*Article*

# Family–Teacher Relationships and Child Engagement in Early Care and Education

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**Abstract:** Young children's positive interactions with teachers and peers in early care and education (ECE) settings support the development of their social and academic skills. Identifying malleable factors that contribute to children's positive engagement in these interactions is important in supporting early development. The current study examines one potential malleable factor that could be bolstered through supports for families and teachers alike: family–teacher relationships. We investigate associations between three specific domains of family–teacher relationships and children's engagement in ECE, so that findings are specific and relevant to intervention. We examine data from Oregon's Quality Rating Improvement System Validation Study; a diverse sample of 492 preschool-aged children in center-based ECE participated. Children's engagement was directly observed; parents reported their perception of family–teacher relationships. Multilevel models examined the associations between family–teacher relationships and children's positive engagement with teachers and peers in ECE classrooms. Results indicate a positive significant relationship between practices and children's positive engagement with teachers. Although this association was not causal, it suggests that teachers who collaborate and communicate with families, respond to family feedback and cultural values, and demonstrate a family-focused concern may help children engage more positively with teachers. Findings are discussed, limitations addressed, and future directions provided.

**Keywords:** family–teacher relationships; child engagement; family engagement; early care and education

## 1. Introduction

The majority (61%) of young children in the United States attend some type of child care or preschool prior to school entry [1]. Young children's experiences in these early care and education (ECE) settings, such as preschools and center- or home-based child care programs, are important to their development of social and academic skills (e.g., literacy, language development, self-regulation) [2–4]. Children's engagement with teachers and peers is central to these formative ECE experiences [5,6] and to their readiness to learn [7]. Less is known about factors that may support children's positive engagement in ECE. To date, most research points to the importance of high-quality ECE (e.g., emotionally) [8,9]. The quality of relationships between teachers and families may also contribute to children's engagement in ECE. Related research points to positive associations between family–teacher relationships and other child-level outcomes, such as early literacy skills, social–emotional development, and lower risk of expulsion, in preschool [10–12]. To help inform services and/or interventions for young families and teachers, the current study builds upon prior research to specifically examine associations between the quality of family–teacher relationships and children's positive engagement with teachers and peers in ECE programs.

## 2. Importance of Family–Teacher Relationships

This study is guided by the bioecological framework, which suggests that environments such as the home and ECE programs represent two important microsystems critical for development and learning [13]. Children's proximal processes with objects, symbols, adults (who are not their parents), and classmates in the ECE microsystem influence their school readiness skills [5,6]. The interactions between these two microsystems, the home and ECE setting, are captured by the mesosystem. The dynamics that transpire in the mesosystem, such as family–teacher relationships, may ultimately affect child outcomes, such as children's engagement in ECE settings. The current study empirically examines this mesosystemic relationship in order to better understand various influences on children's learning.

Family–teacher relationships are central to the broader construct of family engagement, which encompasses overall family well-being and children's healthy development [14]. Effective family–teacher relationships are those in which families and teachers embrace a shared responsibility for educating and socializing children, and families are viewed as partners [15–17]. McWayne and colleagues [17] describe these family–school relationships as "a true partnership among experts" (p. 447). An emphasis on strong relationships between families and teachers is represented in the quality standards of the National Association for the Education of Young Children [18], Quality Rating and Improvement Systems [19], and Head Start [20].

The family–teacher relationship field articulates three key domains of quality family–teacher relationships: (1) attitudes, (2) knowledge, and (3) practices that are relational and goal-oriented (Forry et al., 2011). First, 'attitudes' refer to the ways in which a teacher's beliefs and values about families and children in their care inform their work and interactions [21]. This includes a teacher's commitment to their work, openness to change, and the ways they show respect to families by understanding their different family contexts (e.g., culture, faith, financial situation [14,22,23]).

Second, 'knowledge' refers to sharing specific information between teachers and families, such as cultural beliefs and practices, values, or home dynamics (Forry et al., 2012; Kim et al., 2015). When teachers know information about families, they can support them and offer strategies consistent with families' needs or values [14,24]. This is particularly true when children are young and teachers rely on families to provide relevant information so that a teacher can help meet a child's developmental needs [25]. For example, if a teacher knows about a family separation, they can prepare to modify their interactions to provide the child additional social–emotional support if needed.

