

RUNNING HEAD: WHO'S SUPPORTING HER?

She's supporting them; who's supporting her?

Preschool center-level social-emotional supports and teacher well-being

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### **Abstract**

Preschool teachers across the country have been charged to prepare children socially and emotionally for kindergarten. Teachers working in preschool centers are supporting children's social and emotional learning (SEL) within a rich ecology of emotion and social relationships and the present study considers how the supports implemented for children's SEL at the center-level are associated with teachers' psychological health and workplace experiences. Hierarchical linear models were constructed using data from the Head Start Family and Child Experiences Survey 2009 cohort. Results indicate that although teachers work in individual classrooms, they share common perceptions at the center-level of their workplace climate, access to support, and, although to a lesser extent, experience commonalities in psychological health and job satisfaction. Furthermore, in centers that had implemented more supports for children's SEL (including access to mental health consultants, classroom curriculum, and training and resources for teachers) teachers were less depressed, more satisfied with their jobs, felt more supported in managing challenging behavior, and viewed the workplace climate of their center as more positive. Findings are discussed in light of the national efforts to increase and retain a high-quality early childhood workforce.

She's supporting them; who's supporting her? Preschool center-level social-emotional supports and teacher well-being

Preschool centers across the country are investing heavily in social and emotional learning (SEL) curricula and professional development opportunities for staff now that SEL is included in the preschool learning standards of all 50 states (Dusenbury et al., 2015). Although numerous reports link SEL interventions and instruction to social and academic gains for children (see Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011 for a review), a much smaller body of research has considered the interplay among supports for SEL instruction, teacher well-being, and preschool center climate. The present study considers the broad ecology of preschool at the center level that has been reflected in prior theoretical models, including the Prosocial Classroom model (Jennings & Greenberg, 2009), but not fully explored.

Teachers' abilities to engage in the teaching practices that support SEL are dependent in part on their own well-being, including their social and emotional competencies. Particularly in early childhood education, teachers experience high levels of distress due to poor work conditions, workplace relationships, intrapersonal factors, and challenging child behavior (Friedman-Krauss, Raver, Neuspiel, & Kinsel, 2014). Jennings and Greenberg (2009) incorporated teacher emotional competence into their model of the prosocial classroom, acknowledging the role that a teacher's mental health plays in her ability to support children's social-emotional learning. A wellspring of research has confirmed many downstream associations described in the Jennings and Greenberg model. For example, the Chicago School Readiness Project (Raver et al., 2009) and the Head Start Cares Demonstration Project (Morris et al., 2014) have shown that, when done with fidelity, the implementation of such programming

can significantly raise children's social and emotional competencies. However, less attention has been paid to the upstream effects of the implementation of supports for children's SEL on the teachers and the climate of the teachers' workplace.

Research into SEL programming and supports that accounts for contextual factors is particularly relevant now given President Obama's call to strengthen the capacity of the early childhood workforce (Slack, 2013), and due to accumulating evidence connecting teachers' workplace experiences and psychological health to turnover and classroom quality (e.g., Jepson & Forrest, 2006; Montgomery & Rupp, 2005; Whitebook, Sakai, Gerber, & Howes, 2001). In accordance with dynamic systems theories (Yoshikawa & Hsueh, 2001), and the bioecological model of development (Bronfenbrenner & Morris, 2006), we conceptualize children in preschools as at the center of a dynamic and complex microsystem that includes key sources of influence that directly and indirectly impact their development. Of particular interest in this study are the influences that preschool centers have on children's development. Specifically, how the policies and practices enacted for the child's benefit at the center-level (e.g., curriculum selection) contribute to teachers' work-place experiences (e.g., center climate, perceptions of support, and job satisfaction), which may in turn influence a teacher's own emotions (e.g., depression) and his or her relationships with children (e.g., perceptions of child behavior).

Nationally, teachers receive little pre-service training in how to support children's SEL (Schonert-Richel, Hanson-Peterson, & Hymel, 2015) and access to quality in-service training is highly variable (Jennings & Frank, 2015). Facing pressure to attain SEL learning standards, teachers are often left to their own devices to determine the best course of action and the supports and resources available to them at their center will play a significant role in enabling and encouraging them to support children's SEL. In prior qualitative work, we identified

possible ways that preschool center directors' decisions about children's SEL communicated commitments and beliefs to teachers about the value of emotions more broadly (Zinsser, Denham, Curby & Chazan-Cohen, 2016; Zinsser & Zinsser, 2016). Interviews and focus groups with Head Start and private preschool administrators and teachers indicated that directors influence a more global emotional climate of a center— instilling an institutional awareness of, sensitivity to, and valuing of emotions that in turn influences teachers' emotions and their experience of support to engage in social and emotional teaching practices. The present study represents an initial quantitative extension of this qualitative work in order to better understand how the implementation of SEL supports for children impact teachers' well-being at work.

### **Social-Emotional Teaching and Learning**

SEL describes the process by which children acquire social-emotional skills, including: recognizing their own and others' emotions, managing their emotions, showing social awareness and empathy, forming and maintaining positive relationships, and making responsible decisions (Zins, Payton, Weissberg, & O'Brien, 2007). These competencies set children up for greater success in the realms of social and cognitive development, pre-academic achievement, school readiness, and adjustment (Denham, Zinsser, & Brown, 2010). Given that children develop these social and emotional skills primarily through social interactions at home and school, there is increasing attention to early childhood teachers' influence on SEL (Denham et al., 2012; Horner & Wallace, 2013). The significant attachment-like relationships that preschool teachers form with their students place them in a position to socialize children's emotional competencies (Poulou, 2005).

