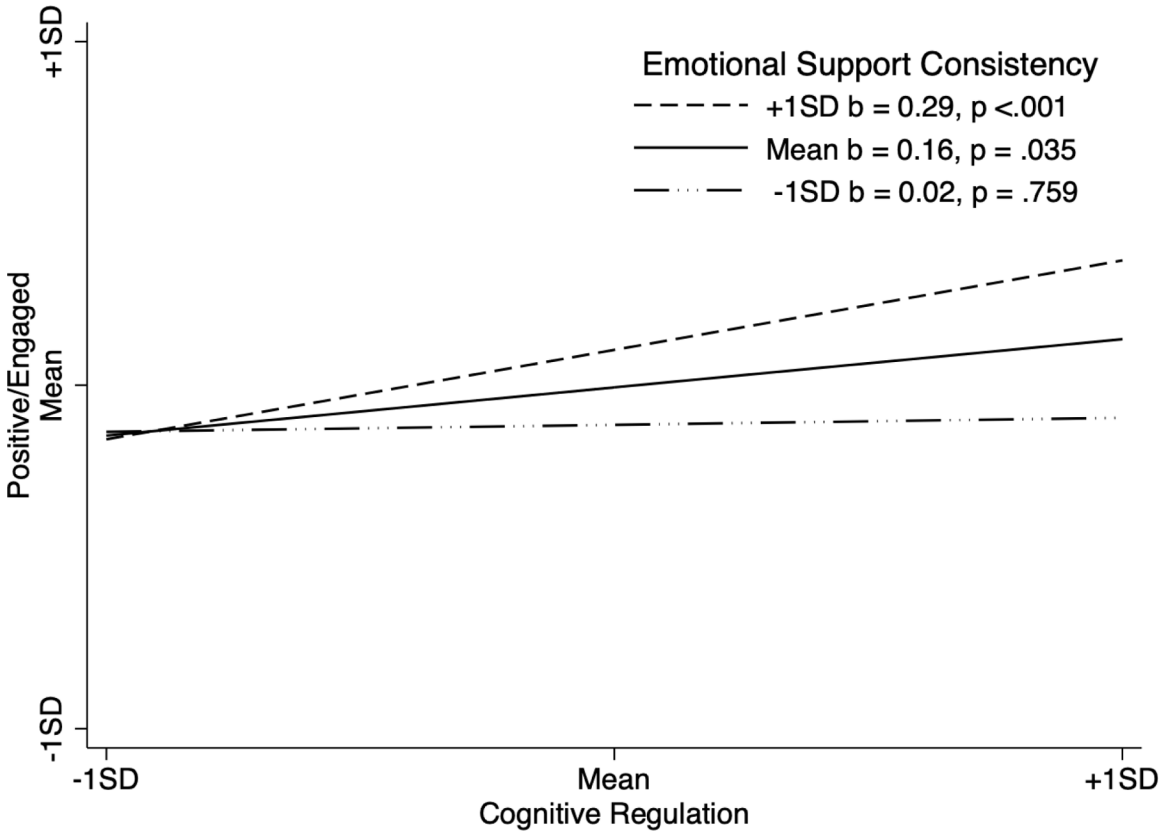

Figure 3.
Emotional Support Consistency Moderating the Association Between Cognitive Regulation and the Positive/Engaged Component of Preschool Adjustment

