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## Chasing the white whale: Capturing the relation between parent educational involvement and student socioemotional difficulties over time

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Chasing the white whale: Capturing the relation between parent educational involvement  
and student socioemotional difficulties over time

Proposal for Dissertation

Presented to

The Department of Psychology

DePaul University

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May 22<sup>nd</sup>, 2018

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## Abstract

Early childhood socioemotional difficulties are of increasing concern due to their impact on later functioning, particularly in the academic environment. A large body of research highlights the relation between parent educational involvement and student academic success such that more involvement is associated with better grades, retention, and graduation. It is praised by the research community and policymakers as a protective factor for those students at risk for poor outcomes. An under-researched area of the parent educational involvement literature is the construct's relation to student socioemotional functioning, which also affects success in the academic environment and predicts long term functioning. A handful of studies document parent educational involvement is associated with less externalizing and internalizing difficulties in longitudinal studies with preschoolers (Fantuzzo, McWayne, Perry, & Childs, 2004; Goldberg & Smith 2017). However, less information is known about whether and how child socioemotional functioning influences parent educational involvement. This study seeks to longitudinally investigate these associations, evaluating parent educational involvement as a predictor of later child socioemotional difficulties, and socioemotional difficulties as a predictor of later parent educational involvement. Participants were low-income, predominantly Latinx preschoolers ( $n = 69$ ) and their primary caregivers. Regression analyses revealed a significant negative association between baseline home-school conferencing and later child difficulties ( $\beta = -.20, p < .05$ ), after controlling for child age and gender, and initial socioemotional functioning. Additionally, child socioemotional difficulties predicted later home-based involvement ( $\beta = .23, p < .05$ ), after controlling for initial levels of parent educational involvement and marital status. Results suggest promoting positive home-school communication may curb later socioemotional concerns. In addition, findings highlight child functioning influences parent educational involvement, and socioemotional problems may act as an invitation for parents to increase their educational involvement at home. Cultural considerations and the implications for research and policy are discussed, including strategies for developing regular positive communication that may be viable for ethnic minority low-income families.

Chasing the white whale: Capturing the relation between parent educational involvement and student socioemotional difficulties over time

Parent educational involvement is lauded by parents, school personnel, and policy makers as an important piece of children's educational success, which has often been documented through associations with academic achievement. However, definitions of educational success increasingly integrate socioemotional competencies as key components of school readiness (Blair & Raver, 2015), and the significance of early socioemotional problems is now well recognized by education and public health experts. Epidemiological studies show nine to fourteen percent of children aged 0 to 5 in the United States experience emotional or behavioral problems (Brauner & Stephens, 2006), resulting in significant impairment, family stress (Repetti, Taylor, & Seeman, 2002), and poor academic achievement or school failure (Sabol & Pianta, 2012). Understanding associations between parent educational involvement and child socioemotional functioning may be particularly important for low income, Latinx children, because of increased risk for socioemotional deficits at school entry (Tough, 2013) and difficulty capitalizing on known protective factors, such as parent educational involvement (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Desimone, 1999; Williams & Sánchez, 2013). Enhancing parents' earliest interactions with school systems may set them up for a positive educational involvement trajectory, and prevent or reduce child socioemotional difficulties.

Epstein's conceptual framework (Figure 1) can be used to understand family and school relations. The theory includes history, child development, and the shifting relationships between key stakeholders (parents, children, and teachers). Epstein (1987) posits there are overlapping spheres between home and school that are influenced by several external factors including time (e.g. grade level and social conditions at the time the child is in school), the experience of the

family (e.g. previous relations with schools, beliefs and attitudes regarding school involvement), and the experience of the school and its personnel (e.g. dedication to involving parents). This framework highlights the importance of children to the home-school dynamic and transactional associations between child, family, and schools. Further, the model posits active partnerships between the two systems enhances child well-being, proposing protective functions for parent educational involvement (Grolnick & Raftery-Helmer, 2015).

### **Does Parent Educational Involvement Influence Child Socioemotional Outcomes?<sup>1</sup>**

Parent Educational Involvement can be defined as “parents’ behaviors in home and school settings meant to support their children’s educational progress” (El Nokali, Bachman, & Votruba-Drzal 2010, p. 989). It is a robust predictor of student academic outcomes for children in early childhood education settings (Ma, Shen, Krenn, Hu, & Yuan, 2016) and across school grades (Jeynes, 2007; Topper, Keane, Shelton, & Calkins, 2011; Wang & Sheikh-Khalil, 2014). Although less frequently studied, a handful of studies document parent educational involvement predicts better child socioemotional functioning from preschool through high school and among Caucasian and African American children (Downer & Mendez, 2005; El Nokali et al., 2010; Farver, Xu, Eppe, & Lonigan, 2006; Powell, Son, File, & San Juan, 2010). Specifically, parent educational involvement is associated with reduced child externalizing problems both concurrently and prospectively (Baker, 2013; Domina, 2005; Fantuzzo, McWayne, Perry, & Childs, 2004).

Home-based involvement (e.g. reading to the child, educational outings, discussing school, etc.) predicts later reductions on teacher-reported child conduct problems, hyperactivity, and inattention/passivity among low-income, urban African American preschoolers attending

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<sup>1</sup> See Appendix A for a detailed literature review

Head Start centers (Fantuzzo et al., 2004). In addition, Goldberg and Smith (2017) found parent-reported school-based involvement predicted fewer internalizing difficulties two years later when controlling for baseline difficulties in a preschool sample. Results mirror the cross-sectional findings of a study with older children that documented correlations between more home- and school-based involvement and less hyperactivity and better social skills (McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004). Despite increased barriers to parent educational involvement among Latinx families, home-based involvement is associated cross-sectionally with social competence among preschool aged children (Farver et al., 2006) and first graders (Valdez, Shewakramani, Goldberg, & Padilla, 2013)

The relation between home-school conferencing and child socioemotional outcomes is less well understood. In their longitudinal study with African American preschoolers, Fantuzzo and colleagues (2004) found parent-reported home-school conferencing was associated with less teacher-reported child conduct problems 6 months later. In contrast, Goldberg and Smith (2017) found home-school conferencing in preschool did not predict later internalizing difficulties and Serpell and Mashburn (2012) found attending conferences was not a significant predictor of child outcomes during preschool and at kindergarten entry. Unexpectedly, they found higher frequency of parent-teacher phone calls during preschool predicted more problem behaviors and lower social competence during preschool and at kindergarten entry (Serpell & Mashburn, 2012). However, their measure captured both successful and unsuccessful attempts at communication (missed calls) initiated by parents or teachers. It is possible a higher frequency of calls indicated a lack of conferencing (e.g. failed contacts), which may lead to worsening behavioral problems, since the problematic behavior is never resolved. Based on these conflicting results, further

research is needed to disentangle the relation between home-school conferencing and socioemotional difficulties for preschoolers.

### **Does Child Socioemotional Functioning Predict Parent Educational Involvement?**

Conceptual models of family-school relationships (Epstein, 1987), and developmental psychopathology models propose evocative effects of child maladaptation on parenting (Pearl, French, Dumas, Moreland, & Prinz, 2014; Williams et al., 2009) and suggest child socioemotional functioning also shapes parent educational involvement. Children who are defiant evoke more negative responses from parents, such as ineffective discipline, a permissive discipline style, and less positive parenting and satisfaction (Burke, Pardini, & Loeber, 2008; Pearl et al., 2014). Children's internalizing problems also predict later parenting difficulties (e.g. ignoring misbehavior, lack of confidence in parenting; Williams et al., 2009).

On the other hand, specifically pertaining parent educational involvement, Hoover-Dempsey and Sandler's (1995) model posits children's invitations for parent educational involvement are key predictors. These invitations may be implicit (e.g. difficulties with school or homework requiring the parent's involvement for a resolution) or explicit requests (e.g. asking parents to attend field trips). Green, Walker, Hoover-Dempsey, and Sandler (2007) found child explicit invitations for involvement were predictive of home-based and school-based involvement, even after accounting for socioeconomic status and maternal education supporting children are active participants in the home-school relationship.

Cross-sectional studies report mixed findings regarding the associations between children's socioemotional functioning and parent educational involvement at home. Grolnick, Benjet, Kurowski, and Apostoleris (1997) reported mothers participated in more home-based involvement activities with children they perceived as less difficult (e.g. more obedient and less



controlling). In contrast, Downer and Mendez (2005) reported preschoolers' negative emotional intensity was associated with more father involvement in home-based educational activities among low-income, African Americans. Sample differences (predominantly low-income African-American fathers vs. economically diverse white mothers) may explain the different findings of these two studies; most the children in Grolnick and colleagues' (1997) study also lived in two-parent households, and mothers may have reported less involvement with difficult children because they sought additional assistance from a co-parent at home.

However, cross-sectional research does not clarify the directionality of associations. To address this gap, one longitudinal study tested the effect of child socioemotional problems on later parent educational involvement. Høglund and colleagues (2015) investigated three types of models (transactional, child effects only, and parent effects only) to describe the relation between individual dimensions of parent educational involvement (homework assistance, conferencing, and school-based involvement) and aggressive behavior in a two-year longitudinal study. The best fitting model included child socioemotional functioning effects on parent educational involvement activities; specifically, aggressive behaviors in the fall of 3<sup>rd</sup> grade significantly predicted more caregiver homework assistance in the spring of 3<sup>rd</sup> grade. Models with parent-to-child or transactional effects were not a good fit for the data. This study suggests child characteristics impact parent educational involvement for a diverse population of elementary school-aged children. However, no other published studies investigate the transactional relation between educational involvement and socioemotional functioning, which suggests additional research is needed to explore these relationships, especially for younger children and those experiencing internalizing difficulties.

## **Current Study**

Theory suggests parent educational involvement and child socioemotional outcomes are intrinsically connected (Epstein, 1987). Research has documented home-based educational involvement longitudinally predicts fewer socioemotional problems for preschoolers (Fantuzzo et al., 2004; Goldberg & Smith, 2017) and young children (El Nokali et al., 2010). However, findings are mixed regarding the effects of home-school conferencing activities on child socioemotional outcomes, and reflect methodological differences on the measurement of conferencing (i.e. phone contact vs attendance at conferences; Serpell & Mashburn, 2012). On the other hand, little research has evaluated the effects of socioemotional problems on educational involvement using longitudinal methods, but preliminary research suggests children's behavior can serve as invitations for parent educational involvement (Hoglund et al., 2015). Moreover, studies have infrequently focused on young Latinx children, a growing population in the United States with unique cultural and linguistic characteristics that may influence their attitudes towards and involvement with schools.

The current study had two aims. The first aim of the study was to investigate whether parent educational involvement activities, specifically home-based involvement and home-school conferencing predict later socioemotional functioning during preschool within a low-income, Latinx population. The second aim of our study was to explore whether child socioemotional difficulties during preschool influence later parent educational involvement among low-income Latinx caregivers.

## **Method**

### **Participants**

Seventy-one, 3-to-5-year-old, predominantly Latino children and their parent(s)

participated. Families were recruited from three sites of a large provider (approx. 600 children) of Head Start services in the Chicago area where most of the staff was bilingual (English and Spanish). The sites served neighborhoods that were predominantly Latinx: flyers were sent home with all children in all classrooms, and research staff attended parent meetings at the centers to present information about the study and were available on-site to answer questions and enroll participants. All children who attended preschool at the centers could participate unless they (1) already had a sibling participating in the study or (2) had an Autism Spectrum Disorder or Cognitive Impairment diagnosis.