**SEL in the context of Head Start.** Children's social and emotional development has long been central to the Head Start "whole-child" development mission (Goal One Technical

Planning Group, 1991). With the reformation of the Head Start program following the congressional reauthorization in 2007, two revisions to the Head Start learning framework have further defined the national program's SEL goals for children as they get ready for kindergarten entry (HSCDELF, 2010; HSELOF, 2015).

Learning standards, such as the Head Start learning framework, are statements about what students should know and be able to do as a result of educational instruction. Well-written standards create consistency in education and communicate priorities to staff, students, and families (Dusenbury et al., 2015). When standards also articulate clear goals and provide developmental benchmarks, as the new 2015 Head Start framework does, they may serve as a powerful plan for education including the implementation of evidence-based curricula and providing high quality professional development for teachers.

Today all states in the U.S. have free-standing SEL standards at the preschool level and in many states, these standards were developed in conjunction with the Head Start learning frameworks (Dusenbury et al., 2011; Dusenbury et al., 2015). Despite the clear learning standards related to preschoolers' SEL within Head Start and across the country, teachers are inconsistently prepared and supported in promoting children's SEL. Preschool centers can support social-emotional teaching and learning in a number of ways. Three such approaches potentially available to Head Start programs at the time this study was conducted include the retention of mental health consultants, the implementation of SEL curricula, and the provision of training and resources related to SEL. Mental health consultants (clinicians, social-workers, play therapists, or other behavioral service providers) typically provide individualized support either in the classroom or during pull-out sessions. Additionally, such consultants can work with teachers and parents to adapt classrooms and/or routines to the specialized emotional or

behavioral needs of specific children. A second social-emotional support is the implementation of a universal evidence-based SEL curriculum such as those highlighted in the 2013 CASEL Guide (Domitrovich, Durlak, Goren, & Weissberg, 2013). SEL curriculum (such as Preschool PATHs (Domitrovich, Cortes, & Greenberg, 2007), Al's Pals (Geller, 1999), and Second Step (Frey, Hirschstein, & Guzzo, 2000) promote children's SEL through a combination of didactic instruction and role play on topics such as self-control, relationship building, and problem solving, among other social and emotional skills.

Finally, preschool centers can support social-emotional teaching and learning through teacher training and access to SEL resources. For example, the SEL technical assistance center funded by the Office of Head Start, the Center on the Social and Emotional Foundations for Early Learning (CSEFEL; <http://csefel.vanderbilt.edu>). CSEFEL was the national resource and technical assistance center funded by the office of Head Start and the Child Care Bureau following the 2007 Head Start Reauthorization. The center collated and disseminated numerous resources related to children's social-emotional development and specific classroom management strategies to Head Start centers and teachers. Research with elementary and secondary teachers has found positive associations between such school-wide social emotional supports and teachers' sense of commitment to their profession and school (Collie et al., 2011). Thus, we anticipate similar benefits for teachers in preschools that have adopted supports for children's SEL.

### **Teacher Workplace Well-being**

Teachers play a critical role in constructing the learning environment of the classroom that significantly impacts children's growth and development (Hamre & Pianta, 2007; Eccles & Roeser, 1999). Given their significant role as emotion socializers (Denham et al., 2012), shaping

children's emerging social and emotional competencies, researchers are also attentive to teachers' own psychological health and how it contributes to, or detracts from the learning environment and children's development (e.g., McLean & Connor, 2015; Zinsser, Baily, Curby, Denham, & Bassett, 2013).

Teaching, especially in early childhood, has long been described as highly rewarding (Bloom, 1986) with a majority of teachers reporting being highly satisfied (Thomason & La Paro, 2013). However, research around teacher emotional health, depression, and stress consistently shows that teaching is an emotionally challenging occupation (e.g., Johnson et al, 2005). Teachers' emotional well-being can influence their relationships with students, classroom management styles, and social-emotional teaching (Jennings & Greenberg, 2009). Teachers who are emotionally overwhelmed are less effective educators and more likely to leave the profession (Jepson & Forrest, 2006; Whitebook, Sakai, Gerber, & Howes, 2001). During emotionally challenging times in the classroom, more competent teachers can potentially manage their physiological arousal in healthy ways that do not detract from their relationships with students and coworkers, enabling them to view their work as more enjoyable (Goddard, Hoy, & Hoy, 2004). In Head Start settings, studies have additionally examined the intrapersonal factors that contribute to teachers' poor mental health, including outside psychosocial stressors (LiGrinning, et al., 2010; Reffett, 2009). Yet nearly a quarter of Head Start teachers are estimated to suffer from clinically significant levels of depression, a rate higher than the national average (Whitaker et al., 2013). To our knowledge, however, the body of research focused on the interplay between center-level administrative practices and teacher psychological health has been comparatively limited and tends to focus more on workplace stress (e.g., Bloom, 2010) than depression.



**Teacher Depression.** Although stress in teachers is associated with poorer quality classroom interactions and less supportive reactions to children's negative behaviors (Swartz & McElwain, 2012), stress does not appear to impact teachers abilities to implement behavior management and classroom climate interventions (Li-Grining et al., 2010) such as SEL curricula. Unlike stress, depressive symptoms are pervasive and not in reaction to a particular threat (APA, 2013). Furthermore, depression can reach clinically diagnosable levels, which impair quality of life both at work and home. In studies of depressed mood among teachers, associations have been found with perceiving children as more hostile (Mashburn, Hamre, Downer, & Pianta, 2006) reporting greater levels of conflict with children in their classes (Hamre et al., 2008), and experiencing less positive relationships with children in Head Start programs (Whitaker, Dearth-Wesley & Gooze, 2014).