Third, 'practices' refer to teacher interactions and engagement with families in ways that are relational and goal-oriented [23]. Key engagement practices include communication, a focused and expressed concern for the family, responsiveness to a family's needs and preferences, and collaboration through practices such as setting goals for the child [14,22,26]. Communication between families and teachers regarding a child's needs, experiences, and development is an important way to ensure continuity for children as they transition between home and school settings [27]. For example, families and teachers can collaborate to meet the specific developmental needs of a child, such as a special routine or song when a child is learning to use the toilet. Families who perceive the cultural competence of providers are more likely to actively participate in early childhood systems of care [22]. The ECE field has moved toward measuring the quality of family–teacher relationships in these terms, and away from prior approaches such as a checklist measuring the frequency of parent involvement in home or school-based activities [16].

## 3. Family–Teacher Relationship and Child Outcomes

Research on children's outcomes related to family–teacher relationships has largely been conducted in K-12 school settings, with an emphasis on academic outcomes. Little research focused on the critical years of early childhood [28], yet there is some empirical evidence that links specific practices such as family–teacher collaboration and communication

with children's school readiness, academic performance, social–emotional development, and behavior in preschool [10,12,29,30]. For example, several studies on the outcomes of the Getting Ready intervention to promote collaboration between teachers and parents found the intervention helped to strengthen Head Start children's social–emotional competencies, early language and literacy, and behavioral skills [11,30,31]. Another study found that when teachers perceived a higher-quality relationship with families, children who had not previously been expelled were at a lower risk for expulsion [12]. Additional research is needed to understand the potential roles of family–teacher relationships to children's outcomes during preschool, when many of the foundations for learning and development are established [16]. During these early years, children's engagement is an important outcome to examine, since it is an important precursor to academic and social–emotional skills [6,29].

## 4. Dimensions of Child Engagement

The ways in which children engage with others, and with tasks or activities, in their early learning programs is important to their learning and development. Engagement has been identified as a multidimensional construct that includes a child's engagement with teachers, peers, and tasks [7]. The multiple dimensions of children's engagement allow for a more nuanced understanding of how family–teacher relationships may be linked with how young children engage with teachers, peers, and tasks in the preschool classroom. In line with previous studies on child engagement [4,6], this study considers multiple domains of children's engagement including positive engagement with teacher and positive engagement with peers.

### 4.1. Positive Engagement with Teacher

Positive engagement with teachers reflects a child's emotional connectedness; communications with a teacher [7] that are linked with a wide array of positive outcomes for children, include higher achievement, social competence, and executive function, as well as less internalizing behavior, and typical patterns of the stress-related hormone cortisol across the day [2,4,6]. The ways in which young children seek interactions, such as attending to and approaching the teacher, and communicate with their preschool teacher predict success, such as more gains in expressive knowledge and improved literacy skills [4,6]. Children who engage with teachers in these ways likely experience more language exchanges during these interactions and develop trusting relationships that model healthy social interactions [32].

### 4.2. Positive Engagement with Peers

Children's interactions with their peers also contribute to their development in early childhood [4–6]. Key components of these peer experiences include sociability, ability to initiate and maintain interactions, and cooperation [33]. Children who engage in more cooperative play, demonstrate more prosocial behaviors, and maintain conversations with peers show gains in self-regulation, greater social competence, and gains in language and literacy skills during preschool [4–6,34].

In sum, there is growing evidence that aspects of how children engage with teachers and peers in ECE settings contribute to learning and development [4–6]. Thus, it is important to identify factors that contribute to more positive child engagement during the preschool years.

## 5. Family–Teacher Relationships and Child Engagement

While family–teacher relationships have been associated with important child outcomes in K-12 settings, very little research has directly examined links between family–teacher relationships and positive child engagement in ECE settings. One study found that parents who had direct and regular contact with the school (which partially aligns with the practices aspect of family–teacher relationships) had children who demonstrated

more positive engagement with their peers and adults in kindergarten [35]. Mechanisms for such associations are not yet delineated. For instance, it may be that as families and teachers engage in practices such as communication and responsiveness to feedback from one another, children experience more consistency across home and school and, therefore, feel more at ease to engage with others. Teachers may also be better able to set up environments and interactions that elicit positive child engagement, which may lead to improved developmental outcomes. Another study found a small impact of the Getting Ready parent engagement intervention on children's ECE-reported social skills (e.g., closeness) [30]. A recent pilot program in Head Start, designed to help educators create more culturally inclusive and welcoming environments by responding to and learning more about families' practices and routines, showed positive influences on child engagement [17]. The program involved a coffee hour event where families completed a Home-to-School Information Sheet about family traditions. The authors reflected that parents and children were excited to share about themselves with teachers and peers [17].