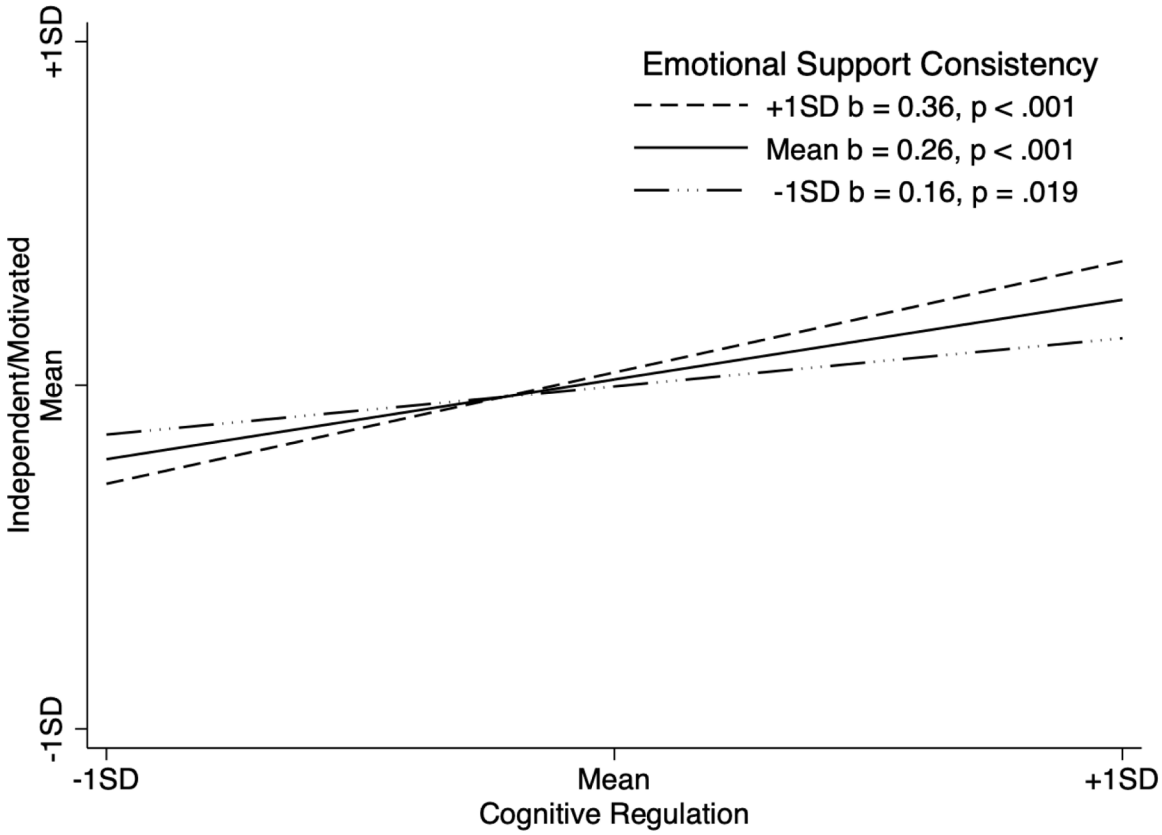

Figure 4.
Emotional Support Consistency Moderating the Association Between Cognitive Regulation and the Independent/Motivated Component of Preschool Adjustment