Spending time with depressed caregivers also negatively impacts children's social and academic gains. Living with a depressed mother is associated with preschool children's displays of poorer social skills and greater behavior problems (Gross, Conrad, Fogg, Willis, Garvey, 1995). Emerging evidence also indicates that children in classrooms with emotionally distressed or depressed teachers perform more poorly on some academic assessments and struggle with social skills like cooperation (Siekkinen et al., 2013). Academically at-risk children in elementary classrooms with depressed teachers also make smaller gains in mathematic skills over the school year (McLean & Connor, 2015) as compared to similarly at-risk peers with non-depressed teachers. Teacher depression is also negatively associated with child-care quality (Jeon, Buettner, & Snyder, 2014), making teachers' emotional health a critical issue to consider in light of initiatives like President Obama's call to expand access to high-quality preschool (Slack, 2013), aiming to increase access to high-quality preschool for all children. Recent studies

into elevated rates of depression among Head Start teachers (Whitaker et al. 2013) have further raised questions about how best to support the emotional health of the early childhood workforce. As such, we have included self-reported depressive symptoms in our study as an indicator of teacher psychological well-being and aim to test whether teacher depression is associated with their center's support of children's SEL.

**Teacher Job Satisfaction.** Teachers' job satisfaction—positive regard for one's current work and choice of career—is crucial not only to individuals' well-being, but also to teacher retention and instructional quality. When teachers are more satisfied with their jobs, they are more likely to be more effective (Ostroff, 1992), provide high quality care (Jorde-Bloom, 1988) and provide more opportunities for cognitive development and exploration in their classrooms (Thomason & La Paro, 2013). Teachers who are dissatisfied with their jobs are more likely to experience emotional burnout (Skaalvik & Skaalvik, 2009) and may consider leaving the profession (Saari & Judge, 2004). When teachers struggle to manage social and emotional challenges in the classroom, teaching is less enjoyable (Goddard, Hoy, & Hoy, 2004), and the quality of their nurturing caregiving decreases (NICHD ECCRN, 2005), ultimately detracting from their ability to support children's SEL and academic gains. Thus, we intend to examine whether centers' adoption of more supports for children's SEL is associated with teachers' job satisfaction.

### **Preschool Center Climate, Teacher Well-being, and Child Behavior**

Just as children and teachers co-construct the social and emotional climate of their classrooms, a teacher's ability to engage in the challenging work of social-emotional teaching emerges from the contexts in which she is teaching. The adult relationships in a preschool center contribute to workplace environments (Bloom, 1988; Karoly et al. 2013; Zinsser, Denham,

Curby & Chazan-Cohen, 2015). Although center climate may be a more distal influence than the classroom (Bronfenbrenner & Morris, 2006), center-level policies and characteristics affect classroom practice, which in turn can affect child outcomes.

Prior studies of workplace environments in preschool have focused heavily on structural indicators such as professional orientation, salaries, and levels of education (e.g., Bloom, 1988) as predictors of job commitment. More recently, intrapersonal characteristics of centers, such as working conditions, job demands, co-worker relationships and access to resources and support (Reffett, 2009), have been linked to teachers' job satisfaction, emotional burnout, and turnover. These latter aspects of workplace conditions contribute to center climate – or the emotional atmosphere of a preschool center that is conducive to teaching and learning. Negative center climate can be a significant source of distress for teachers (Stauffer & Mason, 2013), whereas positive center climate is associated with greater teacher emotional well-being (Burns & Machin, 2013). Preschool teachers who report a stronger sense of center community, an aspect of climate, experience more job satisfaction and career commitment (Collie, Shapka, & Perry, 2011; McGinty, Justice, & Rimm-Kaufman, 2008), tend to engage in more professional development (Wagner & French, 2010) and provide higher quality classroom instruction (McGinty et al., 2008). A preschool center's climate directly influences teachers and can indirectly affect children's classroom experiences (Zinsser & Curby, 2014) through the quality of instruction and teacher-child interactions. One particular contributor to teachers' perceptions of center climate is their experience of support (emotional or physical) during challenging situations, such as managing a child's problematic behavior.

**Challenging Behavior.** Children's behavior can be a source of joy and stress for teachers throughout their work day. When behavior is frustrating, teachers must expend additional effort

to maintain positive supportive relationships. Child behavior problems can result in poorer student-teacher relationships, which are associated with greater teacher emotional exhaustion (Grayson & Alvarez, 2008). Perhaps for this reason, preschoolers' externalizing behavior problems predict subsequent teacher emotional distress (Friedman-Krauss, Raver, Morris, & Jones, 2014). Teachers report that managing student behavior is their most stressful work task (Kaiser et al., 1993). Teachers who are stressed, in turn, provide less consistent emotional support to their students (Zinsser et al., 2013) necessary for children's SEL gains (Mashburn et al., 2008). Centers can reduce this source of stress by helping teachers to manage challenging student behaviors; for example, by enacting procedures for requesting support in the classroom during an emergent situation, providing specialized training and professional development around behavior management, and responding efficiently to teachers' requests for help with particular students. Practices such as these help teachers feel adequately supported and foster a sense of psychological safety within the workplace (Zinsser & Zinsser, 2016). Indeed, teachers report more job satisfaction if they perceive their workplace as more supportive (Bogler & Nir, 2010) and they also report lower levels of stress (e.g., Hastings & Bham, 2003; Ray, 2007). Conversely, when there is little support for managing such behaviors, such as access to behavioral services, teachers are more stressed and more likely to expel a child displaying challenging behaviors (Gilliam, 2005).

