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Head Start Families' School Readiness Beliefs and Transitioning Roles

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Abstract

School readiness research has largely focused on child-level outcomes (e.g., academic and behavioral skill development), as well as teacher and parent reports of activities targeting children's kindergarten transition. Limited work has examined family involvement at the preschool level, particularly as pertains to the school readiness of families. While early childhood programs like Head Start (HS) emphasize and strive to involve families in a variety of ways, the relationship between parents and school shifts dramatically once children enter kindergarten. Parents of HS graduates may find themselves unprepared for the shift in involvement with school that occurs across this transition period in their children's education. Further, the types of involvement activities completed by parents may be shaped by their beliefs about their own roles. However, existing knowledge of parents' beliefs and expectations about their roles during the kindergarten transition is narrow in scope. It is additionally constricted by the use of measures with untested or poor reliability and validity. The development of such measures has previously neglected to seek the direct input of stakeholders like parents of transitioning children. Thus, the current study employed a mixed methods, participatory action research approach to develop the Family Expectations for School Readiness Involvement (FESRI) scale, a measure of parents' beliefs and expectations about parental roles and involvement in preparing their preschool children for elementary school across the kindergarten transition. Review by key stakeholders (HS staff and parents) suggested the FESRI's social acceptability regarding content and ease of use. Exploratory factor analysis yielded a three-factor structure: Relationships, Parent as Teacher, and Preparing for Kindergarten. Rasch modeling provided evidence of acceptable item functioning within each factor and suggested directions for further measure development (e.g., work with parents with lower agreement on FESRI beliefs

factors). Preliminary explorations suggested a significant, positive association between these beliefs and family involvement behaviors in HS parents. Initial support was also noted for associations between beliefs and family characteristics potentially reflecting exposure to US school culture and HS services.

Chapter I: Introduction

Vast literature supports the importance of the developmental period from ages 3 to 5 years, or the preschool years, to successful school entry and achievement. Research in the areas of literacy and mathematics, for example, offers evidence of the developmental pathways that lead from the preschool years to later academic performance (e.g., in middle school; Lopez, Gallimore, Garnier, & Reese, 2007). However, achievement is significantly threatened in children with multiple risk factors (e.g., chronic psychosocial stress, limited access to healthcare, economic hardship, low parental education, single-parent household). Although facing risk during early development does not always lead to lower achievement, the likelihood of difficulties increases as the number of risk factors accumulates (Sameroff & Rosenblum, 2006).

A significant social problem is that risk factors tend to cluster, particularly for children from low-income neighborhoods. Further, these risks are more common among the youngest of American children and those from ethnic minority backgrounds. According to recent statistics, 70% of Black and 67% of Hispanic children under the age of 6 years live in low-income homes. These percentages are approximately double the percentages of their White and Asian peers (Addy, Engelhardt, & Skinner, 2013). Similarly high rates of low-income status are seen for children under age 6 who live with immigrant parents, lower levels of parental education, no or part-time parental employment, single parents, and public insurance (Addy et al., 2013).

Often facing more risk factors than peers, children from low-income backgrounds disproportionately experience lower achievement in school. Although some kindergarteners from low-income families perform in the highest range on various measures of reading, mathematics, and general knowledge, proportionately more young children in low-income families perform below expectations on academic measures compared to peers living in affluent families (Klein &

Knitzer, 2007). A similar pattern is seen for performance on cognitive assessments at this age range (Lee & Burkam, 2002). Academic achievement discrepancies between low-income, ethnic minority children and their more socioeconomically advantaged peers begin during the early childhood years (Klein & Knitzer, 2007; Robbins, Stagman, & Smith, 2012) and persist through at least middle school (Lopez et al., 2007). Furthermore, small gaps at kindergarten entry seem to widen over time (McClelland, Acock, & Morrison, 2006).

Head Start (HS) was strategically designed to support children who are at-risk for poor school performance directly by working with them and indirectly by partnering with their families to support resilience, healthy development, and academic learning (US Department of Health & Human Services [US DHHS], 2003). HS programs are federally mandated to provide parents with involvement opportunities through a variety of avenues directly (e.g., attending parent-teacher meetings, reading to their children) and indirectly (e.g., participating in Parent Policy Council, which contributes to program planning and decision making) related to their own children. Additionally, opportunities are provided to families to foster family literacy and health (45 CFR 1301-1311; US DHHS, n.d.). Outcomes from the HS Family and Child Experiences Survey suggest that HS children significantly expand their early learning skills across the program year. Though children who entered HS with lower skills remained below peers with higher skills at HS exit, they demonstrated higher growth rates than those peers between HS entry and the end of kindergarten (West, Malone, Hulsey, Aikens, & Tarullo, 2010).