Research on other central aspects of family–teacher relationships, specifically knowledge and attitudes [14,16], is also needed to understand contributors to children's positive engagement in their ECE settings. A teacher's knowledge about children and their families, and their attitude towards them, may support more positive child engagement in ECE. For example, a teacher with commitment to inclusion of various religions may create an environment that encourages families to share customs and beliefs, thus supporting children's sense of belonging and, therefore, also their engagement with teachers and peers. More research about family–teacher relationships that includes teacher attitude toward and knowledge about families, and their links with child outcomes in ECE, is needed to inform strategies to support development.

## 6. Current Study

This study contributes to a developing body of research about the ways in which quality family–teacher relationships contribute to children's experiences and development in ECE. Specifically, this study explores how parent perceptions of family–teacher relationships (i.e., knowledge, practices, attitudes) contribute to positive child engagement in preschool. Since the majority of four- and five-year old children attend center-based care [36], this study focuses on center-based ECE and uses the term "teacher" to refer to adults caring for children in these settings.

This study examines two research questions to explore links between three aspects of family–teacher relationships (i.e., knowledge, practices, attitudes), and child engagement with teachers and peers: (1) How is a stronger family–teacher relationship associated with child engagement with teachers? and (2) How is a stronger family–teacher relationship associated with child engagement with peers? Based on prior research with elementary school children [35]), and a pilot program in ECE [17], it is hypothesized that more positive practices between teachers and families will be associated with higher levels of child engagement with teachers and peers. Given limited research on the attitudes and knowledge aspects of family–teacher relationships, this study poses an exploratory hypothesis that, in families who perceive that their teacher has a more positive attitude toward them, and who feel more comfortable sharing information with their teacher, children will show more positive engagement with teachers and peers.

## 7. Method

### 7.1. Participants

This study utilized data from Oregon's Quality Rating Improvement System (QRIS) Validation Study [37]. Oregon's QRIS is a voluntary star-rating system that rates early learning programs on standards within five domains of quality [38]. The QRIS Validation Study encompassed two inter-related studies. Data for the current paper were drawn from the second study, which examined links between QRIS ratings and child and family engagement in home- and center-based programs [39]. The current analysis focuses on the

127 center-based ECE programs, given limited understanding in the field of measuring child engagement in home-based early learning programs.

All programs that applied for a rating on Oregon's QRIS during the time of the second study (August 2015–January 2017) were invited to participate (see [37] for details). The sample included 492 preschool children (and their reporting family member), enrolled in 127 centers with 286 teachers (including assistant teachers). The sample reflected diversity in child race/ethnicity (e.g., 26% Latino/Hispanic), language (23% dual language learners), income, and parent education (Table 1). The majority of the teachers (96%) were female with an average age of 39.9 years (*SD* = 13.1 years). English was the language spoken at school by 96% of the teachers. Eighty percent of the teachers identified themselves as White, 2% African American, 5% American Indian/Native American, 14% Latino, 3% Asian, and 1% Other. Teacher education varied: graduate degree (9%), Bachelor's degree (29%), some college/Associate of Arts degree (50%), and high school or less (12%).

**Table 1.** Descriptive Statistics for Child and Parent Demographics.

| Demographics | n | Frequency% | M | SD | Min. | Max. |
|---|---|---|---|---|---|---|
| | | Child | | | | |
| Female | 460 | 51% | | | | |
| Age (in years) | 463 | | 4.56 | 0.67 | 2.58 | 6.28 |
| Race/Ethnicity | | | | | | |
| White | 356 | 74% | | | | |
| Latino | 126 | 26% | | | | |
| African American | 20 | 4% | | | | |
| Asian/Pacific Islander | 19 | 4% | | | | |
| Other race/ethnicity | 24 | 5% | | | | |
| Dual Language Learner | 113 | 23% | | | | |
| # of Months Attended Care/Preschool | 470 | | 13.57 | 12.50 | 0.00 | 60.00 |
| | | Parent | | | | |
| Female | 423 | 86% | | | | |
| Age (in years) | 434 | | 34.57 | 7.37 | 18.41 | 72.95 |
| Race/Ethnicity | | | | | | |
| White | 356 | 74% | | | | |
| Latino | 108 | 22% | | | | |
| African American | 6 | 1% | | | | |
| Asian | 15 | 3% | | | | |
| Other race/ethnicity | 26 | 4% | | | | |
| Primary Language | | | | | | |
| English | 394 | 80% | | | | |
| Spanish | 78 | 16% | | | | |
| Other | 18 | 4% | | | | |
| Education | | | | | | |
| Less than HS | 42 | 9% | | | | |
| HS equivalent | 108 | 23% | | | | |
| Some college or AA | 158 | 33% | | | | |
| BA | 88 | 18% | | | | |
| Graduate degree | 80 | 17% | | | | |
| Household Income | | | | | | |
| Less than $25,000 | 166 | 34% | | | | |
| $25,000–$34,999 | 74 | 15% | | | | |
| $35,000–$44,999 | 38 | 8% | | | | |
| $45,000–$54,999 | 27 | 6% | | | | |
| $55,000–$74,999 | 40 | 8% | | | | |
| $75,000/more | 122 | 25% | | | | |