**Center size.** The size of a center may also be related to teachers' perceptions and workplace experience. Although there is not a large research base on the impact of preschool center size on teacher well-being, evidence from elementary schools points towards a trend of smaller schools fostering a stronger sense of community among teachers and a shared responsibility for children (Lee & Loeb, 2000). Similarly, teachers at smaller schools tend to be

more satisfied with their jobs compared to those in larger schools (Eberts, Kehoe & Stone, 1982). In qualitative work, teachers at large Head Start programs (those serving over 300 children) have said that the physical size of their buildings and programs makes it difficult for administrators to provide timely support during challenging child behavior situations (Zinsser & Zinsser, 2016). However, small programs may also be limited in the financial and technical assistance resources they can make available to teachers, including those related to children's SEL. As such, we have included center size in the present study.

### **The Present Study**

Preschool classrooms exist within emotionally rich ecologies, and we propose that center-level characteristics, such as physical resources and supports, along with teachers' perceptions of challenges and center climate, contribute to teachers' emotional health and experiences of satisfaction. Prior qualitative investigations have identified possible mechanisms by which preschool administrators' decisions about resources and policies communicate an overall valuing of emotions which may benefit teachers' experience of the climate of their workplace (Zinsser et al., 2016). The present study represents a quantitative extension of this research. Specifically, we sought to answer two research questions: 1) To what extent can preschool teachers' emotional well-being and workplace experiences be attributed to where they work? And 2) How does the implementation of social-emotional supports for children relate to teachers' well-being at work and/or their perception of their workplace? To address these goals, the present study used data from a large-scale, nationally representative study of Head Start programs.

## **Method**

### **Participants**

Data come from the Head Start Family and Child Experiences Survey (FACES) 2009 cohort (United States Department of Health and Human Services Administration for Children and Families, 2013), a nationally representative sample of Head Start programs, centers, classrooms, children and their families. In the FACES study, multi-stage clustered sampling was used to select programs, centers, and classrooms with probability proportional to size. Specifically, 60 Head Start programs (grantees) were selected from across the United States (save for Puerto Rico and the migrant/tribal communities), then two centers were selected from each program. Teachers from all 120 centers completed surveys in the spring of 2010 (Full sample  $N=498$ ). The present study uses data only from centers from which a center director interview and at least three teacher interviews were collected. The analysis sample therefore included data from 85 center directors who employed 419 teachers who completed the survey. Teachers were almost exclusively female and most were middle aged, had attended at least some college, and had been teaching for over a decade. Most teachers identified as either White, Black, or Hispanic/Latino. Additional demographic details about teachers can be found in Table 1. The teachers all worked in preschool classrooms where they taught three and four-year-old children (49.8% female) whose families lived at or below the federally determined Head Start poverty criteria. Children participating in the FACES study were 22.9% White, Non-Hispanic, 33.0% African American, Non-Hispanic, and 36.0% Hispanic/Latino.

## Measures

***Depression.*** Teachers were asked questions from the Center for Epidemiological Studies Depression Scale (CES-D), a screening test that measures symptoms for depression and severity (CES-D, 20 items; Radloff, 1977). After answering questions such as “I felt depressed”, they were asked to rate the frequency via a 5-point scale from 1 (*Not at All*) to 5 (*Nearly Every Day*).

Scores from the CES-D items were aggregated and square-root transformed to adjust for non-normality (skewness was reduced from 2.12 to 0.32). Higher combined scores indicate greater severity of depressive symptoms. The CES-D items have demonstrated predictive validity, including positive correlations with poor health status and negative correlations with positive affect (Andresen, Malmren, Carter, & Patrick, 1994). It has also demonstrated sensitivity and specificity when compared with scores on the Diagnostic Interview Schedule for the DSM-IV (Thomas et al., 2001).

***Job Satisfaction.*** Teachers' satisfaction with their current teaching positions was assessed through three Likert-style questions. On a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) teachers responded to the following statements: "I really enjoy my present job," "I am making a difference in the lives of children," and "If I started over, I would choose teaching." These items shown adequate internal consistency ( $\alpha=.79$ ) and although unique to the FACES surveys, items are similar to questions used to assess teachers' job satisfaction in other studies, such as the National Study of Early Care and Education (2013) and Bloom's Early Childhood Work Environment Survey (ECWES; Bloom, 1989). Teachers' responses were negatively skewed and the aggregate was therefore log transformed prior to being included in analyses (skewness was reduced from -3.04 to -1.15). The final transformed variable was scaled so that higher scores indicate greater satisfaction.

***Perception of Center Climate.*** Teachers reported on their perception of their center's workplace climate on 13 Likert-style items using a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Items included statements such as "Teachers don't feel isolated" and "Atmosphere free from gossip." Together the items had high internal consistency ( $\alpha=.93$ ). As with the measures of job satisfaction, items in this subscale are similar, but not identical to

those used in other studies of the preschool climates including Bloom (1989). In other studies of center climate positive associations have been found between teachers' perceptions of the supportiveness and emotional tenor of their workplaces and children's learning (Lower & Cassidy, 2007).

***Supports for Handling Child Behavior.*** The final dependent variable was derived from a single item wherein teachers were asked to rate on a scale from 1 (*Not at all well*) to 5 (*Very well*) "How well does your program support teachers when they experience challenges in managing children's behavior?" This item has been included in prior waves of FACES studies but is otherwise unique and thus limited psychometric information is available.