Early experiences, particularly early interactions with adult family members, are crucial for later development. Attachment within the parent-child relationship is one of the key elements needed for children to attain competence in the face of significant challenges to development (Masten & Coatsworth, 1998). In fact, families can serve as a powerful buffer against the

threatening effects of poverty on young children (Bronfenbrenner, 2001). Empirical literature on math and literacy in kindergarten points to the importance of parent-child interactions during early childhood (Dickinson & McCabe, 2001; Ehrlich & Levine, 2007; Jordan, Kaplan, Olah, & Locuniak, 2006; Lopez et al., 2007; Sénéchal & LeFevre, 2002; Whitehurst & Lonigan, 1998), supporting HS standards for family involvement (45 CFR 1304.40 (h) (1-4) Family partnerships; 45 CFR 1304.41 (c) (1-3) Community partnerships; 45 CFR 1308.21 (a) (1-10) (b) (c) Parent participation and transition of children into HS and from HS to public school; US DHHS, n.d.). For example, Hindman and Morrison (2011) demonstrated that family involvement (e.g., teaching about letters and words, playing counting games) during HS predicted children's decoding, vocabulary, and positive learning approaches, which all contribute to school readiness.

School Readiness

As Sheridan, Marvin, Knoche, and Edwards (2008) wrote, "School readiness is determined by the life experiences of young children between birth and enrollment in formal education programs" (p. 149). Traditionally, school readiness has been defined by child-specific skills in areas like literacy, math, social, and behavioral competencies. Newer models have introduced family-level competence. Rimm-Kaufman and Pianta (2000) proposed inclusion of the transactional relationship between children and their ecological contexts (e.g., family, school, and neighborhood), as well as inclusion of the transition to kindergarten. This emphasis on kindergarten transition urged researchers and practitioners to consider the dynamic nature of those ecological contexts over this transitional time period and children's relationships with them. Similarly, Sheridan et al. (2008) emphasize the importance of transactional relationships in preparing young children for early school success.

This latter research team draws specific attention to two types of relationships that may be critical for early education and intervention services that target school readiness. The parent-child relationship and the parent-professional relationship are seen as vital elements in supporting school readiness (Sheridan et al., 2008). The parent's rapport with the child during early childhood is repeatedly shown to support positive outcomes. Further, attending to the parent's relationships with professionals (e.g., preschool teacher) ties well with the recognition that children develop within reciprocally interacting systems (Bronfenbrenner, 1979). Partnership-based relationships are essential for effective kindergarten transitions (Early, Pianta, Taylor, & Cox, 2001).

School readiness research and practice will be most effective when integrated with collaborative partnership building (as is being done by Sheridan et al., 2008 and others). School readiness signifies more than young children's skills and preparedness for kindergarten. Also critical are the roles of families and the kindergarten transition process. By integrating family involvement and collaborative partnerships within the school readiness framework, the transition component will be more successful.

Kindergarten transition practices. Within early childhood settings, including center-based programs and family-based contexts, adults engage in various practices to ease children's transition into kindergarten. Transition practices vary, as does its conceptualization. While some interpret transition practices as entailing discrete events such as kindergarten classroom visits, others view transition as a process that connects children's natural environments (e.g., family network) to support environments (e.g., schools or programs; Bohan-Baker & Little, 2002). Discrete events occur once and then terminate (e.g., child or parent visits a kindergarten class, a kindergarten teachers visits the preschool classroom, transfer of student records across academic

settings). More continuous practices might serve to link children or their families to community supports (Kagan & Neuman, 1998), such as ongoing home visits conducted by program personnel or repeated home-school notes. These latter types of practices seem to be more based in partnership- and rapport-building.

Alternatively, transition can be regarded as practices that persist from preschool through kindergarten (Kagan & Neuman, 1998). In fact, Rimm-Kaufman and Pianta's (2000) transition model highlights that multiple contexts and individuals influence children's transition into kindergarten. More importantly, this model stresses the relationships across systems and individuals, and the transactionally evolving nature of those relationships over time (Rimm-Kaufman & Pianta, 2000). Thus, kindergarten transition is a process involving many individuals, not an isolated event occurring just in the life of the child (Bohan-Baker & Little, 2002). The transition process may begin in the year prior to kindergarten entry and continue throughout kindergarten.