The present sample includes children who participated in baseline and follow-up data collection (8 months later). Twenty families enrolled in the study but only completed the first wave of data collection, so they are not included in the present study. Parents chose not to participate due to scheduling difficulties, because their child no longer attended the center, or they could not be reached. There were some noted differences between this study's sample of 71 parent-child dyads and the 20 families that did not participate in the follow up data collection. For example, non-participating families were less likely to be Latinx than participating children ( $X^2(4, N = 89) = 13.31, p < .05$ ; 65% vs 92.8% Latinx) and parents ( $X^2(4, N = 91) = 11.02, p < .05$ ; 65% vs. 91.5%) and of higher income (52.6% made above \$30,000 vs 27%;  $F(1,83) = 4.451, p < .05$ ). In addition, the caregivers' country of origin was more diverse for non-participating families ( $X^2(5, N = 91) = 12.45, p < .05$ ). There were no significant differences in group means for child age or gender, or parental marital status, level of education completed, or employment status. Two participants were removed from further data analyses due to significant missing data on one of the key measures, therefore, the final sample size was 69.

Participant demographics for the 69 children and caregivers in this study are presented in

Table 1. Children were 3 to 5 years and 8 months old ( $M = 3.89$ ,  $SD = .73$ ) Most were Latinx (92.5%) and half the children were male (52.2%). Primary caregivers were 100% female, and mostly biological mothers. One primary caregiver was an adoptive mother. Primary caregivers were mostly Latino (91.3%). Additionally, many caregivers were immigrants (63.7%) and the majority identified as Mexican (94.9%). Half of the primary caregivers completed high school or less (50.7%). Most families made less than \$30,000 per year (71.9%) and spoke another language in the home besides English (61%).

## Measures<sup>2</sup>

*Demographics.* A questionnaire created for the study, which gathered information about the child's age, gender, and ethnicity as well as information on the caregiver's age, education, ethnicity, immigration history (i.e. country of birth, age moved to the United States, if applicable), income and employment (i.e. full-time, part-time, or unemployed), and languages spoken in the home.

*Child Behavior Checklist Parent-Report Form (CBCL-PRF, Achenbach & Rescorla, 2001).* CBCL-PRF is a 100-item questionnaire assessing parental reports of behavioral and emotional problems, which yield a total score, broadband internalizing and externalizing scales, and eight subscales. Caregivers rate their child's behavior on a 3-point Likert scale (0=Never true, 1=Sometimes True, 2=Often True). It is a measure with excellent internal consistency and test-retest reliability (Weiss, Goebel, Page, Wilson, & Warda, 1999). Validity is supported through correlations with the Behavior Assessment System for Children (BASC) scales ( $r = .38$  to .88) and a high percentage of correct classification of referred versus non-referred children

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<sup>2</sup> See Appendix B for questionnaires

(80–85%; Achenbach & Rescorla, 2001). For this study, the raw total scores were used and internal consistency was acceptable: Year 1  $\alpha = .76$  and Year 2  $\alpha = .81$ .

*Family Involvement Questionnaire Short Form (FIQ-SF, Fantuzzo et al., 2013)*. The FIQ-SF based on the Family Involvement Questionnaire (Fantuzzo, Tighe, & Childs, 2000). It is a 21-item questionnaire that assesses three domains of parent involvement in education: Home-Based involvement (e.g., I spend time with my child working on reading/writing skills, I talk with my child about how much I love learning new things), School-Based involvement (e.g., I volunteer in my child's classroom, I attend parent workshops or training offered by my child's school), and Home-School Conferencing (e.g., I talk to my child's teacher about classroom rules, I talk to the teacher about how my child gets along with his/her classmates in school). Items are rated using a 4-point frequency scale (1= Rarely, 2 = Sometimes, 3 = Often, 4 = Always). This questionnaire was designed specifically for early childhood education (pre-k, kindergarten, 1st grade) and was normed with urban, low-income, minority populations (Fantuzzo, Tighe, & Childs, 2000). The measure is reliable ( $\alpha > .80$ , Fantuzzo et al., 2013; Bulotsky-Shearer, Bouza, Bichay, Fernandez, & Gaona Hernandez, 2016). Also, it demonstrates concurrent validity through correlations with parental satisfaction with the preschool program (Fantuzzo et al., 2013). Subscale scores were calculated by adding the relevant 7 items together to form a total score for each subscale, and the home-based involvement and parent-teacher conferencing subscales were used. The measure demonstrated strong internal consistency in our sample: home-based involvement Year 1  $\alpha = .85$ , home-school conferencing Year 1  $\alpha = .92$ , home-based involvement Year 2  $\alpha = .87$ , and home-school conferencing Year 2  $\alpha = .91$ .

## **Procedures**

During the first wave of data collection (T1), recruitment flyers, consent forms, and

survey packets were sent home to all parents at the three centers in the winter of 2015 and fall of 2016. Survey packets included several measures of their child's functioning (externalizing and internalizing difficulties, parent-child relationship, trauma exposure) and parental information (acculturation, parent-school involvement, stressful life events, psychopathology). Parents were offered the option to complete the questionnaire on their own or with an interviewer (via phone or in-person); only one parent decided to complete the questionnaire with assistance. Parents returned completed packets to the confidential bins at the centers or mailed them to the principal investigator's research office.

Participating families were invited to a follow up assessment (T2) approximately 8 months later. Parents were contacted via telephone, email, and letters sent home with their children or directly mailed to their homes. Children who were no longer enrolled at the preschools were still invited to complete the assessment. Primary caregivers completed a survey packet during the in-person interview after completing interactive activities with their children. For the purposes of this study, selected questionnaires were used from the primary caregiver surveys, at both time points, to explore the relation between child socioemotional difficulties and parent educational involvement.

### **Data Analyses**

To evaluate whether the data met key assumptions for regression analyses, including a linear relationship, normality, independence, and homoscedasticity, scatterplots of the variables' relationship and their variances, as well as the Durbin-Watson statistic and histograms were used. Hierarchical regressions were used for hypothesis testing. Parental education-level, income, and marital status were examined as possible covariates to include in the regression models. Demographic variables were not associated with child socioemotional problems. Marital

status was associated with Home-based Involvement and controlled for in the model where this was the outcome.

To test the relation between baseline (T1) parent educational involvement and later (T2) socioemotional difficulties, child age and gender were entered as covariates to control for age and gender effects on raw CBCL scores. Baseline socioemotional difficulties were entered in block 2. Block 3 included baseline parent educational involvement (Home-Based Involvement and Home-School Conferencing).

To determine if baseline (T1) socioemotional difficulties predict later (T2) parent educational involvement variables, two independent regressions were estimated: one for Home-Based Involvement and one for Home-School Conferencing. In block one, covariates were entered (parent marital status). Baseline educational involvement dimensions (Home-Based Involvement or Home-School Conferencing) were entered in block 2. Block 3 included baseline socioemotional difficulties.

## Results

Data was consistent with the assumptions necessary for regression analyses. Outliers (>3SD from the mean) were winsorized to reduce the potential influence of extremely high values. Less than 2% of the data were missing. Mean substitution at the person-level was used for those item scores.

Descriptive statistics and bivariate correlations for all included variables are presented in Table 2 and 3. Most caregivers reported high levels of involvement, which were close to the maximum score of 28. The average score for home-based involvement ( $M = 22.72$ ) and school conferencing scales ( $M = 22.7$ ) reflects items were typically rated as happening “often,” based on the frequency scale used at baseline. The Child Total Problem Score was well within the

normative range ( $M = 16.62$ , T1;  $M = 15.25$ , T2) at both time points. Contrary to expectations, parent educational involvement and child socioemotional functioning were not significantly correlated.

### **Parent Educational Involvement as a Predictor of Later Socioemotional Functioning**

Home-based and Home-School Conferencing were investigated as predictors of later Total Problems when controlling for child age and gender, as well as T1 Total Problems. The regression model predicted 53% of variance in T2 socioemotional functioning. The first and second step of the model explained 50% of variance. Adding Home-Based Involvement and Home-School Conferencing significantly improved model fit ( $r^2 = .53$ ;  $F(5,62) = 14.19$ ,  $p < .001$ ) and contributed a 3% increase in variance explained; suggesting educational involvement had a small effect on child problems. Home-School Conferencing was the only significant predictor of later functioning ( $\beta = -.20$ ,  $p < .05$ ; Table 4), suggesting that increases in conferencing activities predict fewer parent-reported child difficulties later, above and beyond the effects of initial child socioemotional problems.

### **Socioemotional Functioning as a Predictor of Later Parent Educational Involvement**

Socioemotional functioning was investigated as a predictor of later parent educational involvement when controlling for significant covariates (i.e. marital status for Home-Based Involvement) and initial levels of involvement. The regressions explained 38% of variance in home-based involvement and 27% of variance in home-school conferencing. Adding Total Problems significantly improved model fit ( $r^2 = .38$ ;  $F(3,65) = 13.11$ ,  $p < .001$ ) and contributed a 5% increase in variance explained, suggesting a small effect. Total Problems were a predictor of later home-based involvement ( $\beta = .23$ ,  $p < .05$ ; Table 5), with more child difficulties predicting more frequent parent home-based involvement 8 months later, above and beyond previous



educational involvement levels. However, child difficulties were not a significant predictor of Home-School Conferencing (Table 5).

### **Discussion**

This study investigated the relation between parent educational involvement and student socioemotional functioning among a sample of low income Latinx preschoolers. Results provide evidence that more home-conferencing activities enhance child socioemotional functioning using a longitudinal design and controlling for initial levels of child socioemotional problems. In contrast, home-based involvement was not a significant predictor of later child functioning. Results also showed more child socioemotional difficulties predicted increases in home-based involvement eight months later, but did not influence parent-school conferencing. The results point to the protective effects of parent-teacher communication and highlight the importance of considering child-level characteristics when investigating barriers or facilitators to parent educational involvement.

The current study contributes to the inconclusive literature on home-school conferencing. We found more frequent home-school conferencing activities predicted decreases in child problems as reported by parents. The results replicate previous cross-sectional findings with elementary school aged African American children (Brody & Flor, 1998), as well as longitudinal findings with African American preschoolers (Fantuzzo et al., 2004) and extend finding to Latinx preschoolers. Although other longitudinal studies have found parent-teacher contact does not predict changes in child socioemotional functioning, or is associated with later increases in problem behavior and low social competence, methodological differences between these studies can inform the kinds of communication between parents and schools that may be most fruitful. Goldberg and Smith (2017) found neither parent-reported (and initiated) *negative* contact with

the school about child performance nor teacher reported (and initiated) *negative* contact with parents help ameliorate internalizing difficulties among adopted preschoolers. Further, Serpell and Mashburn (2012) reported attending conferences was not a significant predictor of child outcomes, but higher frequency of parent-teacher *phone* calls (attempted and completed) during preschool predicted more problem behaviors and lower social competence during preschool and at kindergarten entry. In contrast, the measure of home-school conferencing used in our study includes a broader range of behaviors (i.e. discussing the child's accomplishments, school rules, and daily routine with the teacher) and may capture not only the quantity, but the *quality* of communication.

More frequent and positive communication about the child may lead to better teacher and parent awareness of potential issues they would otherwise have difficulty identifying. Often, teachers are have a more difficult time identifying and reporting internalizing difficulties when compared to externalizing difficulties (Abikoff, Courtney, Pelham, & Koplewicz, 1993). In contrast, parents provide valid reports of internalizing difficulties for young children (De Los Reyes et al., 2015; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Additionally, frequent communication with the school may make parents aware of difficulties with peers and adjustment to the school environment, providing parents with more information to address the source of difficulties. Our findings suggest increasing positive interactions between parents and teachers (as opposed to solely initiating contact because of problems) may be useful to decreasing later difficulties. Future research that clarifies the specific factors or characteristics of home-school communication, and the processes via which it contributes to child socioemotional health can inform school programming and prevention/intervention efforts and help schools and parents maximize limited resources.