*7.2. Procedure*

One classroom serving preschool-aged children was randomly selected from each of the 127 centers to participate. Consent forms and surveys were distributed to directors/owners and to all the teachers, assistants/aids, and families in the selected classroom, in accordance with the protocol approved by the [University Name's] Institutional Review Board. Interested parents returned the consent forms and completed surveys either online or in a sealed envelope to the classroom teacher to protect confidentiality. Up to four children in each classroom, with parent consent were randomly selected to participate in child engagement classroom observations.

*7.3. Measures*

Family–Teacher Relationships. Parent perception of the quality of their relationship with their child's ECE teacher was measured using the parent-report version (short-form) of the Family and Provider/Teacher Relationship Quality (FPTRQ) [23]. A Confirmatory Factor Analysis (CFA) using the sample of parents (N = 1184) who completed the FPTRQ full measure in the field study revealed that the short-form retained the structure of the full measure. There were strong correlations between the full measure subscales and short-form subscales, and the variance accounted for ranged from 83 percent to 100 percent [40]. The short-form included 25 items, took about 5 min to complete, and was offered to families in English and Spanish [40]. All FPTRQ items were rated on a 4-point, Likert-type scale, with higher ratings reflecting a more positive family–teacher relationship. This study utilized all three subscales from the short-form:

*Knowledge.* Knowledge was measured by three items in which parents reported the extent to which they felt comfortable sharing information about their family with the teacher. Examples included: "How comfortable would or do you feel sharing with your childcare provider or teacher changes happening at home" and "How comfortable would or do you feel sharing with your childcare teacher the role that faith and religion play in your household." The three items were summed into a total knowledge score with good internal consistency ($\alpha$ = 0.89 in current study).

*Practices.* Parents also responded to 13 items about practices related to collaboration, communication, family-focused concern, and responsiveness. Examples included: "Since September, how often have you met with or talked to your childcare teacher about goals you have for your child" and "How often does your teacher ask you about the cultural values and beliefs you want him/her to communicate to your child?" The 13 items were summed for a total practices score with excellent internal consistency ($\alpha$ = 0.93 in the current study).

*Attitudes.* Parents responded to nine items measuring their perception of teacher attitudes related to commitment, understanding context, and respect. Sample items included: "My teacher is understanding," and "My childcare teacher judges my family because of our faith and religion" (reversed). Higher scores reflected a more positive family–teacher relationship. The nine items were summed into a total attitudes score with good internal consistency ($\alpha$ = 0.77 in the current study).

**Child Engagement.** Children's engagement with adults, peers, and tasks or learning activities was measured with the Individualized Classroom Assessment Scoring System (inCLASS) [41]. The inCLASS demonstrates construct validity [7] and measured ten dimensions comprising four domains: positive engagement with teachers, positive engagement with peers, positive engagement with tasks, and negative engagement [7]. Focusing on positive engagement, this study concentrated, specifically, on the two domains of positive engagement with teachers and peers; higher scores reflect more positive engagement. Positive engagement with teachers included two dimensions ($\alpha$ = 0.80 in current study): (a) positive engagement with teacher (i.e., attunement to the teacher, proximity seeking, and shared positive affect), and (b) teacher communication (i.e., initiates conversation with the teacher, sustains conversation, and uses speech for varied purposes). Positive engagement with peers included three dimensions ($\alpha$ = 0.88 in current study): (a) peer sociability (e.g.,

shared positive affect, cooperation), (b) peer assertiveness (e.g., leadership), and (c) peer communication (e.g., initiates conversations with peers).