***Perception of Children's Behavior.*** Independent variables derived from teacher interviews include a single item rating of teachers' perception of children's behavior. The prompt asked teachers to rate the behavior of children in their class on a scale from 1 (*The group misbehaves very frequently and is almost always difficult to handle*) to 5 (*The group behaves exceptionally well*).

***Social-Emotional Supports.*** Finally, a variable was computed to represent teachers' access to social-emotional supports. Teachers were asked to report whether or not their center used each of three possible supports for children's SEL: a social skills curriculum, a mental health professional, and resources from the Center on the Social and Emotional Foundations for Early Learning (CSEFEL). CSEFEL (<http://csefel.vanderbilt.edu>) was the national resource center funded by the office of Head Start and the Child Care Bureau prior to the 2009 FACES data collection periods. Resources included training materials, videos, and print resources related to building relationships, creating supportive environments, social-emotional teaching strategies, and developing behavior support plans. Teachers self-reported whether or not (*yes, no, I don't*



*know*) to a question about each possible resource. Affirmative answers were summed together to create a variable (ranging from 0-3) representing the number of SEL supports the teachers were aware of having access to. Teachers' responses were also aggregated so the center-level measure of SEL supports is the average across all responding teachers in that center (ranging from .57-3.0).

**Center Size.** Finally, center directors were asked to report on the total number of lead teachers employed by the center. This was used as a proxy variable for center size.

### **Data Analysis**

Analyses examined the contribution of teacher-level characteristics (perceptions of supports and children's behavior) and center-level variables (aggregated perceptions of supports and center size) to teachers' well-being (depression, job satisfaction, experiences of workplace climate, and support with children's challenging behavior). Following preliminary analyses, hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) was used to account for the fact that multiple teachers worked at the same Head Start center. Data from the teachers are not independent, which violates a major assumption of typical multiple regression analyses. Furthermore, it is the dependence (or shared variance) that we were interested in predicting using variables associated with the teachers and the centers. HLM adjusts the standard errors to appropriately model the structure of the data (Osborn, 2000).

HLM partitions variance in the outcome associated with the teacher-level predictors (Level-1) from variance in the outcome associated with center-level predictors (Level-2).

Predictors can therefore be added at each level. The following equations represent our analyses:

#### **Level-1 Model**

$$Y_{ij} = \beta_{0j} + \beta_{1j}*(SE\ Supports_{ij}) + \beta_{2j}*(Child\ Behavior_{ij}) + r_{ij}$$

Level-2 Model

$$\bar{\beta}_0 = \gamma_{00} + \gamma_{01}*(SE\ Supports_j) + \gamma_{02}*(Center\ Size) + u_0$$

$$\beta_1 = \gamma_{01}$$

The Level-1 equation describes the within-center variance based on teacher characteristics. For teacher  $i$  in center  $j$  the expected outcome  $Y$  is equal to the intercept,  $\beta_0$ , plus an effect for teachers' reports of SE supports,  $\beta_{1j}$ , and child behavior,  $\beta_{2j}$ , plus error,  $r_{ij}$ . Slope  $\beta_{1j}$  was constrained at level-1. The level-2 equation models between center variance using aggregated reports of SE supports and center size (as represented by the number of lead teachers employed). Thus, the center average in each outcome,  $\beta_0$ , is equal to a conditional mean or intercept,  $\gamma_{00}$ , plus effects for average teacher SE supports,  $\gamma_{01}$ , plus the effect for the average perceptions of child behavior,  $\gamma_{02}$ , plus error,  $u_0$ . We included only the variance of the random intercept. The variables SE supports and child behavior were centered in Level-1 according to their respective group means. All variables on Level-2 were grand mean centered. The double entry of SE supports at both levels of the model allows us to account for both Level-1 and Level-2 variance within the same variable.

As a preliminary step, we examined the descriptive statistics and bivariate correlations (See Table 2). Next, unconditional HLM Models were analyzed to estimate the amount of variance at the teacher and center level. Unconditional multi-level models account for the nested structure of the data and its impact on each outcome. The HLM software does not report standardized coefficients so all effects are reported with unstandardized coefficients. Notably,

classroom sampling weights provided in the FACES data were used to adjust for the probability of classroom selection and classroom-level response, such that results are representative of the entire Head Start 2009 cohort of teachers and centers (U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation, 2013).

## Results

### Preliminary Analyses

Means, standard deviations, and normality statistics are presented in the bottom portion of Table 2. Missing data were minimal; only 17 teachers (4.05%) were missing responses on one dependent variable (supports for management of challenging behavior). Therefore, these teachers were excluded from the analysis of this model via listwise deletion and the final level-1 analysis sample consisted of 402 teachers. There was no missing data at the center level (Level-2). As the correlation matrix in Table 2 shows, nearly all included variables were slightly or moderately associated and in the expected directions. Depressed teachers were less satisfied, reported having access to fewer SE supports and supports for challenging behaviors, experienced a more negative workplace, and reported children being less well behaved. Especially strong positive correlations were found between teachers' perceptions of center climate and their job satisfaction ( $r = .39$ ,  $p < .01$ ) and their experience of support with managing behavior ( $r = .63$ ,  $p < .01$ ). Interestingly, access to SE supports was not correlated with teachers' perceptions of children's behavior ( $r = .07$ ,  $p > .05$ ).