Surprisingly, home-based involvement, a robust predictor of socioemotional and academic functioning in previous research, was not a significant predictor of child socioemotional functioning in our sample. However, previous studies that found this association often used *teacher* ratings of child emotional and behavioral difficulties (Fantuzzo et al., 2004; Powell et al., 2010), and the two studies that used *parent* reports of child behavior did not find an association cross-sectionally (McWayne et al., 2004) or longitudinally (El Nokali et al., 2010). Parents and teachers may report child behaviors differently based on the context of their observations and their expectations (Stanger & Lewis, 1993). Teachers' exposure to a classroom of students may influence socioemotional ratings and provide a more accurate representation of socioemotional functioning, particularly externalizing difficulties (Eiraldi, Mazzuca, Clarke, & Power, 2006). It is also possible the operationalization of home-based involvement in our study did not capture the activities most salient to Latinx families, such as activities that foster the social and moral development of their children (McWayne et al., 2013).

A second goal of this study was to explore the potential of child socioemotional difficulties to influence later parent educational involvement. Child difficulties predicted more parent educational involvement in the home 8 months later, controlling for initial levels of child educational involvement. This finding is consistent with Hoglund and colleagues' (2015) longitudinal finding that aggressive behaviors predicted more homework assistance, an aspect of home-based involvement, among third, and fourth graders. Findings are also consistent with other cross-sectional studies that found connections between home based involvement and children's behavior (Downer & Mendez, 2005; Grolnick et al., 1997). A possible explanation, using Hoover-Dempsey and Sandler's (1995) model, is that child difficulties function as an invitation to increase involvement.

However, in contrast with Hoglund and Colleagues' (2015) findings, child difficulties did not predict changes in home-school conferencing activities. It is possible the low levels of socioemotional difficulties in our sample influenced our results. Eiraldi and Colleagues (2006) suggest parents seek treatment and support when their children's behavior is impairing, and that threshold may be higher for minority families (Roberts, Alegria, Roberts, & Chen, 2005); therefore, the low-level difficulties displayed by most children in our sample may not act as an invitation that leads to shifts in parental behavior in the school setting, especially among a cultural group that may be hesitant to engage school personnel due to perceived barriers and the stigma attached to socioemotional difficulties (Nadeem et al., 2007). Additional studies need to replicate the effects of child socioemotional problems on parent involvement and continue to evaluate bidirectional associations between educational involvement and child socioemotional outcomes among children with different levels of clinical severity.

### **Implications**

Our findings suggest home-school conferencing may be useful in curbing future socioemotional difficulties for low-income, Latinx preschoolers. Fortunately, this is a relatively flexible dimension of parent educational involvement and does not necessarily need to be conducted in school or in person, which may be important for families with little time or transportation difficulties. Programming geared toward increasing positive conversations between staff and families around socioemotional functioning may improve parent-teacher relationships and student-teacher relationships, and reduce stress in both environments. Establishing social media pages, newsletters, automated text messages, or other forms of communication may be helpful in increasing the communication between the two systems and decreasing barriers to participation; using more engagement strategies is associated with higher

involvement (Calzada et al., 2015). Previous research highlights additional strategies that can be adopted to enhance the involvement of Latinx and immigrant parents with schools, including school initiated contact (Ramirez, 2003), schools' appreciation for parents' cultural values, and having staff that share parent's cultural identity (Calzada et al., 2015).

Additionally, the results suggest parents may adjust their behavior at home in response to socioemotional difficulties without increasing their direct involvement with school personnel. School personnel may not be aware of the changes parents are making to address difficulties and inviting parents to share their perspective could be helpful in promoting positive communication between the two systems and validating parents' efforts. Providing parents with strategies to try in their home may also be helpful. Universal programs directed at improving children's school readiness by improving teachers' classroom management and by delivering a socioemotional curriculum often contain a parent involvement component (e.g. homework for the parent and child to complete together) that has been associated with satisfaction with the programming (Webster-Stratton, Reid, & Stoolmiller, 2008). Extending school-based programming to include parents may be a helpful way to provide parents with strategies to use at home that are consistent with school-based initiatives without targeting individual children.

### **Limitations**

There may be limited generalizability because of the specificity of the demographics of this sample. Many of the families who chose to participate reported high levels of involvement and low levels of socioemotional concerns; therefore, the relations may not be representative of children and families with significant difficulties and barriers to involvement. Also, we did not investigate the potential differences or overlap between general parent involvement and specific educational involvement in the home, which may be difficult to differentiate at this

developmental level. Additionally, although regression analyses had enough power to detect small effect sizes, the small sample size limited our ability to use more advanced statistical techniques akin to Hoglund and colleagues' (2015) study or test for possible moderators affecting the relationships. Finally, our use of parent-reported data may have shaped the results and limited our ability to make conclusions about behavior across settings and to assess any reporting bias that may have been present due to the social desirability of presenting the child in a favorable light. Despite these limitations, this study's unique sample and longitudinal methodology significantly advances our understanding of parent educational involvement and socioemotional functioning among young low-income Latinx children.

### **Conclusion**

Parent educational involvement is praised by many groups, parents included, as an important factor in children's functioning and success in an academic environment. This study provided evidence that aspects of involvement influence child socioemotional functioning and vice versa. It expanded the literature on these understudied relations by using a longitudinal design and investigating the relation for Latinx young children, a population often left out of the parent involvement literature. Additional research in this area is needed to enhance parent-school communication and better understand parents' efforts to manage their children's socioemotional problems through their home involvement, this information can guide culturally relevant programming to promote children's socioemotional well-being.

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Tables and Figures

Table 1. *Demographic data for sample*

Demographic characteristics( <i>n</i> )	Percentage of sample
<b>Child</b>	
Gender (69)	
Male	52.20%
Female	47.80%
Age (69)	
3 Years Old	36.20%
4 Years Old	43.50%
5 Years Old	20.30%
Ethnicity (67)	
Hispanic	92.5%
Other	7.5%
<b>Primary Caregiver</b>	
Gender (69)	
Female	100%
Age (68)	
Under 30 years old	42.6%
Over 30 years old	57.4%
Ethnicity (69)	
Latinx	91.3% (95.1% Mexican; n = 59)
Other	8.7%
Country of Birth (69)	
USA	36.2%
Other	63.8% (38.1% immigrated as a child)
Education (69)	
High school or less	50.7%
More than high school	49.3%
Marital Status (71)	
Married/Living with Partner	81.1%
Single/Separated/Divorced	18.8%
Employment Status (70)	
Full-Time employment	19.1%
Part-Time employment	22.1%
Unemployed	58.8%
Income (64)	
Less than \$10,000	15.6%
\$10,000 – \$19,000	31.3%
\$20,000 – \$29,000	25.0%
\$30,000 – \$39,000	17.4%
Over \$40,000	9.3%
Language Spoken in Home (69)	
English Only	39.1%
Additional Language	60.9%

Table 2. *Correlations between possible covariate and study variables*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Child Age T1	1											
2. Child Gender T1	-.10	1										
3. Highest Level of Education T1	-.22	.06	1									
4. Marital Status T1	-.10	.14	-.19	1								
5. Employed Part-Time T1	.03	.19	.04	-.11	1							
6. Employed Full-Time T1	.00	-.22	.27*	-.34*	-.25*	1						
7. Home-School Conferencing T1	.06	.01	-.20	-.10	.05	-.21	1					
8. Home-Based Involvement T1	-.03	-.07	-.06	-.26*	.04	-.18	.44**	1				
9. Total Problems T1	.18	-.24*	.04	.03	-.08	.07	-.06	-.12	1			
10. Home-School Conferencing T2	-.08	.01	-.13	-.15	.07	-.06	.52**	.37**	-.09	1		
11. Home-Based Involvement T2	-.08	-.21	.05	-.32**	-.03	.16	.36**	.54**	.16	.52**	1	
12. Total Problems T2	.122	-.06	-.05	-.04	-.08	-.10	-.15	-.01	.70**	-.06	.05	1

\* p<.05

\*\* p<.01

Table 3. Means and Standard Deviations of study variables

	Year 1		Year 2	
	Mean	SD	Mean	SD
Home-Based Involvement	22.72	3.99	22.46	4.17
Home-School Conferencing	22.74	5.18	21.67	5.41
Total Problems	16.62	12.70	15.25	12.78

Table 4. Standardized Coefficients from regression analyses for Total Problems at Time 2 (T2)

	Model 1	Model 2	Model 3
	Covariates	+T1 Problems	+ T1 Parent Education Involvement
<i>Covariates</i>			
Child Age	.12	.00	.02
Child Gender	-.05	.12	.13
Baseline Problems (T1)		.72**	.73**
<i>Parent Education Involvement</i>			
Home-Based Involvement			.18
Home-School Conferencing			-.20*
<b>R<sup>2</sup></b>	<b>.02</b>	<b>.50</b>	<b>.53</b>

\*p&lt;.05

\*\* p&lt;.01

Table 5. *Standardized Coefficients from regression analyses for Parent Education Involvement at Time 2 (T2)*

	Home-Based Involvement (HBI) at T2			Home-School Conferencing (HSC) at T2		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	Covariates	+ T1 HBI	+ T1 Problems	Covariates	+T1 HSC	+ T1 Problems
<i>Covariates</i>						
Parental Marital Status	-.32**	-.20	-.19	--	--	--
Baseline Involvement (T1)		.49**	.52**		.52**	.51**
Total Problems (T1)			.23*			-.05
<b>R<sup>2</sup></b>	<b>.10</b>	<b>.33</b>	<b>.38</b>	<b>--</b>	<b>.27</b>	<b>.27</b>

-- nonsignificant correlation; not included in analysis

\*p<.05

\*\* p<.01



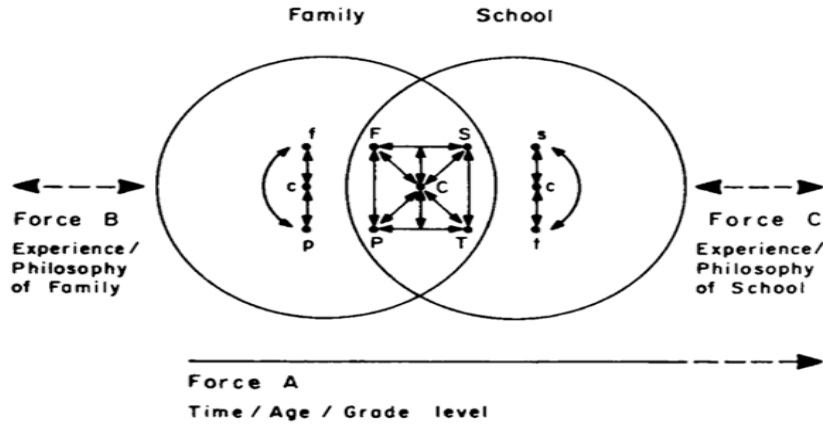


Fig. 1: Model of overlapping spheres of influence of families and schools

Key: Intrainstitutional interactions (lower case)  
 Interinstitutional interactions (upper case)

- f/F = Family
- s/S = School
- c/C = Child
- p/P = Parent
- t/T = Teacher

Figure 1. Epstein’s conceptualization of the home-school connection (Epstein, 1987, p. 131)

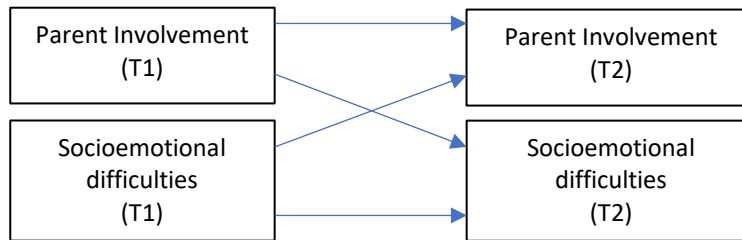


Figure 2. Theoretical model of the relation between parent education involvement and child socioemotional functioning.