Observations were conducted as four 10-min cycles of observation followed by a 5-min coding period. In the current study, each child was observed an average of 3.97 cycles (*SD* = 0.23, range 1–5). The observations were conducted in English or Spanish, dependent on the primary language of the classroom. Data collectors followed study guidelines for the types of activities to observe, for consistency across children and programs. This included two to three observation cycles in which free play was the main activity, at least one cycle focused on a large group or whole group setting as the primary activity, and one (or no) cycle included routine/transition, meals/snacks, or structured small group or individual time as a primary activity.

Data collectors attended a two-day training and certification process with a certified inCLASS trainer. To become certified, data collectors passed the reliability portion of the training with a score of at least 80%. Reliability was further established in the field within the observation team. Eight children (24 cycles) were double-coded and consensus scores were reached after the observations. The average agreement was 95%. Following inCLASS protocols, one year after initial inCLASS certification, data collectors were re-certified to ensure that there had not been notable coder drift over time.

**Covariates.** Characteristics of children and families were reported in the family survey and were explored as potential covariates: child age in years, gender (0 = *male*; 1 = *female)*, race/ethnicity (0 = *white only*, 1 = *another race/ethnicity*), dual language-learner status (0 = *no*, 1 = *yes*), parent report of child temperament (i.e., surgency, negative affect, and effortful control) [42], number of hours per week child attended center, household income the previous year, and the proportion of cycles the teacher was part of the activity being observed. Literature on the association between temperament and the quality of interactions with teachers and peers suggests child temperament is an important covariate to include in analysis [43,44].

## 8. Data Analysis

The three aspects of family–teacher relationships were modestly to moderately correlated with one another (rs = 0.17 to 0.35), affirming the appropriateness of examining them as independent predictor variables. Multilevel level modeling (MLM) was conducted due to the hierarchical nature of the data where children (level 1) were nested within classrooms (level 2). The percentage of missing data was as follows: knowledge (2%), practices (2%), attitudes (2%), child age (6%), female (7%), dual language status (0%), surgency (2%), negative affect (2%), effortful control (2%), household income (5%), hours per week child attended center (3%), teacher is a part of the activity (0%), positive engagement with teacher (0%), positive engagement with peers (0%), and negative engagement (0%). Missingness was addressed with full information maximum likelihood in Mplus 7th Edition [45] to provide a more efficient estimate that uses all available information. Nonsignificant covariates were trimmed from the final model, with the exception of dual language learner status which was included because it reflected the language of assessment.

## 9. Results

### 9.1. Preliminary Analyses

Table 2 provides descriptive statistics and correlations for predictor, outcome, and covariate variables. Overall, parents reported relatively high mean levels in all three aspects of the family–teacher relationship, with substantial variability around the means. The examination of descriptive statistics allowed for the identification of any missing data on predictor and outcome variables, as well as checking for outliers, test assumptions (i.e., linearity, homoskedasticity, independence of errors, normality) [45], and to identify whether the data were skewed. An examination of histograms, and skewness and kurtosis descriptive statistics, indicated the data were not normally distributed, suggesting the need for the Robust Maximum Likelihood Estimator (MLR). Two of the inCLASS dimensions

used to create the outcome variables were skewed and/or kurtotic (assertiveness = 1.3 skew, 1.44 kurtosis; teacher communication = 0.96 skew, 0.63 kurtosis). Both outcome variables were moderately skewed (between 0.5 to 1.0, or between $-1$ to $-0.5$), but not excessively kurtotic (close to 0). Therefore, MLR was used in MPlus because this maximum likelihood parameter provides estimates with standard errors that are robust to non-normality and non-independence of observations [45].

There was only one significant correlation between the FPTRQ subscales and inCLASS constructs: family–teacher relationship practices were significantly and positively correlated with children's positive engagement with teachers ($r = 0.10$, $p < 0.05$).

Unconditional multilevel models were initially fit for the outcome variables to estimate the proportion of variance at the child and classroom levels. The intraclass correlations were as follows: children's positive engagement with teachers = 0.37, and positive engagement with peers = 0.20, which indicated the appropriateness of multilevel analysis.