The amount of center-level variance in each dependent variable (the intraclass correlation (ICC)) was calculated as the proportion of center-level variance divided by the total variance and can be interpreted as the proportion of variance attributable to group membership, in this case,

the center at which a teacher works. ICCs (reported in the uppermost portion of Table 3) varied across outcomes from 9% of variance in Depression attributable to center membership to 26% of variance in Center Climate being attributable to center membership. These findings indicate that multi-level modeling is indeed appropriate and that there is a significant portion of the variance in each outcome that is between centers.

### **Hierarchical Models**

Final models with all predictors are presented in Table 3. Prior to interpreting model output, Level-1 residuals were examined for evidence of normality. Next, the Log likelihood ratio test  $\chi^2$  values (presented in Table 2) were examined to determine if the full model with predictors is a significantly better fit than the unconditional model. All conditional models showed significantly lower deviance than the corresponding unconditional models. Finally, model statistics coefficients were examined. Each model provided an intercept, which can be interpreted as the mean level for the outcome when all classroom and center variables are at the average level. Teacher depression had an intercept of 1.57 and was significantly and negatively associated with Level-2 SE supports ( $\beta = -0.40, p < .01$ ), indicating that teachers were less depressed in centers where there were more SE supports. Teacher job satisfaction had a positive and significant intercept of 0.57 ( $p < .01$ ). Teachers' satisfaction with their jobs was positively associated with their perceptions of child behavior ( $\beta = 0.03, p < .01$ ) and the Level-2 center report of SE supports ( $\beta = 0.05, p < .001$ ). In other words, teachers were more satisfied if they perceived their children as well behaved and if their centers offered more SE supports (Level-2). Teachers' perceptions of center climate had a significant intercept of 3.70 and were positively associated with SE supports at Level-1 ( $\beta = 0.22, p < .001$ ) and Level-2 ( $\beta = 0.37, p < .001$ ). Finally, teachers' perceptions of supports for handling child behavior had a significant and

positive intercept of 2.96. Interestingly, this dependent variable was not associated with teachers' perceptions of child behavior (Level-1), but was positively associated with SE supports both between (Level-2;  $\beta = 0.41, p < .001$ ) and within centers (Level-1;  $\beta = 0.26, p < .01$ ). Effect sizes ( $R^2$ s presented in Table 3) were calculated by subtracting the variance of level-1 residuals ( $\sigma^2$ ) of each of the full models from that of the unconditional models and dividing by the unconditional model's  $\sigma^2$  value. Generally, effects were small, accounting for less than 10% of the variance in dependent variables.

### Discussion

Several findings are notable from this study and together they point towards the need for conversations about supporting child and teacher social and emotional well-being to occur in conjunction with discussion about developing and retaining a high-quality early childhood workforce. Our findings indicate that although teachers work in individual classrooms, they share common perceptions at the center-level of their workplace climate, access to support, and, although to a lesser extent, experience commonalities in psychological health and job satisfaction. Furthermore, the implementation of supports for children's social and emotional learning by centers is associated with several positive teacher indicators. In centers that adopted more supports for SEL, teachers were less depressed, more satisfied with their jobs, felt more supported in managing challenging behavior, and viewed the workplace climate of their center as more positive. In the following sections we review these results in light of previous research and the possible implications.

#### Center-Level Variance

There was a wide range of variance attributable to the center level across the dependent variables in this study. Estimates ranged from slightly less than 10% of the variance in teacher

self-reported depression to more than a quarter of the variance in teachers' perceptions of their center climate. Thus, to some extent, aspects of teachers' own psychological well-being and perceptions of their centers can be viewed as characteristics of the center. This finding is in line with the sentiments expressed by teachers in our prior qualitative work (Zinsser & Zinsser, 2016) and with prior quantitative studies of organizational climate and classroom quality (e.g., Bloom, 2010, Karoly et al., 2013; Zinsser & Curby, 2014). This finding supports the further investigation of center-level characteristics as meaningful contributors to teachers' workplace well-being and confirms our dynamic systems theoretical orientation.

### **Center-Level Social Emotional Supports as Predictors of Teacher Well-being and Workplace Experiences**

The primary purpose of this study was to examine how the implementation of supports for children's SEL was related to teachers' workplace experiences. From prior qualitative work we hypothesized that adoption of supports for children's SEL at the center-level may communicate certain values and priorities to teachers and could positively benefit the workplace climate overall (Zinsser et al., 2015).

All four of our models showed that Head Start centers who invest in social-emotional supports for their students are experienced as more positive places to work by teachers. More specifically, at centers that offer more social-emotional supports (mental health consultants, SEL curriculum, and classroom resources), teachers feel less depressed, are more satisfied with their jobs, report perceiving their centers' climate as more positive, and feel more supported in handling challenging student behaviors.

**Teacher Depression.** In light of the increased rate of depression among teachers in Head Start as compared to the national average (Whitaker et al., 2013), and the significant role

teachers' mental health can play in children's social and emotional development (Jennings & Greenberg, 2009), any research that can possibly help us understand how to promote teacher psychological well-being is important to consider. In our study, only the between-center differences in social-emotional supports predicted teacher depression. Interestingly, despite prior studies showing associations between teacher depression and their relationships with children (e.g., Whitaker et al. 2014), teachers' perceptions of child behavior was not significantly associated with depression in this model. There are several plausible explanations for this small center-level association between supporting child SEL and teacher's psychological health. For example, the provision of additional supports could act as a mediator, improving children's emotion and behavior regulation and thereby helping teachers to experience more positive relationships with students, which is associated with lower levels of depression (Hamre et al., 2008; Mashburn et al., 2006; Whitaker et al., 2014). Alternatively, this association could indicate a difference in hiring practices wherein centers that effectively support SEL also tend to hire teachers who are more emotionally positive (Zinsser et al., 2013). The small effect is not unexpected given the indirect nature of either of these explanations, but the significance of the association warrants further study.