## Appendix A

Despite the research associating parent education involvement with positive student outcomes, and the support it receives in the public sphere, it continues to be difficult to promote, particularly in low-income, urban environments (Arnold, Zeljo, Doctoroff, & Ortix, 2008; Desimone, 1999). Parent education involvement is associated with academic achievement (Wilder, 2014) and students' motivation for learning (Gonzalez-DeHass, Willems, & Holbein, 2005). The impact of educational involvement on non-academic indicators of success is much less studied, but research has found it is associated with social skills, and internalizing and externalizing difficulties (Fantuzzo, McWayne, & Perry, 2004; El Nokali, Bachman, & Votruba-Drzal, 2010). Socioemotional skills are foundational for future learning (Stafford-Brizard, 2016), and impact attitudes, behavior, and academic performance (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011); thus, they are increasingly becoming the focus of education policy. Moreover, early socioemotional functioning is associated with later wellbeing in multiple domains (Jones, Greenberg, & Crowley, 2015).

Parent education involvement is also a protective factor, and has the potential to curb some of the detrimental effects of poverty on student learning (De Civita, Pagani, Vitaro, & Tremblay, 2004). Research with low-income, minority parents suggest that although they view involvement in their children's education as important, they experience significant barriers to educational involvement (Williams & Sánchez, 2013) and hold different conceptualization of parent education involvement (McAllister, Wilson, Green, & Baldwin, 2005), which may contribute to difficulties in the home-school relationship. Poverty also strains parents' resources, including their time, which is a significant barrier to educational involvement. Therefore, the

children who are least likely to experience high parent education involvement also face significant barriers.

A widely used conceptual framework for parent education involvement describes the relation between home and school as overlapping spheres capturing the contributions of parents, children, and the school (Epstein 1987). Much research has documented parent education involvement is negatively affected by parental risk factors, including limited education, single parenthood, low income, and mental health problems, such as depression. However, the contributions of child characteristics have been studied empirically much less, but may be a more malleable target of intervention for school programming aiming to enhance parent education involvement and student outcomes. Clinical research has documented a bidirectional relationship between other dimensions of parenting (e.g. rejection, negative affect) and child mental health, including disruptive behaviors (Combs-Ronto, Olson, Lunkenheimer, & Sameroff, 2009; Pearl, French, Dumas, Moreland, & Prinz, 2014), ADHD symptoms (Lifford, Harold, & Thapar, 2007), and internalizing difficulties (Lewis, Collishaw, Thapar, & Harold, 2013), suggesting the relationship between parent education involvement and children's socioemotional functioning is likely complex.

On the one hand, parent education involvement may enhance child socioemotional functioning. On the other hand, child socioemotional problems may hinder parent education involvement at school, because of resulting conflict with teachers, and at home, because the children may be difficult to engage in educational activities (e.g. homework completion). To our knowledge, only one study, to date, has explored the longitudinal bidirectional associations between children's socioemotional functioning and parent education involvement, and this study was conducted with school age children.

This relation may be particularly important for the youngest learners as parent involvement shifts over time: research finds its effects on GPA, standardized test scores or other indicators of achievement (i.e. teacher-rated academic attitudes) are strongest when children are young (Wilder, 2014). Even though most research focuses on school-aged children and preschoolers are often excluded from meta-analyses, there is evidencing supporting the importance of early childhood education environments, both at home and at school, to children's future success. Enhancing early learning environments at home is associated with higher reading achievement, less retention, and fewer years in special education services at age 14 (Miedel & Reynolds, 1999). Also, investing in early childhood education reduces the achievement gap and reduces social costs (Heckman, 2011). To address this limitation, the present study seeks to evaluate the longitudinal associations between parent education involvement and child socioemotional difficulties among low income, Latinx preschoolers. This will allow for a better understanding of the relationship between parent education involvement and child socioemotional problems among Latinx families. In addition, this can inform school efforts to contextualize child functioning within the larger family system and work toward improving outcomes for the youngest learners.

### **Parent Education Involvement**

Broad definitions of parent education involvement capture the activities parents participate in that support their children's education and "parental participation in educational processes and experiences of their children (Jeynes, 2007, p. 89)." There have been several recent reviews describing the association between parent education involvement and student academic outcomes. In a review of the literature, Fan and Chen (2001) identified 4 commonly evaluated domains of parent involvement: parent-child communication (interest in homework,

assistance with homework, discuss school progress), home supervision (time spent doing homework/ TV, coming home after school, environment conducive to homework), educational aspiration for children (educational expectations, values academic achievement), and school contact and participation (volunteer, attend school events, bidirectional contact). More recently, Jeynes' (2003, 2005, 2007) meta-analyses built on this work, but added reading regularly to the child and parenting style (extent to which parents demonstrated positive and supportive parenting) as additional components of parent education involvement. Hill and Tyson (2009) used a similar approach, evaluating the dimensions of home-based involvement, school-based involvement, and academic socialization.

Common dimensions of parent education involvement are highlighted in recent meta-analyses; yet, all the major reviews note the inconsistency in the literature when defining, operationalizing, and measuring parent involvement. Park and Holloway's study (2013) defined parent involvement as "parents' interaction with children and schools that are intended to promote academic achievement (p. 106)," and measured it using three dimensions of involvement: school-based involvement, homework monitoring, and educational expectations. In contrast, other researchers use a more limited interpretation of parent education involvement and define it based on activities parents participate in, excluding parental expectations and attitudes toward education (Sui-Chu & Willms', 1996). Topor, Keane, Shelton, and Calkins (2010) used a definition of educational involvement explicitly stating the importance of expectations and summarized parent involvement as "activities that parents engage in at home and at school and positive attitudes parents have towards their child's education, school, and teacher (p. 2)." Others have measured parent involvement as single dimension and do not differentiate between types

(Miedel & Reynolds, 1999). These differences in conceptualization and operationalization often lead to inconsistent findings.

For example, when parent education involvement is broadly defined and considered to be multidimensional, the literature supports a significant relation between it and student outcomes for a diverse group of students, including children in early childhood education settings (Fantuzzo, McWayne, Perry, & Childs, 2004), elementary school (Tooper et al., 2010), middle school (Jeynes, 2007), and high school (Wang & Sheikh-Khalil, 2014), as well as across racial and socioeconomic groups (Lee & Bowen, 2006). Within this conceptualization of parent education involvement differential relations are noted between certain dimensions of educational involvement and student outcomes. Home-based school involvement such as reading to children, engaging in educational outings, and providing an environment conducive to learning is consistently a strong predictor of academic success (Fan & Chen 2001) as is educational aspirations (Wilder, 2014). On the other hand, homework supervision, has mixed support with studies supporting no relation (Fan and Chen, 2001), a positive relation (Wilder, 2014), or one that shifts over time depending on grade level (Núñez et al., 2015).

There is mixed support for the effects of school-based involvement as well. Wang and Sheikh-Khalil (2014) found no relation between parent school-based involvement (i.e. attending events and volunteering) and students' GPAs in high school, but Sebastian, Moon, & Cunningham (2017) found a negative relation between teacher-initiated parent involvement and student performance. These findings suggest while parent education involvement is an important construct, its relation to student outcomes is complex and changes across age groups and setting (i.e. home vs. school involvement), presumably as the child's needs for parent education involvement shift (Domina, 2005).

**Meta-analytic support.** Despite inconsistencies, the link between parent education involvement and child academic outcomes is well established and has been replicated by multiple meta-analyses. Fan and Chen's (2001) meta-analysis evaluated the outcomes of 25 studies and found there was a medium effect between parent education involvement and general academic outcomes. Studies in the meta-analysis evaluated child outcomes at different ages, ranging from elementary school to high school age. While none of the studies included outcome data for preschoolers, three studies included baseline data collected when the children were in preschool. For example, Hess, Holloway, Dickson, and Price (1984) found parental reports of preschool involvement predict school readiness and academic achievement in 6<sup>th</sup> grade. Jaynes (2003, 2005, 2007) reported similar findings with children and youth of ethnic minority background and/or living in urban environments. He consistently found a medium effect size for the relation between parent education involvement and academic outcomes for school-aged children (i.e. grades, standardized test scores, teacher ratings on academic behaviors and attitudes). Hill & Tyson (2009) found a small significant effect for parent education involvement and academic success (i.e. GPA, or standardized reading and math scores) among mostly middle-school African American and Caucasian children after performing a meta-analysis on 25 studies, including just two longitudinal studies. Most recently, Castro and Colleagues (2015) completed a review of 37 studies published between 2000 and 2013. Consistent with previous reviews, the authors found a medium effect size between parent education involvement dimensions and academic skills (i.e. general achievement and performance in specific subjects such as math, reading, science, and the arts) for students in kindergarten to 8<sup>th</sup> grade.

While the larger literature establishes the relation between parent education involvement and student outcomes, it is limited in its focus on academic indicators. Socioemotional functioning

and approaches to learning are better indicators of success than grades for younger students (Logue, 2007). In Fantuzzo and Colleagues' study (2004) parent reported parent education involvement dimensions (home-based, school-based, and home-school conferencing) were associated with teacher-reported child learning behaviors (motivation, attention, and attitudes toward learning) and behavioral problems 6 months after baseline for preschoolers. The relationship between parent education involvement and child socioemotional functioning ranges from small but significant associations (Hoglund, Jones, Brown, & Aber, 2015) to medium effects (Hill and Craft, 2003) reinforcing the importance of understanding how these variables interact with one another.

**Theoretical framework.** Epstein's widely used conceptual framework of family and school relations accounts for history, child development, and the shifting relationships between key stakeholders (parents, children, and teachers; Epstein, 1987, Figure 1 from p. 131). The theory posits there are overlapping spheres between home and school that are influenced by several external factors including time (e.g. grade level and social conditions at the time the child is in school), the

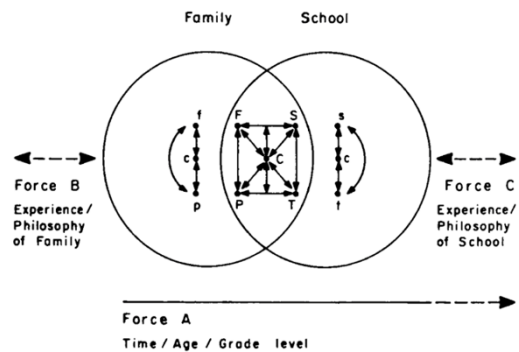


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experience of the family (e.g. previous relations with schools, beliefs and attitudes regarding school involvement), and the experience of the school and its personnel (e.g. dedication to involving parents). Imagine a set of linked rings that come together or pull apart depending on the movement of individual rings. For example, if both the family and the current teacher/school



have positive views of parent involvement in education the rings will be brought together and there will be more overlap between the two systems. If one ring is moved further from the other due to differing opinions on involvement or low social pressure for involvement the rings will stretch apart creating little overlap.

In addition to external factors, the relationships within and between the spheres are important as well. There are two levels within the internal structure. At the organizational level, communications between family and schools are described as general interactions affecting many families (e.g. notices of school policies, workshops, opportunities for volunteering in school events, parent advisory boards). Epstein described the relationship between home and school as six categories, with a focus on how schools could build involvement by: supporting parenting practices, communicating, offering volunteering activities, suggesting home-based involvement activities, including parents in decision making at school, and collaborating with the community (Epstein, 1995). The framework also highlights the importance of individual level relationships between: (1) parent – child, (2) parent – teacher, & (3) student – teacher. The “child has the central place in all of the patterns of interaction and influence in this model. We assume that the child’s welfare and interests are the parents’ and teachers’ reasons for interacting. For the child, the school and family policies, parent and teacher interactions, and the child’s understanding and reactions to these connections, influence academic learning and social development (Epstein, 1987, p. 130).”