Across this multi-year process, parents and their children may develop new ways of interacting with one another as new demands are placed from an academic or social perspective. Furthermore, children learn new skills and begin to establish a pattern of student-teacher interactions. Likewise, parents develop their own patterns of home-school interactions. These patterns build from the parents' own experiences as students and from their experiences with other children (Gonzalez, Borders, Hines, Villalba, & Henderson, 2013). Interactions in the preschool context are likely to differ from interactions in the elementary school context (Durand, 2011). In the broader ecological sense, all of these various relationships (e.g., child-parent, child-teacher, home-school, home-community, preschool-elementary school) further intersect and act upon each other (Rimm-Kaufman & Pianta, 2000).

Although kindergarten transition is a multi-person process over time, implemented practices tend to be child-focused, with few activities targeting the preparation of parents. Furthermore, they tend to occur near the actual preschool exit or kindergarten entry. Some evidence suggests that 90% of transition activities occurred after the start of kindergarten (Pianta, 2004). Other evidence indicates that transition activities are led more frequently by preschool teachers than by kindergarten teachers (La Paro, Kraft-Sayre, & Pianta, 2003).

Transition activities led by teachers range from time-intensive (e.g., conducting home visits) to classroom-based (e.g., inviting children to visit the classroom) to indirect practices (e.g., mailing information; La Paro et al., 2003; Nelson, 2004). Connecting transition activities to outcomes, LoCasale-Crouch, Mashburn, Downer, and Pianta (2008) found that kindergarten teachers' ratings of social and behavioral competencies were higher for children whose preschool teachers reported implementing more transition activities. This relationship was strongest for children facing socioeconomic risks. The implemented transition practices included activities directly experienced by children, contact between preschool and kindergarten, and contacts between teachers and parents. Among the surveyed transition activities, contact between the preschool and kindergarten teachers about specific children and/or curricula was associated positively with kindergarten teachers' ratings of children's competencies (LoCasale-Crouch et al., 2008).

Besides participating in school-based transition activities, parents also engage in activities at home to prepare for kindergarten. These home-based practices include those aimed at supporting academic skills and those aimed more broadly at orienting children to school. For example, early parent-child experiences include shared book reading, which is an activity that supports academic skills and behavioral skills required to attend to academic tasks. Orienting

experiences include discussions about behavioral expectations, meeting new classmates and teachers, the first day of school, and nature of schoolwork (La Paro et al., 2003). To prepare themselves, parents may talk with family or friends who have school-aged children or to other parents of children from their child's school (La Paro et al., 2003). Even when activities involve parents at home or at school, the direct aim is most often to support children's transition. Few experiences target the preparation of parents for the transition. This omission in transition planning ignores the role of the family context in the transactional ecology of kindergarten transition.

School readiness and kindergarten transition research largely highlights the activities that are implemented by preschool and kindergarten teachers. Limited literature identifies school readiness or transition practices directed by parents for their young children. Even less work studies the practices that target supporting parents through the kindergarten transition.

Family Involvement Behaviors

Family involvement is critical in facilitating positive transitions for children (Malsch et al., 2011). Involvement in kindergarten transition has been linked to more involvement in later schooling, which in turn supports long-term academic success (Schulting, Malone, & Dodge, 2005, as cited in Malsch et al., 2011). Multiple types of parent-focused transition practices may foster parents' involvement in kindergarten transition: provision of information, emotional support and encouragement, and active empowerment to serve as child advocates (Giallo, Treyvaud, Matthews, & Kienhuis, 2010). Within the transition model for HS families that was developed by Malsch and colleagues (2011), information provision should include not only logistical information about the transition process, but also information about "the similarities and differences between HS and kindergarten settings, and information about ways parents could

be involved" (p. 54) in the process. An important step to meeting parents' transition needs, however, might be to identify those needs.

Family involvement behaviors in learning. An important consideration is the roles that parents may serve towards enhancing their children's learning. Family involvement is a key protective factor in supporting student achievement (Bulotsky-Shearer, Wen, Faria, Hahs-Vaughn, & Korfmacher, 2012; Christenson & Sheridan, 2001; Englund, Luckner, Whaley, & Egeland, 2004), including for HS children (McWayne & Bulotsky-Shearer, 2013). For example, language (Roopnarine, Krishnakumar, Metindogan, & Evans, 2006; Sénéchal & LeFevre, 2002), literacy (Sénéchal & LeFevre, 2002), social behaviors (Roopnarine et al., 2006), and academic achievement (Ingram, Wolfe, & Lieberman, 2007) have all been positively associated with a variety of family involvement behaviors and styles. Across the literature, however, the construct of family involvement has been inconsistently conceptualized.