**Teacher Job Satisfaction.** Teachers in this study reported greater satisfaction with their jobs when they perceived children as being better behaved and when their centers implemented more supports of child SEL. The first association is in line with many prior studies showing that children's behavior problems can be one of the greatest sources of stress for a teacher (Friedman-Krauss, 2014; Grayson & Alvarez, 2008; Kaiser et al., 1993). Similarly, there is some prior evidence that teachers feel less efficacious when they struggle to address children's social and emotional needs (Goddard et al., 2004). The present study indicates that when centers provide

teachers with the necessary tools and resources to support children's SEL, teachers experience greater job satisfaction, possibly because they feel more effective in the classroom.

Given that preschool teachers report that children's social-emotional skills are more important than math or literacy skills (Hollingsworth & Winter, 2013), being inadequately supported to engage in social emotional teaching could impact teachers' sense of self-efficacy, a component of job satisfaction. The fact that both perceptions of child behavior and access to social emotional supports were associated with teachers' satisfaction suggests that teachers with adequate resources either perceive children's behavior differently or the social emotional supports have had a direct, positive effect on children's behavior. It is also possible that the child-level SEL supports have a positive impact on teachers' own SEL (i.e., you learn it best by teaching it) which has also been shown in intervention studies to improve teachers' job satisfaction (Vesley, Sakofske, & Lescheid, 2013).

**Center Climate.** Teachers' perceptions of the climate of their workplaces was positively predicted by the number of social-emotional supports both at the teacher and center levels of the model. In other words, teachers in centers that adopted more of the supports for children's SEL reported feeling less isolated at work and instead felt part of a team. This finding is in line with prior studies of school climate, job satisfaction, and teacher emotional health (Burns & Machin, 2013; Collie, Shapka, & Perry, 2011; McGinty, Justice, & Rimm-Kaufman, 2008; Stauffer & Mason, 2013) and indicate that centers which attend adequately to children's SEL are also positive places for teachers to work. Although the direction of this effect cannot be determined from these results, our prior qualitative work (Zinsser et al., 2015) suggests that administrators' decisions to adopt child social emotional supports communicates a prioritization of emotions more broadly and these administrators also utilize an emotionally sensitive leadership style that



engenders a greater sense of psychological safety and community among staff. This finding can inform future leadership development programming and interventions. It indicates that including aspects of child SEL may contribute to teachers' perception of administrators' commitment to creating an emotionally positive place to work.

**Support for Children's Challenging Behavior.** Teachers' sense of being supported in managing children's challenging behavior was positively associated with their access to social emotional supports both within and between centers. Given that managing student behavior is frequently cited as a significant source of stress for teachers (Friedman-Krauss, et al., 2014; Kaiser et al., 1993), and that such stress negatively impacts teachers' ability to engage in high-quality social emotional teaching (Zinsser, Baily, Curby, Denham, & Bassett, 2013), any potential way to mitigate that stress deserves further investigation. Children's SEL and their challenging behavior are clearly linked – as children gain greater knowledge of emotions, grow in their ability to manage their feelings and behaviors, and come to make more responsible decisions in social situations, teachers should see a decrease in the challenging behavior that can be so disruptive and stressful, thus are likely to require less support in managing it from their administrators. This positive association with supports for child SEL existed even after controlling for teachers' perceptions of children's behavior. Therefore, while one explanation is that the social emotional supports reduced the need for support with challenging behavior, there is also a center-level explanation: namely, that centers which implement these supports for child SEL are also more successful at supporting teachers more broadly. Teachers tend to report fewer child behavior problems when they perceive the workplace climate as positive (O'Brennan, Bradshaw, & Furlong, 2014). Furthermore, when teachers have just one of the included supports – access to a mental health consultant – Gilliam's work (Gilliam, 2005; Gilliam & Shahar, 2006)

indicates they are less likely to rely on severe discipline, like expulsion, when faced with challenging behavior. Additionally, it is possible that access to the CSEFEL materials provides teachers with an opportunity to reflect more meaningfully on their interactions with more challenging students. In intervention studies, such reflection has improved teachers' relationships with disruptive students (Spilt, Koomen, Thijs, & van der Leij, 2012). The supports for child SEL included in this study may therefore act to additionally support teachers either before or during their interactions with children displaying challenging behaviors.

**Center Size.** Center size, as measured by the number of lead teachers employed by the center, was not associated with any of the dependent variables in this study. Most likely this was too broad of a measure to explain any of the variance in teachers' experiences. In future studies, more proximal measures of teachers' workplace experiences, such as student-teacher ratio or financial resources allocated to each classroom, may better capture whether or not structural features of a center impact the models defined in this paper. However, it is also notable that the persistent significant association between social emotional supports after controlling for center size indicating that such supports were positively associated with teachers' well-being and workplace experiences regardless of how large their center was. This was in contrast to our expectations based on prior research (Eberts, Kehoe & Stone, 1982; Lee & Loeb, 2000) and our own experiences (Zinsser & Curby, 2014).