Despite the importance of the child in the relation between parents and the school, few studies investigate the role of child characteristics influence on or by parent education involvement. Hoover-Dempsey and Sandler’s (1995) model of parent education involvement posits student invitations for parent involvement are key predictors of parent education

involvement. These invitations may be implicit (e.g. difficulties with school or homework requiring the parent's involvement for a resolution) or explicit requests. In a 2007 study, researchers tested this theoretical model of predictors of parent education involvement including parental motivational belief, invitations for involvement, and perceived life context. Authors analyzed the responses of 853 parents of young children (first to sixth grade). They found child invitations for involvement were predictive of home-based and school-based involvement, even after accounting for socioeconomic status and maternal education (Green, Walker, Hoover-Dempsey, & Sandler, 2007). This led authors to conclude social context (e.g. child and teacher invitations) was a more meaningful predictor of educational involvement than parent demographic characteristics, which have been more often studied. This theory supports Epstein's conceptualization of involvement suggesting child-factors are important determinants of the home-school relationship.

### **Socioemotional Difficulties and Parent Involvement**

The significance of early socioemotional deficits and mental health problems is increasingly recognized. The prevalence of emotional and behavioral difficulties for children aged 0 to 5 in the United States is between 9% and 14% (Brauner & Stephens, 2006). Attention-Deficit/Hyperactivity Disorder (ADHD), disruptive behavior problems, and depression and anxiety symptoms are common during early childhood (Egger & Angold, 2006), cause significant impairment to children, and increase family stress (Repetti, Taylor, & Seeman, 2002). While the literature is limited on the effect of specific mental health difficulties on school readiness, as it is a relatively new area of research, there is evidence to support its influence on children's success in the school environment. Luby, Belden, Pautsch, Si, & Spitznagel (2009) found children who met the criteria for Major Depressive Disorder (MDD) had significantly

more difficulties in the school setting than their non-depressed peers. Langley, Bergman, McCracken, & Piacentini (2004) found high correlations between anxiety symptoms and problems with school activities, such as concentrating on school work and completing assignments. In addition, children's symptoms of externalizing disorders or ADHD in early childhood increase risk for continued mental health difficulties, poor relationships, and school difficulties (Campbell, 1995). The importance of early socioemotional skills, and the potential impact of mental health difficulties that follow young children throughout their academic careers (Sabol & Pianta, 2011) and impact later wellbeing (Campbell, Shaw, & Gilliom, 2000), support the study of factors influencing socioemotional functioning.

**Parent education involvement's relation to child socioemotional outcomes.** Parent education involvement is associated with positive social and emotional skills. In a large longitudinal study, El Nokali and Colleagues (2010) assessed the relation between parent education involvement and children's social development, as reported by parents and teachers. The sample included 1364 children and their families from the NICHD Study of Early Child Care and Youth Development study followed throughout elementary school with data collected in first, third, and fifth grade. The authors created a composite score for parent education involvement assessing parental encouragement of education, parental investment, and educational attitudes as reported by parents and teachers. Children who had mothers who were more involved in first grade (one standard deviation above the mean) had children with higher social skills ratings (by both parents and teachers) in third grade. Results replicated the findings of an earlier longitudinal study with elementary students (Izzo et al., 1999), that found teacher reports of parent involvement at home and school over the first two years of the study, predicted socioemotional adjustment (i.e., anxiety and social skills) in year three of the study, while

controlling for baseline socioemotional functioning. The relation between parent education involvement and positive social skills was replicated in studies investigating the relation for kindergarten students (McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004).

***Externalizing difficulties.*** Studies have also evaluated associations between parent education involvement and specific mental health problems, such as disruptive behavior problems. Multiple studies have shown parent education involvement is associated with reduced child externalizing problems (Baker, 2013; Domina, 2005; Webster-Stratton, Reid, & Hammond, 2001). For example, Fantuzzo and Colleagues (2004) investigated the influence of parent (predominantly mothers) involvement on teacher-reported child conduct problems, hyperactivity, and inattention/passivity among 144 low-income urban, mostly African American preschoolers attending Head Start centers in a cross-sectional study. The study used a multidimensional measure of parent education involvement and found home-based involvement had a significant negative relation with all externalizing outcomes, while school-based involvement was associated with less conduct problems and inattention and conferencing was only associated with less conduct problems. The relatively stronger predictive power of home-based involvement, as compared to school-based involvement, found in this study, is consistent with results of meta-analyses of predictors of student academic outcomes (Fan and Chen, 2001).

***Internalizing difficulties.*** The relation exists between parent education involvement and internalizing difficulties as well. A study investigating the mechanisms of how parenting characteristics, including parent education involvement, influence the socioemotional outcomes of rural, African American youth aged 6-9 found a significant indirect relation between teacher-reported school-based involvement and child depressive symptoms (Brody & Flor, 1998). The relation between parent education involvement and a reduction of depressive symptoms was

found in a sample of middle school children as well (Wang, Hill, & Hofkens, 2014). More broadly, a longitudinal study investigated the role of home-school interactions in the psychological adjustment of adopted preschoolers in most white, affluent families and found higher educational involvement was related to lower internalizing symptoms (Goldberg & Smith, 2017). This built on earlier research, with predominately African American kindergartens, where limited involvement was positively associated with internalizing difficulties (McWayne et al., 2004). Together results suggest a negative relation between parent education involvement and internalizing symptoms.

***School-based involvement and behavior.*** Although studies show the most robust relationships between parent home-based involvement and child socioemotional outcomes, studies that include only school-based involvement consistently report associations with social skills and behavior problems. A cross-sectional study investigating the relation between two domains of parent education involvement (school-based involvement and conferencing) and self-reported socioemotional outcomes for English language learners found more parent education involvement was associated with less internalizing and externalizing difficulties for third-graders (Niehaus & Adelson, 2014). It was also associated with greater social competence in kindergarteners (Rimm-Kaufman, Pianta, Cox, and Bradley, 2003). In addition, a prospective study expanded the literature to preschoolers. Powell, Son, File, & San Juan (2010) found higher parent-reported school involvement at the beginning of the school year was associated less externalizing and internalizing difficulties at the end of the year.

***Home-school conferencing and behavior.*** Interestingly, the relation between parent-teacher conferencing and child outcomes is variable in the literature. In Izzo and colleagues' study (1999), researchers found a positive relation between frequency of home-school

conferencing and later behavioral difficulties, after controlling for year one difficulties. This was replicated in longitudinal studies with preschoolers (Serpell & Mashburn, 2012) and kindergarteners (McCormick, O'Connor, Cappella, & McClowry, 2013). It is possible the amount of home-school conferencing is motivated by problem behavior (Deslandes & Bertrand, 2005) leading to a positive relation. However, the opposite has also been found as well: Fantuzzo, and Colleagues (2004) found more home-school conferencing was associated with less conduct problems 6 months later among mostly low-income, African American preschoolers. The data analysis techniques used in the Serpell and Mashburn study were more sophisticated. They were able use advanced models due to a larger sample size, which allowed them to compare children in classrooms and draw conclusions about relative levels of educational involvement. Together the two studies suggest that while home-school conferencing may be beneficial in reducing behavioral problems at the school-level, the relation may look different when investigating individual classrooms.

Additionally, the baseline attitudes and culture around parent education involvement may be important variables that were unassessed. If the culture at the school is to initiate contact with parents when there is a problem, as is typical in some schools (Deslandes & Bertrand, 2005), then a positive relation between conferencing and poor socioemotional skills is expected. However, if a school or program, such as Head Start centers involved in the Fantuzzo study, have programming around parent involvement and policies around cultivating positive parenting involvement (which is a cornerstone of Head Start programming), then frequent parent contact is not necessarily linked to negative behavior and could be attributed to programming culture (Hill, 2001). The conflicting evidence highlights the need for additional longitudinal studies to detangle the relationship between home-school conferencing and behavioral difficulties.

***Parent education involvement as a mediator.*** For preschoolers, parent education involvement mediated the relation between risk factors (e.g. poverty) and poor socioemotional outcomes in previous research. Foster, Lambert, Abbott-Shim, McCarty, & Franze (2005) investigated the relation between socioeconomic status and teacher-rated student social functioning. Parent education involvement in the home (e.g. enrichment activities, reading, home-learning activities, and books in the home) and social risk were rated by mostly mothers and tested as potential mediators. Both social risk and home-based education involvement mediated the relation between SES and student social functioning, a composite of the child's adaptive behavior, social skills, and problem behaviors. This relation was replicated in a study involving nationally representative sample of Caucasian, African-American, and Latino kindergartens and their families (Raver, Gershoff, & Aber, 2007).

***Parent education involvement interventions and socioemotional functioning.*** Intervention studies also highlight how improvements in programming centered on increasing parent education involvement reduce problem behaviors. O'Donnell and Kirkner (2014) evaluated the effectiveness of a YMCA's family involvement project dedicated to increasing support for mostly monolingual low-income Latino families. One hundred and forty-four mothers participated with their 208-elementary school-aged children. The caregivers attended weekly workshops throughout the year on topics related to providing in-home education. Results showed participation in workshops predicted higher social skills grades for children. Webster-Stratton's Incredible Years program is another intervention designed to improve home-school interactions, specifically around early childhood behavior management. The program improved relations between parents and teachers, reduced problem behaviors, and increased positive behavior management strategies in preschools and elementary schools (Webster-Stratton, Reid,

& Stoolmiller, 2008). These results were also supported by a large year-long longitudinal study including elementary, middle, and high schools that implemented more activities for parent education involvement and reported less discipline difficulties resulting from problem behaviors (Sheldon & Epstein, 2002). Although a review cited no relation between parent involvement programming and student outcomes, the authors noted serious flaws in measurement and design that may be contributing to non-significant findings rather there truly being no relation between the two constructs (Mattingly, Prislin, Mckenzie, Rodriguez, & Kayzar, 2002).

### **Child socioemotional difficulties as predictor of parent education involvement.**

While some research supports the conclusion parent education involvement can enhance child socioemotional outcomes, theory and research also suggest child socioemotional difficulties may predict parent education involvement. For example, Downer & Mendez (2005) reported cross-sectional associations between preschoolers' negative emotional intensity and more father involvement in home-based educational activities among low-income, African Americans. However, child negative emotionality did not predict school-based involvement in this study. In contrast, Grolnick, Benjet, Kurowski, and Apostoleris, (1997) reported mothers who perceived their children as less difficult (e.g. more obedient and less controlling) were more likely to be involved in home-based educational activities (e.g. visiting the library) in their cross-sectional study. The parent education involvement composite in this study included reports from parents, teachers, and students. There was no relation between child difficulty and school-based involvement in this study as well. It is possible sample differences (predominantly low-income African-American fathers vs. economically diverse white mothers) explain the different findings of these two studies. Another possibility is the studies together represent a continuum. Sixty-nine percent the sample in Grolnick and colleagues' (1997) study lived in a two-parent household and



it is possible mothers were less involved with difficult children because they have sought additional assistance from a co-parent for educational activities.

Additionally, child mental health difficulties may interfere with educational activities at home. Parents of children with mental health difficulties report increased stress and more difficulty parenting their children than parents who did not have children with significant mental health difficulties (Owen et al., 2002). In a large study, Angold and colleagues (1998) investigated the burdens associated with caring for children with significant mental health problems. Ten percent of the 1015 parents surveyed reported feeling burdened by their children's symptomatology and impairment. In turn, increased parental stress it is associated with negative interactions at the school (Peña, 2000; Waanders, Mendez, & Downer, 2007). Therefore, improving children's socioemotional functioning may reduce parental stress, increase parental engagement in learning related activities, and improve strained relationships at the school.