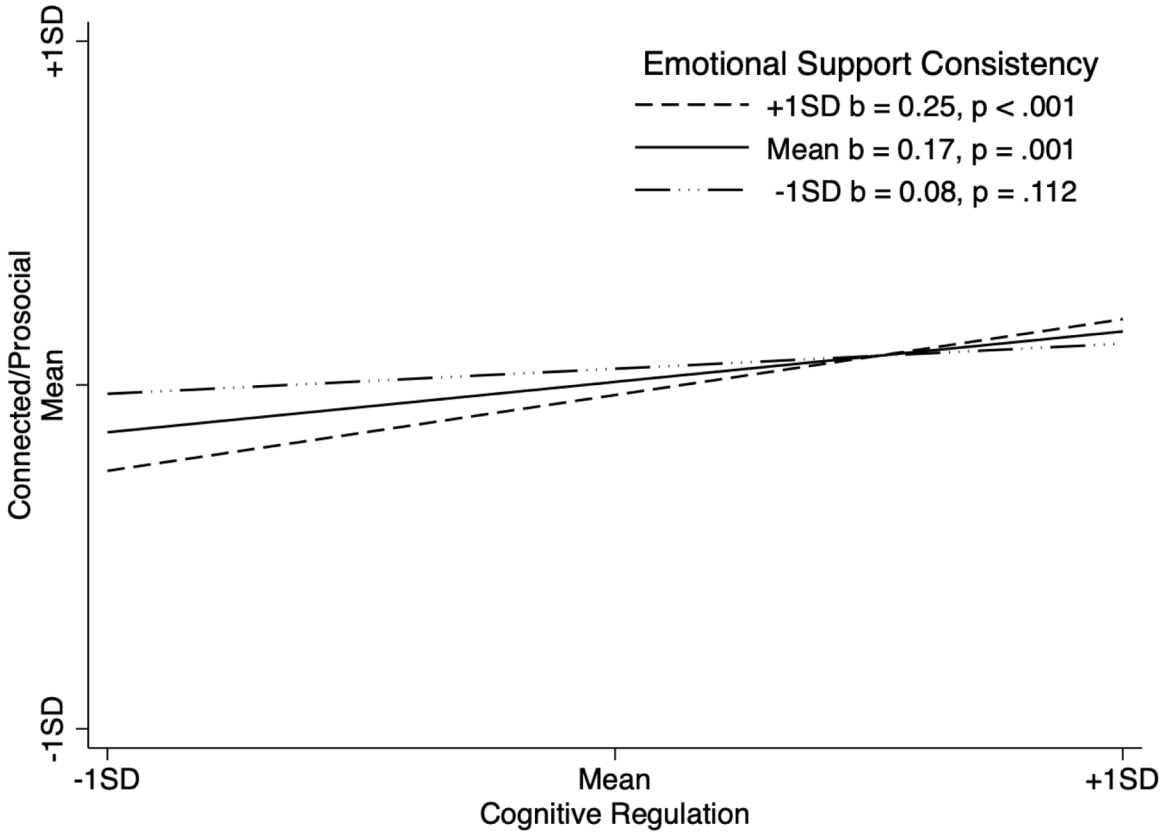

Figure 5.
Emotional Support Consistency Moderating the Association Between Cognitive Regulation and the Connected/Prosocial Component of Preschool Adjustment

Table 1

Standardized Item Loadings Across Components of Preschool Adjustment, Cognitive Regulation, and Emotion Regulation

	Pos/Eng	Ind/Mot	Con/Pro	CR	ER
TRSSA Cooperate	0.88				
PLBS Attitude Toward Learning	0.87				
PLBS Attention/Persistence	0.81				
TRSSA School Liking	0.56				
SCBE Angry/Aggressive	−0.80				
STRS Conflict/Anger	−0.82				
TRSSA Self-Directedness		0.87			
PLBS Competence Motivation		0.82			
STRS Dependency		−0.42			
SCBE Anxious/Withdrawn		−0.69			
SCBE Cooperative/Sensitive			0.94		
TRSSA Comfort with Teacher			0.61		
STRS Closeness			0.58		
PSRA Pencil Tap				0.99	
PSRA Toy Wrap				0.56	
PSRA Toy Peak				0.57	
PSRA-AR Even Keel					0.46
PSRA-AR Reluctance					−0.70
PSRA-AR Passively Noncompliant					−0.77

Note. TRSSA = Teacher Rating Scale of School Adjustment; PLBS = Preschool Learning Behaviors Scale; SCBE = Social Competence and Behavior Evaluation-30; STRS = Student-Teacher Relationship Scale; PSRA = Preschool Self-Regulation Assessment; PSRA-AR = PSRA Assessor Report; Pos/Eng = Positive/Engaged, Ind/Mot = Independent/Motivated, Con/Pro = Connected/Prosocial, CR = Cognitive Regulation, ER = Emotion Regulation.

Table 2

Sample Size, Means, Standard Deviations, Minimum and Maximum, Skewness, Kurtosis, Omega, and Prechool-, Classroom-, and Child-level Variance Components Across All Analysis Variables