*9.2. Hypothesis Testing*

Following this, a series of conditional models were fit to test the hypotheses (Table 3). These linear, fixed-effect models included family–teacher relationships (i.e., knowledge, practices, and attitudes) at level 1, predicting the child engagement outcomes (positive engagement with teacher, positive engagement with peers) with good internal consistency, which resulted in two final models. Continuous predictors were grand-mean centered to enhance interpretability of parameter estimates and account for potential multicollinearity [46]. Consistent with the hypothesis, family–teacher relationship practices significantly predicted children's positive engagement with teachers. Children whose parents reported more frequent or more characteristically positive practices between the family and teacher were more positively engaged with their teacher in the classroom, when compared with children whose parents reported fewer positive practices. Contrary to the hypothesis, none of the family–teacher relationship subscales significantly predicted children's positive engagement with peers during preschool.

**Table 2.** Bivariate Correlations Between Predictor Variables, Outcome Variables, and Covariates.

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Knowledge | 1.00 | | | | | | | | | | | | | | |
| 2. Practices | 0.36 ** | 1.00 | | | | | | | | | | | | | |
| 3. Attitudes | 0.10 * | 0.24 ** | 1.00 | | | | | | | | | | | | |
| 4. Engagement with teachers | 0.05 | 0.10 * | 0.01 | 1.00 | | | | | | | | | | | |
| 5. Engagement with peers | 0.03 | −0.06 | 0.02 | 0.333 ** | 1.00 | | | | | | | | | | |
| 6. Child age at observation | 0.01 | 0.06 | −0.03 | 0.07 | 0.27 ** | 1.00 | | | | | | | | | |
| 7. Child is female | 0.07 | 0.02 | 0.00 | 0.13 ** | 0.02 | −0.04 | 1.00 | | | | | | | | |
| 8. Child is of minority status | −0.01 | 0.13 ** | 0.04 | 0.01 | −0.16 | 0.07 | −0.01 | 1.00 | | | | | | | |
| 9. Child Dual Language Learner | −0.06 | 0.15 ** | 0.01 | −0.11 * | −0.19 | 0.13 ** | −0.05 | 0.56 ** | 1.00 | | | | | | |
| 10. Surgency | −0.01 | 0.07 | 0.02 | 0.08 | 0.10 * | 0.06 | −0.11 * | −0.15 | −0.10 * | 1.00 | | | | | |
| 11. Negative Affect | −0.12 ** | −0.02 | −0.03 | 0.02 | 0.04 | 0.10 * | 0.06 | −0.07 | −0.02 | 0.09 * | 1.00 | | | | |
| 12. Effortful Control | 0.13 ** | 0.17 ** | 0.04 | 0.05 | 0.13 ** | 0.06 | 0.18 ** | 0.03 | 0.01 | 0.04 | −0.02 | 1.00 | | | |
| 13. Hrs/wk in this program | −0.05 | −0.20 ** | −0.03 | −0.09 | 0.03 | −0.07 | 0.00 | −0.04 | −0.09 | −0.04 | −0.08 | 0.03 | 1.00 | | |
| 14. Household income | 0.00 | −0.29 ** | −0.03 | −0.05 | 0.13 ** | −0.04 | −0.07 | −0.32 ** | −0.22 ** | −0.07 | −0.20 ** | 0.02 | 0.39 ** | 1.00 | |
| 15. Proportion of Cycles teacher part of activity | 0.03 | 0.04 | −0.03 | 0.25 ** | −0.14 ** | −0.01 | 0.03 | 0.01 | 0.03 | 0.05 | −0.06 | −0.02 | −0.14 ** | −0.42 | 1.00 |
| Mean | 9.90 | 39.53 | 17.54 | 2.88 | 2.88 | 4.56 | | | | 4.49 | 3.98 | 5.42 | 23.71 | 3.14 | 0.66 |
| Standard Deviation | 2.02 | 8.89 | 3.06 | 0.97 | 0.99 | 0.67 | | | | 0.75 | 0.79 | 0.66 | 12.36 | 2.08 | 0.27 |
| Minimum | 3 | 9 | 03 | 1.00 | 1.00 | 2.58 | | | | 1.75 | 1.82 | 3.00 | 6.00 | 1 | 0.00 |
| Maximum | 12 | 52 | 36 | 5.75 | 6.17 | 6.28 | | | | 6.83 | 6.45 | 7.00 | 64.00 | 6 | 1.00 |
| N | 484 | 483 | 483 | 492 | 492 | 463 | 460 | 477 | 492 | 484 | 484 | 484 | 478 | 467 | 492 |

Note: Child is of minority status and child dual language learner are dummy coded (0 = no, 1 = yes). * $p < 0.05$, ** $p < 0.01$.