At school, difficult behaviors result in home-school conferencing (Deslandes & Bertrand, 2005). Interestingly, child difficult behaviors may also lead to decreases in other indicators of parent education involvement. One literature review posits behavioral problems are associated with less educational involvement at school due to fear of bad news and increased barriers such as a child's suspension (Hornby & Lafaele, 2011). A qualitative study noted one barrier to parent school involvement is the negative association children make between their behavior and the parent's presence at the school (Lawson, 2003). Another qualitative study reported the behavioral difficulties of other students was a barrier as well, as parents did not want to come to a setting where children's behavior was poorly managed (Murray et al., 2014). These qualitative findings are consistent with evidence from a longitudinal study of elementary school students, which found children's higher reported social competence in third grade predicted more parent

education involvement at school later in the third grade, while behavioral difficulties predicted less parental involvement at school and more home-school conferencing (Hoglund et al., 2015). Another route child mental health difficulties may impact parent education involvement is through the hindrance of positive student-teacher relations, which may affect teacher's perceptions of the student and their family, and possibly cause conflictual relations with parents.

**Bidirectional relationship.** While the effects of parent involvement on child socioemotional skills is a growing literature, bidirectional relationships between child socioemotional problems and parent education involvement are much less explored. There is theoretical and empirical support to suggest this possibility. Epstein's framework highlights the child as a stakeholder in the home-school relationship and posit the child interacts, influences, and is influenced by interactions in both spheres (Epstein, 1987). Empirical data supports the bidirectional relation between children's behavior problems and other dimensions of parenting. For example, Pearl and Colleagues (2014) investigated the relation between parenting quality (parental perceptions of positive parenting, effectiveness of discipline, efficacy, and satisfaction) and child externalizing problems over time and found child behavioral difficulties in kindergarten predicted less positive parenting strategies in first grade, and less positive strategies, in turn, predicted more behavioral difficulties in second grade. This pattern was replicated in a sample of boys aged 7 to 12 with clinical-level symptoms of ADHD, Conduct Disorder, or Oppositional Defiant Disorder (Burke, Pardini, & Loeber, 2008). There is also evidence parenting behaviors have a transactional relation with general child adjustment (Yates, Obradović, & Egeland, 2010) and internalizing symptoms (Williams et al., 2009). Since parent education involvement is an aspect of general parenting (Hindman & Morrison, 2011), it would suggest the two constructs to share a similar relation.

To the researchers' knowledge, only one study has attempted to test this model specifically for parent education involvement. Høglund and colleagues (2015) longitudinally investigated three models for the relation between parent education involvement (homework assistance, conferencing, and school-based involvement) and social competence and aggressive behavior among elementary school students. In the best fitting model, child socioemotional skills reported in the fall of third grade predicted individual parent involvement activities in the Spring of the third grade; however, the model with bidirectional relationships was not the best fit for social competence nor behavioral outcomes. A limitation of this study was the limited operationalization of home-based involvement to homework assistance, which has varying relations with student outcomes in the literature, and does not include educational activities such as reading or going to the library that have more robust empirical support (Wilder, 2014). In addition, the relation between internalizing difficulties and parent involvement was not explored, suggesting further research is still warranted in this area.

### **Ethnicity, Parent Education Involvement, and Socioemotional Outcomes**

While the parent education involvement literature often investigates the role of educational involvement for low-income African American families, limited information is available for Latinx populations. The Latinx community is a growing minority population in the United States (Passel & Cohn, 2008), and may experience barriers to parent education involvement that are distinct from the African American and White populations. Yet, parent education involvement is important to Latino children's socioemotional outcomes as well. Farver, Xu, Eppe, & Lonigan (2006) found educational involvement (i.e. reading/home literacy environment) was associated with improved social functioning for low-income Latino preschoolers. Consistent with the larger literature, home-based involvement was associated with

reduced behavioral problems and high social skills. In addition, parents with strong Latinx cultural orientation reported their children's ability to be successful socially (e.g. follow directions, get along with peers) was more important than academic success (Ryan, Casas, Kelly-Vance, Ryalls, & Nero, 2010) suggesting socioemotional skills are of high importance in these communities.

Latinx parents' may have expectations for or conceptualizations of involvement that are incongruent with those of school personnel (Peña, 2000; McWayne, Melzi, Schick, Kennedy, & Mundt, 2013). For example, a 2007 report by the Tomás Rivera Policy Institute highlighted Latinx parents often conceptualize education involvement as "life participation (e.g. awareness of the child's life, general encouragement, teaching good morals and respect for others, home-based activities)" in addition to traditional academic involvement, with this informal involvement being named more frequently and described as an important complement to formal education (Zarate, 2007). Earlier research also documented a disconnect between teachers' and Latinx parents' views of parent education involvement; a review of studies with this population noted teachers used formal definitions of involvement and parents used more holistic views of educational involvement, including activities such as feeding children before school, instilling cultural values, and home-based educational activities (Scribner, Young, & Pedroza, 1999). This suggests informal (e.g. rules and discussions about education) involvement is common in this demographic and parents view it as important. Notably, research also finds informal involvement increased the odds of on-time graduation among Latino students, and its effect is comparable to that of traditional dimensions of parent education involvement (LeFevre & Shaw, 2012).

Low English language proficiency can also interfere with parent education involvement. Spanish-dominant parents may have difficulty communicating with school personnel who likely

do not speak Spanish and assisting with homework when assignments are in English (Tinkler, 2002). On the other hand, children of Spanish-dominant parents may benefit the most from parent education involvement. One study found language dominance moderated the effects of parent education involvement on elementary school students' social competence (Valdez, Shewakramani, Goldberg, & Padilla, 2013). For English-dominant parents, educational involvement was not significantly correlated with children's social competence. For Spanish-dominant parents there was a significant negative relation between home-based educational involvement and child social competence. In addition, there was a positive relation between school-based involvement and social competence for Spanish-dominant parents. The language barrier can be particularly troublesome for immigrants (Sibley & Dearing, 2014), more so than native-born Latinos (Turney & Kao, 2009), and further hinder involvement (Ramirez, 2003).

### **Rationale**

Student socioemotional functioning has become a focus of school policy. Schools are challenged to meet the needs of a student population with a growing number of mental health difficulties, which impact students' ability to learn. Low-income, minority children are consistently reported to enter school without the socioemotional skills needed to be successful in the academic environment (Heckman, 2011). The relation between early academic outcomes and later success inspired a large literature dedicated to uncovering protective factors for at-risk children; parent education involvement is one such factor. It has been associated with improved academic and socioemotional functioning across grade-levels, socioeconomic status, and race (Fantuzzo et al., 2004; Jeynes, 2003; Wang et al., 2014; Wilder, 2014). Involvement is associated with better social competence, less externalizing and internalizing difficulties in students from

preschool to high school. But, most the literature is concerned with school-aged students and limited longitudinal evidence is provided for the youngest learners in preschool.

Moreover, theory and research (Epstein, 1987; Pearl et al., 2014; Williams et al., 2009) suggest socioemotional difficulties may impact a variety of parenting dimensions. Bidirectional relationships between these two constructs, where parent involvement influences child socioemotional outcomes, and child internalizing and externalizing behaviors influence parent educational involvement, have been proposed, but only evaluated by one study (Hoglund et al., 2015). However, the research did not include young children or assess child internalizing difficulties. Nor are Latinx families often included in the larger literature, which is an important area of study as they may have unique factors, such as language barriers, that moderate the relation between the two constructs. Investigating this relation among the preschool population can enhance our understanding of the barriers to parent education involvement and inform school efforts; enhancing parents' earliest interactions with school systems may set parents up for a positive trajectory with educational involvement, and prevent or reduce child socioemotional difficulties.

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Appendix B

Demographics

About yourself

1. Age: \_\_\_\_\_ years
  
2. Gender: MaleFemale
  
3. Your relationship to the child participating in this study:
  - \_\_\_\_\_ Biological mother
  - \_\_\_\_\_ Biological father
  - \_\_\_\_\_ Adoptive mother
  - \_\_\_\_\_ Adoptive father
  - \_\_\_\_\_ Step-mother
  - \_\_\_\_\_ Step-father
  - \_\_\_\_\_ Grandmother
  - \_\_\_\_\_ Grandfather
  - \_\_\_\_\_ Other (describe: \_\_\_\_\_)
  
4. Ethnicity:
  - \_\_\_\_\_ Hispanic/Latino
  - \_\_\_\_\_ White, Caucasian
  - \_\_\_\_\_ Black, African-American
  - \_\_\_\_\_ Asian, Asian American
  - \_\_\_\_\_ Native American
  - \_\_\_\_\_ Other
  
5. Employed: \_\_\_\_\_ Full-time      \_\_\_\_\_ Part-time      \_\_\_\_\_ Unemployed
  
6. Describe your employment (position, title): \_\_\_\_\_
  
7. Highest Education completed:
  - \_\_\_\_\_ Less than High School
  - \_\_\_\_\_ High School
  - \_\_\_\_\_ Some college or trade school
  - \_\_\_\_\_ Bachelor's Degree
  - \_\_\_\_\_ Post-bachelor's degree
  
8. Marital status:
  - \_\_\_\_\_ Single
  - \_\_\_\_\_ Separated or Divorced
  - \_\_\_\_\_ Living with a partner
  - \_\_\_\_\_ Married
  
9. How many people reside in your household? \_\_\_\_\_

Relationship to your child (e.g., sibling, step-mom, grandfather)	Age

10. Yearly family income:

- \$0 - \$9,999
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,999
- \$50,000 - \$59,999
- \$60,000+

11. Country of birth: \_\_\_\_\_

12. If you were born in a different country, how old were you when you moved to the US?  
 \_\_\_\_\_ years

13. If you are a Latino/Hispanic born in the United States, what is your cultural heritage?

- Mexican
- Puerto Rican
- Cuban
- Central American
- South American
- Other (describe: \_\_\_\_\_)

14. Current relationship with the father/mother of your child (preschooler enrolled in this study) (e.g., if you are the mother of the child, respond about your relationship with the father of the child):

- Spouse
- Partner, never married
- Ex-spouse or ex-partner
- Friend, never partner
- Acquaintance, never partner
- Stranger/no relationship

15. Are you currently participating in mental health services? \_\_\_\_Yes\_\_\_\_No

21. Have you participated in mental health services in the past? \_\_\_\_Yes\_\_\_\_No

About your child

17. Age: \_\_\_\_\_ years, \_\_\_\_\_ months
18. Gender: MaleFemale
19. Ethnicity: \_\_\_\_\_ Hispanic/Latino  
 \_\_\_\_\_ White, Caucasian  
 \_\_\_\_\_ Black, African-American  
 \_\_\_\_\_ Asian, Asian American  
 \_\_\_\_\_ Native American  
 \_\_\_\_\_ Other
20. Country of birth: \_\_\_\_\_
21. If your child was born in a different country, how old was s/he when moved to the US?  
 \_\_\_\_\_ years, \_\_\_\_\_ months
22. Mother-child relationship:  
 \_\_\_\_\_ Live-in mother  
 \_\_\_\_\_ Highly involved (e.g., communicates with child every week)  
 \_\_\_\_\_ Somewhat involved (e.g., communicates several times per year)  
 \_\_\_\_\_ Minimally involved (e.g., communicates with child once per year)  
 \_\_\_\_\_ Not involved
23. Father-child relationship:  
 \_\_\_\_\_ Live-in father  
 \_\_\_\_\_ Highly involved (e.g., communicates with child every week)  
 \_\_\_\_\_ Somewhat involved (e.g., communicates several times per year)  
 \_\_\_\_\_ Minimally involved (e.g., communicates with child once per year)  
 \_\_\_\_\_ Not involved
24. Are any languages besides English spoken in the child's home?  
 \_\_\_\_\_ No  
 \_\_\_\_\_ Yes – List the languages: \_\_\_\_\_, \_\_\_\_\_
25. Was your child born earlier than the usual 9 months after conception?  
 \_\_\_\_\_ No  
 \_\_\_\_\_ Yes – How many weeks early? \_\_\_\_\_ weeks early
26. How much did your child weight at birth? \_\_\_\_\_ pounds and \_\_\_\_\_ ounces



**Child Behavior Checklist**

Below is a list of items that describe children. For each item that describes the child **now or within the past 2 months**, please circle the **2** if the item is **very true or often true** of the child. Circle the **1** if the item is **somewhat true or sometimes true** of the child. If the item is **not true** of the child, circle the **0**. Please answer all the items as well as you can, even if some do not seem to apply to your child.