								Variance Components		
	***n* (% missing)**	***M***	***SD***	***min–max***	***skewness***	***kurtosis***	**Ω**	**Preschool**	**Classroom**	**Child**
Positive/Engaged	312 (0%)	0.00	0.83	−2.65–1.12	−0.69	2.70	.91	.08	.00	.92
Independent/Motivated	312 (0%)	0.00	0.78	−2.47–1.40	−0.66	2.80	.81	.04	.00	.95
Connected/Prosocial	312 (0%)	0.00	0.53	−1.64–0.98	−0.43	2.67	.77	.06	.01	.93
Child Age[a]	312 (0%)	53.84	7.80	32–68	−0.45	2.25	-	.00	.63	.37
Child Gender[b]	312 (0%)	0.50	0.50	0–1	0.01	1.00	-	.00	.00	1.00
No HS or mother present	307 (2%)	0.10	0.30	0–1	2.71	8.34	-	.05	.07	.88
High School/GED	307 (2%)	0.41	0.49	0–1	0.35	1.12	-	.07	.04	.89
Associate's Degree	307 (2%)	0.14	0.34	0–1	2.11	5.47	-	.00	.00	1.00
Bachelor's Degree	307 (2%)	0.20	0.40	0–1	1.48	3.20	-	.14	.00	.86
Graduate Degree	307 (2%)	0.14	0.36	0–1	1.96	4.85	-	.13	.01	.87
Emotion Regulation	312 (0%)	0.00	0.26	−1.74–0.24	−3.13	15.63	.69	.01	.00	.99
Cognitive Regulation	312 (0%)	0.00	0.58	−1.46–0.97	−0.39	2.19	.76	.00	.27	.73
Mean Emotional Support	44 (0%)	5.33	0.87	3.75–6.75	−0.23	1.85	.71	.22	.88	-
Consistency of Emotional Support	44 (0%)	0.42	0.22	0.10–1.03	0.88	3.45	-	.00	1.00	-
Head Start[c]	14 (0%)	0.14	0.36	0–1	−2.04	5.12	-	-	-	-

Note.

[a]Age in months

[b]Male = 1

[c]Head Start = 1

Table 3

Child- and Classroom-level Bivariate Correlations Among Analysis Variables

Child level	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1. Positive/Engaged	1.00											
2. Independent/Motivated	.74***	1.00										
3. Connected/Prosocial	.78***	.79.***	1.00									
4. Child Age[a]	.24***	.29***	.21***	1.00								
5. Child Gender[b]	−.27***	−.23***	−.36***	.00	1.00							
6. No HS or mother present	.03	−.03	−.01	.01	.09	1.00						
7. High School/GED	.12*	.14*	.11*	.07	−.10	−.28***	1.00					
8. Associate's Degree	−.02	−.01	.02	.05	.04	−.13*	−.33***	1.00				
9. Bachelor's Degree	−.04	−.02	−.04	−.14*	−.05	−.17**	−.42***	−.20***	1.00			
10. Graduate Degree	−.14*	−.15*	−.12*	−.01	.07	−.14*	−.35***	−.17**	−.21***	1.00		
11. Emotion Regulation	.10	.18**	.12*	.23***	−.10	−.01	−.03	−.01	.03	.02	1.00	
12. Cognitive Regulation	.18**	.28***	.24***	.51***	−.17**	−.23***	−.01	−.03	.14*	.07	.43	1.00
Classroom level	**1**	**2**	**3**									
1. Mean Emotional Support	1.00											
2. Consistency of Emotional Support	.55***	1.00										
3. Head Start[c]	.48***	.36***	1.00									

Note.

[a]Age in months

[b]Male = 1

*$p < .05$

**$p < .01$

***$p < .01$

$c_{\text{Head Start} = 1}$

Table 4

Fixed and Random Effects Across Unconditional, Main Effect, and Moderation Models