**Table 3.** Effects of Family–Teacher Relationships on Child Engagement.

|  | Positive Engagement with Teacher | | Positive Engagement with Peers | |
| --- | --- | --- | --- | --- |
| ICC | 0.37 | | 0.20 | |
| *Fixed Effects* | β (SE) | B (SE) | β (SE) | B (SE) |
| Intercept | 5.07 ** (0.46) | 2.78 (0.09) ** | 5.55 ** (0.51) | 2.84 (0.06) ** |
| *Covariates* | | | | |
| Child Age | 0.10 † (0.06) | 0.12 † (0.07) | 0.32 ** (0.05) | 0.42 *** (0.07) |
| Female | 0.16 ** (0.05) | 0.26 ** (0.08) | 0.06 (0.05) | 0.10 (0.10) |
| Dual language status | −0.10 (0.06) | −0.20 (0.12) | 0.06 (0.06) | 0.12 (0.13) |
| Surgency | 0.07 (0.06) | 0.08 (0.06) | 0.16 ** (0.06) | 0.19 ** (0.07) |
| Effortful control | 0.00 (0.05) | 0.00 (0.06) | 0.11 * (0.05) | 0.15 * (0.07) |
| Household income | −0.01 (0.06) | −0.01 (0.02) | 0.17 ** (0.06) | 0.07 ** (0.03) |
| Teacher part of activity | 0.34 *** (0.06) | 0.99 *** (0.16) | −0.15 * (0.06) | −0.46 * (0.18) |
| | | *Family–Teacher Relationships* | | |
| Knowledge | −0.04 (0.05) | −0.02 (0.02) | 0.02 (0.05) | 0.01 (0.02) |
| Practices | 0.12 * (0.06) | 0.01 * (0.01) | −0.06 (0.06) | −0.01 (0.01) |
| Attitudes | −0.01 (0.05) | −0.00 (0.01) | 0.02 (0.05) | 0.01 (0.01) |

Note: Only significant covariates were included in the final models. † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

## 10. Discussion

This study expands prior research by examining how three domains of quality family–teacher relationships may be important to children's engagement with peers and teachers in ECE. The study draws upon the bioecological framework [13] because ECE is an important microsystem in which children develop, and dynamics in the mesosystem between families and teachers may be important to children's engagement in their ECE settings. Results indicate a modest positive association between family–teacher relationship practices and children's positive engagement with their teachers. Neither the attitudes nor the knowledge aspects of family–teacher relationships were significantly associated with children's engagement.

### 10.1. Practices in Family–Teacher Relationships

Findings suggest that when families and teachers engage in more practices such as collaboration, communication, sensitivity to cultural diversity, responsiveness to family feedback, and demonstrating concern for families by asking questions and remembering details about the family, children show more positive engagement with their teachers. Although the magnitude of this association is small in size, it is consistent with prior evidence of associations between these types of practices and related outcomes, such as children's academic and socio-emotional development in ECE [10,12,29,30]. Further, findings are in line with one study documenting a link with child engagement in an urban kindergarten [35] and a pilot program in urban Head Start [17]. The current study suggests that such practices may also support children's engagement with their teachers in preschool. One potential mechanism through which this may occur is that practices such as communication about families' cultural values and beliefs help teachers to identify and meet children's needs; this elicits children's positive engagement with the teacher, such as by reducing children's stress and supporting a sense of belonging. Additionally, when a teacher asks families supportive questions that show genuine care, families may talk with their children about their teacher or their school in a more positive light, which could support children's affinity for and engagement in the program. Future research should examine these and other potential mechanisms to provide more detailed information for professional development and support for teachers.

In contrast, we found no significant associations between the practices aspect of family–teacher relationships and children's positive engagement with peers. This diverges from a previous study that documented associations between family involvement with the school and children's positive engagement with peers [35]. Several possible reasons for the difference in findings across the studies include age/grade, different measures of predictors

and outcomes, and the current study's inclusion of more covariates (i.e., temperament). The current study considered a more comprehensive report of family–teacher relationships to include knowledge and attitudes constructs in addition to practices and a rigorous method (i.e., observation) for child engagement, whereas in the McWayne [35] study, parents reported on only six items related to direct school contact and the study did not use observations to assess a child's interactions with teachers and peers. Further, in the current study, we found children's positive engagement with peers was predicted by covariates that did not predict unique variance in children's engagement with their teachers, including age, income, and temperament (i.e., surgency, effortful control). Another possible reason that family–teacher practices were linked with children's positive engagement with teachers, but not positive engagement with peers, may be that engagement with teachers is more proximal, or under more control of the teacher.