How often has this described your child in the past 2 months?	0= Not True	1= Sometimes True	2 = Very True
21. Aches or pains (without medical cause; <b>do not</b> include stomach or headaches )	0	1	2
2. Acts too young for age	0	1	2
3. Afraid to try new things	0	1	2
4. Avoids looking others in the eye	0	1	2
5. Can't concentrate, can't pay attention for long	0	1	2
6. Can't sit still, restless, or hyperactive	0	1	2
7. Can't stand having things out of place	0	1	2
8. Can't stand waiting; wants everything now	0	1	2
9. Chews on things that aren't edible	0	1	2
10. Clings to adults or too dependent	0	1	2
11. Constantly seeks help	0	1	2
12. Constipated, doesn't move bowels (when not sick)	0	1	2
13. Cries a lot	0	1	2
14. Cruel to animals	0	1	2
15. Defiant	0	1	2
16. Demands must be met immediately	0	1	2
17. Destroys his/her own things	0	1	2
18. Destroys things belonging to his/her family or other children	0	1	2
19. Diarrhea or loose bowels (when not sick)	0	1	2
20. Disobedient	0	1	2
21. Disturbed by any change in routine	0	1	2
How often has this described your child in the past 2 months?	0= Not True	1= Sometimes True	2= Very True



22. Doesn't want to sleep alone	0	1	2
23. Doesn't answer when people talk to him/her	0	1	2
24. Doesn't eat well Describe:	0	1	2
25. Doesn't get along with other children	0	1	2
26. Doesn't know how to have fun; acts like a little adult	0	1	2
27. Doesn't seem to feel guilty after misbehaving	0	1	2
28. Doesn't want to go out of home	0	1	2
29. Easily frustrated	0	1	2
30. Easily jealous	0	1	2
31. Eats or drinks things that are not food <i>-don't</i> include sweets Describe:	0	1	2
32. Fears certain animals, situations, or places Describe:	0	1	2
33. Feelings are easily hurt	0	1	2
34. Gets hurt a lot, accident-prone	0	1	2
35. Gets in many fights	0	1	2
36. Gets into everything	0	1	2
37. Gets too upset when separated from parents	0	1	2
38. Has trouble getting to sleep	0	1	2
39. Headaches (without medical cause)	0	1	2
40. Hits others	0	1	2
41. Holds his/her breath	0	1	2
42. Hurts animals or people without meaning to	0	1	2
43. Looks unhappy without good reason	0	1	2
<b>How often has this described your child in the past 2 months?</b>	0= Not True	1 = Sometimes True	2= Very True

44. Angry moods	0	1	2
45. Nausea, feels sick (without medical cause)	0	1	2
46. Nervous movements or twitching	0	1	2
Describe:			
47. Nervous, high-strung, or tense	0	1	2
48. Nightmares	0	1	2
49. Overeating	0	1	2
50. Overtired	0	1	2
51. Shows panic for no good reason	0	1	2
52. Painful bowel movements (without medical cause)	0	1	2
53. Physically attacks people	0	1	2
54. Picks nose, skin, or other parts of body	0	1	2
Describe:			
55. Plays with own sex parts too much	0	1	2
56. Poorly coordinated or clumsy	0	1	2
57. Problems with eyes (without medical cause)	0	1	2
Describe:			
58. Punishment doesn't change his/her behavior	0	1	2
59. Quickly shifts from one activity to another	0	1	2
60. Rashes or other skin problems (without medical cause)	0	1	2
61. Refuses to eat	0	1	2
62. Refuses to play active games	0	1	2
63. Repeatedly rocks head or body	0	1	2
64. Resists going to bed at night	0	1	2
65. Resists toilet training	0	1	2
Describe:			
<b>How often has this described your child in the past 2 months?</b>	0= Not True	1= Sometimes True	2 = Very True
66. Screams a lot	0	1	2

67. Seems unresponsive to affection	0	1	2
68. Self-conscious or easily embarrassed	0	1	2
69. Selfish or won't share	0	1	2
70. Shows little affection toward people	0	1	2
71. Shows little interest in things around him/her	0	1	2
72. Shows too little fear of getting hurt	0	1	2
73. Too shy or timid	0	1	2
74. Sleeps less than most kids during the day and/or night	0	1	2
Describe:			
75. Smears or plays with bowel movements	0	1	2
76. Speech problems	0	1	2
Describe:			
77. Stares into space or seems preoccupied	0	1	2
78. Stomachaches or cramps (without medical cause)	0	1	2
79. Rapid shifts between sadness and excitement	0	1	2
80. Strange behavior	0	1	2
Describe:			
81. Stubborn, sullen, or irritable	0	1	2
82. Sudden changes in mood or feelings	0	1	2
83. Sulks a lot	0	1	2
84. Talks or cries out in sleep	0	1	2
85. Temper tantrums or hot temper	0	1	2
86. Too concerned with neatness or cleanliness	0	1	2
87. Too fearful or anxious	0	1	2
<b>How often has this described your child in the past 2 months?</b>	0= Not True	1= Sometimes True	2 = Very True
88. Uncooperative	0	1	2

89. Underactive, slow moving, or lacks energy	0	1	2
90. Unhappy, sad, or depressed	0	1	2
91. Unusually loud	0	1	2
92. Upset by new people or situations	0	1	2
93. Vomiting, throwing up (without medical cause)	0	1	2
94. Wakes up often at night	0	1	2
95. Wanders away	0	1	2
96. Wants a lot of attention	0	1	2
97. Whining	0	1	2
98. Withdrawn, doesn't get involved with others	0	1	2
99. Worries	0	1	2
100. Please write in any problems the child has that were not listed above:	0	1	2

**Family Involvement Questionnaire**

Please state how often you participate in these activities

**1 = Rarely**

**2 = Sometimes**

**3 = Often**

**4 = Always**

1. I attend conferences with the teacher to talk about my child's learning or behavior	1	2	3	4
2. I talk to my child's teacher about his/her daily school routine	1	2	3	4
3. I talk to my child's teacher about the classroom rules	1	2	3	4
4. I talk to the teacher about how my child gets along with his/her classmates in school	1	2	3	4
5. I talk to my child's teacher about my child's accomplishments	1	2	3	4
6. I talk to my child's teacher about his/her difficulties at school	1	2	3	4
7. I talk with my child's teacher about school work he/she is expected to practice at home	1	2	3	4
8. I participate in planning classroom activities with the teacher	1	2	3	4
9. I attend parent workshops or training offered by my child's school	1	2	3	4
10. I participate in planning school trips for my child	1	2	3	4
11. I volunteer in my child's classroom	1	2	3	4
12. I go on class trips with my child	1	2	3	4
13. I participate in parent and family social activities at my child's school	1	2	3	4
14. I talk with other parents about school meetings and events	1	2	3	4
15. I take my child places in the community to learn special things (e.g. zoo, museum, etc.)	1	2	3	4
16. I talk about my child's learning efforts in front of relatives and friends	1	2	3	4
17. I talk with my child about how much I love learning new things	1	2	3	4
18. I bring home learning materials for my child (tapes, videos, books)	1	2	3	4
19. I spend time with my child working on reading/writing skills	1	2	3	4
20. I spend time with my child working on creative activities (like singing, dancing, drawing, and storytelling)	1	2	3	4
21. I spend time with my child working on number skills	1	2	3	4

## Appendix C

### Original Data Analyses

Descriptive statistics and correlations were examined and are presented in Tables 2 and 3. Child age and gender were used in analyses when internalizing and externalizing scores were the outcomes, because raw scores, instead of normed scores, were utilized. Parental education-level, income, and marital status were examined as possible covariates to include in hypotheses testing. Only demographic variables significantly correlated with the outcomes were included in analyses. To evaluate whether the data met key assumptions for regression analyses, including a linear relationship, normality, independence, and homoscedasticity, scatterplots of the variables' relationship and their variances, as well as the Durbin-Watson statistic and histograms were used. Hierarchical regressions were used to assess the bidirectional relation between parent education involvement and child socioemotional difficulties.

In, one set of two regressions, the researchers tested the relation between baseline (T1) parent education involvement and later (T2) socioemotional difficulties (internalizing and externalizing). In block one, child age and gender were entered as covariates. Baseline socioemotional difficulties (Internalizing or Externalizing scores) were entered in block 2. Block 3 included baseline parent education involvement (Home-Based Involvement, School-Based Involvement, and Home-School Conferencing) to assess if parent involvement predicted future socioemotional difficulties above and beyond known predictors and baseline difficulties. A Bonferroni correction was used to account for multiple comparisons ( $p < .025$ ).

A second set of three regressions was used to determine if baseline (T1) socioemotional difficulties predicts later (T2) parent education involvement variables. In block one, covariates were entered (parent marital and employment status, child age). Baseline education involvement

dimensions were entered in block 2. Block 3 included baseline socioemotional difficulties (Internalizing and Externalizing scores) to assess whether socioemotional difficulties predicted future Home-Based Involvement, School-Based Involvement, and Home-School Conferencing above and beyond known predictors and baseline involvement. A Bonferroni correction was used to correct for multiple comparisons ( $p < .017$ ).

### Original Results

Data was consistent with the assumptions necessary for regression analyses. Outliers ( $>3SD$  from the mean) were winsorized to reduce the magnitude of extremely high values and improve the distribution of the data to meet necessary requirements for regressions. Less than 2% of the data were missing. Mean values were imputed at a person-level for each domain (i.e. externalizing domain on the CBCL). Given the sample size, the researchers had adequate power to detect a small effect for socioemotional outcomes (.81; 5 total predictors: 3 parent involvement dimensions and 2 covariates) and parent education involvement outcomes (power = .83; 6 total predictors: 2 socioemotional domains and 4 covariates; Faul, Erdfelder, Lang, & Buchner, 2007) using linear regressions.

Descriptive statistics and bivariate correlations for all included variables are presented in Table 2 and 3. There were no significant differences between means across T1 and T2. Means suggest parents participated in home-based involvement and home-school conferencing activities more frequently than school-based activities, but all reports of involvement were relatively high and close to the maximum score of 28; the average score for school-based involvement ( $M = 18.65$ ) corresponds to a “sometimes” rating in the frequency scale used, while the average score for home-based involvement ( $M = 22.79$ ) and school conferencing ( $M = 22.72$ ) corresponds to “often.”

Intercorrelations within the different parent education involvement dimensions were positive and moderate both at T1 and T2 (Table 2; from  $r = .40$  for the relation between School-Based involvement T1 and Home-Based Involvement at T1 to  $r = .58$  for the relation between Home-School Conferencing T1 and School-Based Involvement at T1; to  $r = .51$  for the relation between School-Based involvement T2 and Home-School Conferencing at T2 to  $r = .53$  for the relation between Home-School Conferencing T2 and Home-Based Involvement at T2).

Additionally, stability for the education involvement variables from T1 to T2 was moderate (from  $r = .52$  for Home-School Conferencing to  $r = .66$  for School-Based Involvement).

Internalizing and externalizing symptoms shared a strong positive correlation (T1  $r = .71$ ) and T2  $r = .71$ ) and showed moderate stability from T1 to T2 (Internalizing  $r = .63$  and Externalizing  $r = .66$ ). Contrary to expectations, parent education involvement and child socioemotional functioning were not significantly correlated.

### **Parent Education Involvement as a Predictor of Later Socioemotional Functioning**

The regression model predicted 43% of variance in T2 child internalizing problems. The first and second step of the model explained 39% of variance and baseline internalizing difficulties had a significant effect on later internalizing problems. Adding the parent involvement variables improved model fit ( $r^2 = .43$ ;  $F(6,63) = 7.97$ ,  $p < .001$ ) and contributed 4% increase in variance explained. None of the education involvement domains were significant predictors, but home-school conferencing was a trend level predictor of internalizing problems ( $\beta = -.23$ ,  $p < .10$ ; Table 4). Results suggested a 1 unit increase in home-school conferencing was associated with a .23 units decrease in internalizing problems, over and above the effects of other covariates. Home-Based Involvement and School-Based Involvement were not significant predictors.