**Implications for practice.** In our prior qualitative work conducting interviews and focus groups with preschool administrators and teachers we have identified pathways through which directors influence a more global psychologically safe emotional climate of early childhood centers (Zinsser et al., 2016; Zinsser & Zinsser, 2016). Through these new quantitative analyses we have identified that teachers in a center share in common some aspects of their psychological

well-being and hold common perceptions of the climate of their workplace. Furthermore, these perceptions are associated with the availability of structural supports for children's social and emotional development. Thus, a tangible take-away from this study for preschool administrators is that by investing in high-quality child-level SEL supports (e.g., evidence based SEL curricula) they have the potential to not only to positively impact child development, but are likely also to see benefits in the adult workplace climate. Although not addressed in this study directly, we would anticipate that efforts to improve teachers' workplace climates would in turn contribute to lower rates of turnover and teacher burnout and increased job satisfaction and teaching quality.

### **Limitations & Future Directions**

It is notable that these data are correlational; we therefore cannot infer causality. For example, we cannot infer the directionality of the association between center social-emotional supports and teacher well-being. Many speculative explanations are plausible. For example, social-emotional supports could improve teacher well-being by reducing teacher burden and increasing feelings of support. It is also possible, as some of our prior qualitative work implies, that center directors who prioritize social-emotional teaching and learning could also tend to hire teachers with greater baseline well-being and optimism about their field (Zinsser et al., 2015).

This study did not include child-level variables. We therefore can only speculate about the effects of teacher well-being on child experiences and outcomes, based on connections reported in prior studies (e.g., Jennings & Greenberg, 2009). Additional research will be necessary to confirm mediational models of center characteristics influencing students through teacher well-being. It will also be necessary to compare the relative benefit of implementing

added supports for SEL as compared to non-SEL supports (e.g., academic supports) to determine the extent to which our findings can merely be attributed to working in a better resourced center.

Finally, although our findings are generalizable to Head Starts in 2009, we do not know the degree to which features of Head Start make this study's findings unique to that context. Further, because Head Start policies change with each reauthorization, we do not know the extent to which our findings are generalizable to Head Start programs today. Future work should explore the stability of these findings over time and in different public and privately funded early childhood contexts.

### **Conclusion**

Preschools across the country are expected to promote children's social and emotional learning (SEL) to help them get ready for kindergarten. However, teachers receive relatively little support and training in how best to teach those skills. Given that being inadequately prepared can negatively impact teachers' sense of self-efficacy, we set out to study whether implementing child-level supports of children's SEL (access to mental health consultants, SEL curriculum, and classroom resources for teachers) was associated with greater teacher well-being and more positive workplace experiences – key contributors to teacher-student relationships, classroom climate, and teacher retention. Findings indicate that centers' implementation of social-emotional supports is associated with lower teacher depression, greater job satisfaction, more positive perceptions of center climate, and greater experiences of support with challenging child behavior. To retain and support quality early-childhood educators, centers must establish systems to support both teachers' and students' social-emotional well-being.

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Table 1

*Teacher Demographic Information*

	<b><i>M</i> (SD)</b>
Years Teaching	11.55(7.27)
Age	41 (10.64)
Number of lead teachers at center	7.64 (3.72)
	<b>%</b>
Female	99.4
Race/Ethnicity	
Hispanic/Latino	21.3
White	52.8
Black/African American	32.3
American Indian, Alaska Native	1.9
Asian, Pacific Islander	2.7
Another Race	13.2
Highest Level of Education	
High school degree or less	6.3
Some College	10.0
Associates Degree	34.0
Bachelor's degree	37.0
Graduate degree	12.7



Table 2

*Unweighted Correlations and Descriptive Statistics*

	1. Depression	2. Job Satisfaction	3. SE Supports	4. Center Climate	5. Child Behavior	6. Support for Behavior Management
1.	-					
2.	-.19**	-				
3.	-.15**	.13**	-			
4.	-.18**	.39**	.31**	-		
5.	-.11*	.20**	.07	.11*	-	
6.	-.19	.24**	.32**	.63**	.13*	-
Descriptive Statistics						
<i>N</i>	419	419	419	419	419	402
Mean	1.61	0.56	2.10	3.70	3.37	2.98
Std. Deviation	1.19	0.16	0.86	0.76	0.81	0.85
Skewness	0.32	-1.15	-0.62	-0.55	-0.20	-0.55
Kurtosis	-0.25	1.47	-0.40	0.28	0.48	-0.24
Minimum	0.00	0.00	0.00	1.00	1.00	1.00
Maximum	5.66	0.70	3.00	5.00	5.00	4.00

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

Note: Depression and Job Satisfaction descriptive statistics are for the transformed variables.

Table 3

*HLM Analysis using Teacher Survey Weights with Robust Standard Errors*

	Teacher Depression	Teacher Job Satisfaction	Teacher Perception of Center Climate	Teacher Perception Supports Handling Behaviors
ICC	0.09**	0.13**	0.26**	0.23**
Log Likelihood Ratio Test $\chi^2$ ( $df = 4$ )	17.99**	25.56***	44.62***	39.00**
Intercept	1.57***	0.57***	3.70***	2.96**
<i>Level-1: Teacher Report</i>				
Teacher Perception of Child Behavior	-0.07	0.03**	-0.01	0.04
SE Supports (group mean centered)	-0.18	-0.00	0.22***	0.26**
<i>Level-2: Center Level</i>				
Center Size	0.09	-0.02+	-0.06	-0.02
Center SE Supports (grand mean centered)	-0.40**	0.05**	0.37***	0.41**
Model $R^2$	0.02	0.05	0.08	0.05
Random effects				
Intercept Variance ( $df$ )	0.09 (82)	0.00 (82)	0.11 (82)	0.13
Level 1 effects	1.24	0.02	0.37	0.54
$\chi^2$	0.02*	132.71***	216.67***	192.18

\*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .00$