	Unconditional			Main Effect			Moderation		
Fixed Effects	**Pos/Eng**	**Ind/Mot**	**Con/Pro**	**Pos/Eng**	**Ind/Mot**	**Con/Pro**	**Pos/Eng**	**Ind/Mot**	**Con/Pro**
Intercept	−0.03 (0.13)	−0.01 (0.10)	0.00 (0.06)	0.59*** (0.09)	0.49*** (0.10)	0.36*** (0.06)	0.57*** (0.08)	0.47*** (0.10)	0.36*** (0.06)
Child Age[a]				0.00 (0.01)	0.01 (0.00)	0.01 (0.00)	0.00 (0.01)	0.01 (0.00)	0.00 (0.01)
Child Gender[b]				−0.37*** (0.09)	−0.24*** (0.06)	−0.33*** (0.05)	−0.35*** (0.08)	−0.23*** (0.05)	−0.32*** (0.05)
High School/GED vs. No mother or GED				−0.12 (0.11)	−0.13 (0.14)	−0.04 (0.07)	−0.09 (0.11)	−0.10 (0.14)	−0.02 (0.07)
High School/GED vs. Associate's Degree				0.00 (0.18)	−0.08 (0.13)	0.00 (0.07)	−0.01 (0.17)	−0.08 (0.13)	0.00 (0.06)
High School/GED vs. Bachelor's Degree				0.10 (0.13)	−0.03 (0.11)	−0.06 (0.09)	0.14 (0.13)	−0.01 (0.11)	−0.04 (0.09)
High School/GED vs. Graduate Degree				−0.07 (0.16)	−0.20 (0.13)	−0.08 (0.08)	−0.03 (0.16)	−0.17 (0.11)	−0.06 (0.07)
Head Start[c]				0.62*** (0.11)	0.44*** (0.12)	0.24** (0.07)	0.63*** (0.20)	0.45*** (0.12)	0.25*** (0.07)
Mean ES				−0.02 (0.08)	−0.07 (0.07)	0.03 (0.05)	−0.01 (0.08)	−0.06 (0.07)	0.04 (0.06)
Consistency of ES				0.46 (0.25)	0.09 (0.27)	−0.13 (0.18)	0.43 (0.22)	0.08 (0.27)	−0.16 (0.16)
Emotion Regulation				0.04 (0.09)	0.11 (0.09)	−0.01 (0.05)	0.04 (0.08)	0.11 (0.08)	−0.02 (0.16)
Cognitive Regulation				0.13 (0.09)	0.24** (0.07)	0.15** (0.05)	0.16* (0.07)	0.26*** (0.07)	0.16*** (0.05)
Consistency of ES x Emotion Regulation							−1.22* (0.49)	−1.01* (0.47)	−0.28 (0.36)
Consistency of ES x Cognitive Regulation							0.65* (0.29)	0.40* (0.21)	0.40** (0.14)

	Unconditional			Main Effect			Moderation		
Random Effects	Pos/Eng	Ind/Mot	Con/Pro	Pos/Eng	Ind/Mot	Con/Pro	Pos/Eng	Ind/Mot	Con/Pro
Residual *SD*	0.77	0.75	0.51	0.71	0.65	0.43	0.70	0.64	0.43
Classroom *SD*	0.00	0.05	0.06	0.00	0.05	0.08	0.00	0.08	0.09
Prechool *SD*	0.23	0.16	0.13	0.11	0.12	0.14	0.13	0.11	0.13
Pos/Eng *r*	1.00			1.00			1.00		
Ind/Mot *r*	.73	1.00		.68	1.00		.67	1.00	
Con/Pro *r*	.83	.83	1.00	.80	.78	1.00	.80	.78	1.00

Note.

[a]Age in months

[b]Male = 1

[c] Head Start = 1; ES = Emotional Support, Pos/Eng = Positive/Engaged, Ind/Mot = Independent/Motivated, Con/Pro = Connected/Prosocial; models were estimated using multilevel generalized structural equation modeling with the expectation-maximization algorithm; values in parentheses are cluster-robust standard errors;

* $p < .05$

** $p < .01$

*** $p < .01$.

Table 5

Model Fit Across Main Effect and Moderation Models

	Unconditional	Main Effect	Moderation
AIC	1312.75	1076.23	1061.71
BIC	1361.41	1127.75	1120.59
χ^2	-	238.52	18.52
pseudo-R^2_{within}	-	.13	.14
pseudo-$R^2_{between}$	-	.23	.25

Note. AIC = Akaike Information Criterion; BIC = Bayesian information criterion, Pos/Eng = Positive/Engaged, Ind/Mot = Independent/Motivated, Con/Pro = Connected/Prosocial; pseudo-R^2_{within} represents the proportion of variance explained by the fixed effects (Nakagawa & Schielzeth, 2012); pseudo-$R^2_{between}$ represents the proportion of variance explained relative to the unconditional model (Snijders & Bosker, 1999); models were estimated using multilevel generalized structural equation modeling with the expectation-maximization algorithm; variance components are in standard deviation units.