The regression model predicted 46% of variance in T2 child externalizing problems, but none of the parent education involvement dimensions predicted later externalizing difficulties.

### **Socioemotional Functioning as a Predictor of Later Parent Education Involvement**

The regressions explained 43% of variance in home-based, 62% of variance in school-based, and 31% of variance in home-school conferencing. However, internalizing and externalizing problems were not significant predictors of parent involvement above and beyond known covariates or previous parent involvement (Table 5).

### **Cultural Considerations**

Post-hoc analyses were conducted to determine whether cultural factors contributed to the null-findings. Using parent-reported data on the language spoken in the home, we compared education involvement level for those who only speak English vs. those who speak another language (instead of or in addition to English). Table 6 shows there were significant differences in School-Based Involvement at T1 ( $t(69) = 2.37, p = .02$ ) and T2 ( $t(69) = 2.85, p = .01$ ), with English only speaking parents reporting higher means. Similarly, group differences were significant for Home-School Conferencing ( $t(69) = 2.39; p = .02$ ) at T1, and marginally significant for Home-Based Involvement ( $t(69) = 1.83, p = .07$ ) at T2, with more involvement among English only speakers.

Table 1. Correlations between demographic covariates and test variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Child Age T1	1.0															
2. Child Gender T1	-.13	1.0														
3. Highest Level of Education T1	-.21	.06	1.0													
4. Marital Status T1	-.11	.15	-.12	1.0												
5. Employed Part-Time T1	.05	.17	.04	-.11	1.0											
6. Employed Full-Time T1	.02	-.23	.26*	-.34**	-.25*	1.0										
7. Home-School Conferencing T1	.07	.00	-.18	-.11	.05	-.21	1.0									
8. School-Based Involvement T1	.05	-.04	-.28*	.16	-.17	-.34**	.58**	1.0								
9. Home-Based Involvement T1	-.04	-.05	-.04	-.25*	.03	-.19	.44**	.39**	1.0							
10. Internalizing T1	.16	-.29*	-.02	.04	-.07	.03	.04	.04	-.04	1.0						
11. Externalizing T1	.16	-.14	.05	.08	-.16	.04	-.07	.05	-.13	.71**	1.0					
12. Home-School Conferencing T2	-.07	.00	-.11	-.15	.07	-.06	.52**	-.36**	.38**	-.09	-.08	1.0				
13. School-Based Involvement T2	-.31**	.07	-.06	-.02	-.06	-.29*	.58**	.66**	.49**	.08	.00	.51**	1.0			
14. Home-Based Involvement T2	-.08	-.20	.07	-.31**	-.04	.16	.37**	.32**	.55**	.14	.11	.53**	.52**	1.0		
15. Internalizing T2	.11	-.12	.01	.07	-.03	-.09	-.09	.01	.03	.63**	.62**	-.01	.03	.04	1.0	
16. Externalizing T2	.17	-.05	-.12	-.09	-.11	-.10	-.09	.05	.04	.42**	.66**	-.08	-.03	.02	.71**	1.0

\*p<.05

\*\* p<.01

Table 2. Means and Standard Deviations of test variables

	Year 1		Year 2	
	Mean	SD	Mean	SD
Home-Based Involvement	22.79	3.99	22.49	4.16
School-Based Involvement	18.65	5.58	18.39	6.16
Home-School Conferencing	22.72	5.13	21.63	5.35
Internalizing Problems	6.02	5.70	5.37	5.37
Externalizing Problems	11.43	8.18	10.20	8.63

Table 3. Standardized Coefficients from regression analyses for Externalizing and Internalizing Difficulties at Time 2 (T2)

Predictors:	Externalizing Difficulties at T2			Internalizing Difficulties at T2		
	Model 1: Demographics	Model 2: Adds T1 Externalizing	Model 3: Adds T1 Parent Education Involvement	Model 1: Demographics	Model 2: Adds T1 Internalizing Difficulties	Model 3: Adds T1 Parent Education Involvement
Demographics						
Child Age	.163	.06	.08	.10	.02	.04
Child Gender	-.03	.05	.06	-.11	.07	.08
Baseline Difficulties (T1)		.66**	.66 **		.64**	.65**
Parent Education Involvement						
Home-Based Involvement			.09			.14
School-Based Involvement			.06			.05
Home-School Conferencing			-.11			-.23*
R <sup>2</sup>	.03	.45	.46	.03	.39	.43

\*p<.1

\*\* p<.025

Table 4. Standardized Coefficients from regression analyses for Parent Education Involvement at Time 2 (T2)

Predictors:	Home-Based Involvement (HBI) at T2			School-Based Involvement (SBI) at T2			Home-School Conferencing (HSC) at T2		
	Model 1: Demographics	Model 2: Adds T1 HBI	Model 3: Adds T1 Difficulties	Model 1: Demographics	Model 2: Adds T1 SBI	Model 3: Adds T1 Difficulties	Model 1: Demographics	Model 2: Adds T1 HSC	Model 3: Adds T1 Difficulties
Demographics									
Child Age	-.12	-.07	-.11	-.31**	-.36**	-.38**	-.01	-.12	-.12
Parental Employment: Part-Time	-.06	-.01	.02	-.17	-.03	-.03	.02	.05	.05
Full-Time	.03	.22	.22	.40**	-.14	-.15	-.12	.04	.04
Parental Marital Status	-.32**	-.11	-.12		-.22**	-.22**	-.20	-.09	-.09
Baseline Involvement (T1)		.56**	.58**		.66**	.66**		.53**	.54**
Baseline Difficulties (T1)									
Externalizing Difficulties			.15			-.08			.10
Internalizing Difficulties			.08			.18			-.16
R <sup>2</sup>	.12	.38	.43	.28	.60	.62	.05	.30	.31

\*p<.05  
\*\* p<.017

Table 5. Means for parent education involvement by languages spoken in home

	T1 Parent Education Involvement Means			T2 Parent Education Involvement Means		
	Home-Based	School-Based**	Home-School Conferencing**	Home-Based*	School-Based**	Home-School Conferencing
English Only	23.22	20.60	24.52	23.63	20.93	22.70
Bilingual Home	22.52	17.45	21.61	21.80	16.84	20.98

Means significantly different:  
\*p<.10, \*\* p<.05

### Summary of Findings

This study investigated the relation between parent educational involvement and student socioemotional functioning among a sample of low income Latinx preschoolers, in the hopes of understanding how the two constructs impact each other. Results suggest a bidirectional relation did not exist between the two constructs. This was counter to original hypotheses and previous literature. However, home-school conferencing was a trend-level predictor and suggest further research may be useful in this area.

Interestingly, the relation between home-school conferencing and child outcomes is variable in the literature. The results of this study are consistent with findings in a longitudinal study (Goldberg & Smith, 2017) where neither parent-reported (and initiated) negative contact with the school about performance nor teacher reported (and initiated) negative contact with parents predicted significant changes in internalizing difficulties among adopted preschoolers. This is counter to other longitudinal studies that found a positive relation between home-school conferencing and socioemotional functioning (Izzo et al., 1999; McCormick, O'Connor Capella, McClowry, 2013; Serpell & Mashburn, 2012). The differences may lay in methodology. Socioemotional functioning in the latter studies were defined around problem behavior, such as aggression and disruptive behaviors. This may suggest home-school conferencing functions differently across externalizing and internalizing difficulties.

Surprisingly, home-based involvement, which is usually a robust predictor of socioemotional and academic functioning was not a significant predictor in our sample. Methodological issues may explain this null finding as well. Previous studies that found this association often used teacher ratings of child emotional and behavioral difficulties (Fantuzzo et al., 2004; Powell et al., 2010), but two studies that used parent reports of child behavioral

problems did not find an association cross-sectionally (McWayne et al., 2004) or longitudinally (El Nokali et al., 2010), even when they did find associations between parent home-based involvement and teacher reported child behavior problems. Parents and teachers may report child behaviors differently based on the context of their observations and their expectations (Stanger & Lewis, 1993). Teachers' exposure to a classroom of students may influence socioemotional ratings and provide a more accurate representation of socioemotional functioning, particularly externalizing difficulties (Eiraldi, Mazzuca, Clarke, & Power, 2006).

School-based education involvement was not a significant predictor of children's later internalizing and externalizing problems. This is not consistent with previous longitudinal studies (El Nokali et al., 2010; Goldberg & Smith, 2017), but may reflect the uniqueness of our study's sample. A strength of this study is it begins to incorporate the perspective of Latinx parents of young children in the parent education involvement literature. Additionally, over two thirds of the sample included a primary caregiver whom immigrated to the United States (and over 50% spoke other languages in the home). To the researchers' knowledge, no study to date has examined parent education involvement and child socioemotional outcomes with predominantly Latinx immigrant caregivers longitudinally and the two studies examining the relation with Latinx families provided conflicting results. In a cross-sectional study, Valdez and colleagues (2013) found for Spanish-dominant caregivers school-based involvement had a positive relation with child difficulties, while for English-dominant Latinx caregivers this relationship was not significant. On the other hand, Niehaus and Adelson (2014) found parent education involvement at school had a negative relation with socioemotional difficulties for elementary school- aged English-Language-Learners.

Due to our small sample size, we were not able to examine the effects of the language spoken in the home on these relationships, but we did find parent education involvement was lower for women who spoke other languages at home, suggesting language abilities may be an important moderator in this relation. Additionally, the setting may have reinforced cultural norms around involvement. The schools' staff was mostly bilingual serving a predominantly immigrant Latinx population. It is possible staff was more attuned to the cultural values of their parents; school-based involvement would not be the most culturally appropriate way to engage Latinx parents, according to the literature (Trumbull, Rothstein-Fisch, Greenfield, & Quiroz, 2001), therefore teachers may have extended less invitations for participation resulting in less involvement from parents.

Another goal of this study was to explore the potential of child socioemotional difficulties to influence later parent education involvement. Child externalizing difficulties did not predict changes in any of the parent education involvement domains. This finding is inconsistent with Hoglund and colleagues' (2015) longitudinal finding that aggressive behaviors predicted more homework assistance, more home-school conferencing, but less parent school-based involvement among third, and fourth graders. Findings are partially consistent with other cross-sectional studies that found no evidence to support a relation between school-based involvement and emotional difficulties for young children (Downer & Mendez, 2005; Grolnick et al., 1997); however, these two studies did find connections between home based involvement and children's behavior. It is possible the low levels of socioemotional difficulties in our sample affected the results. Eiraldi and Colleagues (2006) suggest parents seek treatment and support when their children's behavior is impairing, and the threshold may be higher for minority families (Roberts, Alegria, Roberts, & Chen, 2005); therefore, the low-level difficulties

displayed by most children in our sample may not act as an invitation that leads to shifts in parental behavior.

Findings may also be inconsistent due to differences in developmental stage and length of follow-up. Unlike the Høglund and Colleagues (2015) longitudinal study, many of participants in our study did not cross grade levels or have the increasing and changing academic and social responsibilities typical of students who move throughout grade school, which could contribute to new stressors for children and changing needs in parental involvement. Most of the caregivers in our sample endorsed a high-level of involvement, which remained stable over time. This, coupled with low level child socioemotional difficulties, which also remained stable, may suggest researchers captured a period where there would not be a need to adjust parental behavior from baseline.

In conclusion, the uniqueness of the study sample and methodological choices may have led to results that conflict with current literature. Additionally, the findings highlight the importance of studying an issue from the view of multiple reporters and demographic groups as these factors may influence conclusions, which can be important information for schools and parents.