### 10.2. Parent Perception of Teacher Knowledge and Attitudes

The current study did not detect significant linkages between the knowledge and attitudes aspects of family–teacher relationships and the two child-engagement outcomes. This study was exploratory in its consideration of knowledge and attitudes, as most of the prior research focused on specific types of practices, such as communication between teachers and parents [10,25], but not on parent comfort in sharing knowledge about the family, nor parent perceptions of teacher attitudes (i.e., respect, commitment, and understanding context). Prior research on teacher attitudes and knowledge has not focused on child outcomes but rather on teacher role in family–teacher relationships [21]. For example, Churchill [47] found mutual respect to be an important aspect of relationships between parents and providers. Thus, the null findings contribute to the knowledge base on attitudes and knowledge aspects of family–teacher relationships and link to child outcomes. Additionally, limited variability in the knowledge and attitudes constructs could have hindered the potential to detect associations with child engagement.

### 10.3. Study Limitations and Future Directions

This study contributes to a small literature base on associations between family–teacher relationships and child outcomes in ECE. However, there are limitations that must be acknowledged. First, this analysis only examined parent (mostly mother) report of the family–teacher relationship. It did not consider teacher-report, nor teacher covariates such as quality of teacher–child interactions or teacher credentials or educational levels, which could affect the relationship between family–teacher relationship and child engagement [48]. Although the family survey asked parents to respond to questions about their experience with the teacher/staff they named at the top of the survey, it is likely that more than one teacher, including assistant teachers, were present during the inCLASS observations of child engagement. Therefore, it is not possible to include classroom-level teacher covariates in analysis. Further, the possibility of multiple teachers in a classroom necessitates a fuller understanding of the role of assistant teachers. Additionally, this study focused on center-based care, and did not consider home-based care, because measurement of child engagement in home-based care is not well-established. Type of care may be an important contributor to family–teacher/provider relationships, as well as to child outcomes [49,50].

An important next step for research in this area is to examine associations among parent and teacher reports of all three constructs (knowledge, practices, and attitudes), as well as similar and differential associations with both family outcomes (e.g., parental feelings of support, home learning environments) and child outcomes, such as engagement. It will be critical for this work to examine diversity in families' experiences, and relationships with teachers, that may influence their children's engagement. Previous research indicates contextual factors such as race/ethnicity, family structure, and socioeconomic status are related to parent involvement in schools and education [25,51,52]. Teacher covariates such as education and experience should also be considered [25,48] in the associations between teacher professional experience and family–teacher relationships [53]. These family and

teacher characteristics may also influence the interactions children have with their teachers and peers. For example, initial evidence from the current study suggests that family income is a significant covariate in predicting positive engagement with peers.

## 11. Conclusions

Although the link between child engagement and child outcomes, as well as the link between family–teacher relationships and child academic and social-emotional outcomes, are established in preschool children [4–6], the link between family–teacher relationships and child engagement is relatively unknown. The identification of malleable factors, such as family–teacher relationships, that contribute to children's positive interactions with teachers and peers in ECE is important in supporting early development. This paper adds to the literature by demonstrating that family–teacher relationships are associated with preschool children's engagement with their teachers, and this is associated with positive child outcomes (e.g., social competence, executive function) [4,6]. The current study expands upon prior research of family–teacher relationships by examining multiple aspects of these relationships (knowledge, practices, attitudes) and children's engagement in their early learning centers. A key strength of this study was measurement of the practices construct of family–teacher relationships, which included collaboration on student goals, teacher responsiveness to family-feedback, and teacher knowledge of and sensitivity to cultural diversity. Future studies should examine cultural diversity more closely to determine whether certain aspects of family–teacher relationships may be more important for children and families from diverse racial and/or religious backgrounds. With further study, including examination of teacher reports, and home-based ECE, findings could inform professional development opportunities to help support teachers in the important work of building and maintaining positive relationships with families. For example, programs may provide training to teachers on ways to strengthen practices such as collaborative goal-setting, communicating with families about their cultural values and beliefs, and then responding in culturally inclusive and welcoming ways.

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