Although some research examines family involvement as a single dimension exclusively focused on activities visible in school (Kohl, Lengua, & McMahon, 2000), the extant literature also proposes that other behaviors by parents serve to bolster student learning and educational achievement. Various multidimensional models have been proposed (e.g., Epstein, 1995; Grolnick & Slowiaczek, 1994). Specifically, Epstein's (1995) classic model encompasses involvement within the community context, outside the home and school contexts. As Epstein wrote, families play a role in children's early learning that includes not only formal learning activities but also other parenting behaviors.

Using a partnership-centered approach involving key stakeholders (i.e., teachers and family members), a three-dimension model of family involvement has been validated in low-income urban samples of predominantly African American preschoolers (Fantuzzo, Tighe, &

Childs, 2000), Hispanic elementary school children (McWayne, Manz, & Ginsburg-Block, 2014), African American elementary school children (Manz, Fantuzzo, & Power, 2004), and Hispanic middle school children (LeFevre & Shaw, 2011). These three dimensions encompass home-based involvement, school-based involvement, and home-school communication. Home-based involvement describes families' out-of-school activities that foster learning (e.g., establishing routines, talking to children about school). School-based involvement pertains to activities that typically occur in school (e.g., volunteer activities, workshop attendance). Home-school communication depicts interactions between families and school personnel (e.g., conferences, phone contacts, and notes). The wide-ranging replicability of these factors suggests that these three involvement dimensions are robust for ethnic minority populations at various ages, including those who have yet to begin elementary school.

The importance of family involvement in children's learning is clear, even at the preschool level. In fact, it has been a foundational element of HS since its inception (Zigler & Styfco, 2006), with HS employing a two-generational approach in which children facing socioeconomic risk are supported through the strengthening of family contexts. Even as family involvement behaviors change across the kindergarten transition (Powell, Son, File, & Froiland, 2012), the importance of family involvement across settings emphasizes the parent-child relationship and home learning environment's impact on school readiness outcomes (Parker, Boak, Griffin, Ripple, & Peay, 1999; West et al., 2010).

Parents' Beliefs about School Readiness and Family Involvement

Although school readiness and kindergarten transition research typically focuses on teacher-directed, child-centered practices, it also repeatedly demonstrates that parents want to be involved in their children's learning (e.g., Durand, 2011; La Paro et al., 2003; Malsch, Green, &

Kothari, 2011; Shields, 2009). Parents value and participate in school readiness activities when given the opportunity, though they may not complete all activities offered (La Paro et al., 2003). For educators seeking to support family involvement in young children's learning and transition into later education, it becomes important to know what factors, aside from pragmatic barriers (e.g., work schedules, transportation, language, cultural issues, and child-care needs; La Paro et al., 2003; Malsch et al., 2011), might facilitate or hinder that involvement. For example, parents' beliefs and expectations likely shape the types of involvement activities that they implement (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Reese & Gallimore, 2000; Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005). Parents hold a range of beliefs on the importance of various domains for children's readiness for school (e.g., Barbarin et al., 2008). Moreover, they may not be aware of how their expectations differ from the school's expectations for parental roles (Durand, 2011; Whitaker & Hoover-Dempsey, 2013), or of how their roles may shift across different school settings (Shields, 2009).

As part of a study on the factors that impact family involvement in a Title I elementary school, Bartel (2010) found that African American parents agreed that it was their responsibility to have many roles in their children's education. Parents were more likely to agree that a specific activity was their responsibility if it directly related to their children rather than to themselves or the school. Furthermore, parents' beliefs about their roles seem to predict school-based involvement but not home-based involvement in ethnically diverse parents of first through sixth graders (Green, Walker, Hoover-Dempsey, & Sandler, 2007). Given the inherent contextual differences between preschool and elementary school, more research is needed to determine how parents' beliefs may impact their involvement behaviors in their young children's early learning and transition.

Research has investigated parents' beliefs about their young children's school readiness and transition to kindergarten. However, the work that has been done on parental beliefs mostly addresses what parents believe are the skills and behaviors needed by their children to be ready for school (e.g., Chan, 2012). When asked to identify those skills, parents frequently cite nominal knowledge, language/early literacy, social competence, general knowledge, self-regulation, independence, motor skills, and numeracy, though specific skills may be identified by different demographic groups (Barbarin et al., 2008).

Such parental conceptions of child-level school readiness may influence the form of their own involvement behaviors. As outlined in Hoover-Dempsey and colleagues' model of the family involvement process (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker, Ice, Hoover-Dempsey, & Sandler, 2011; Walker et al., 2005), parents' beliefs influence student outcomes by defining the involvement activities that parents think are important and permitted for their children's education. Shifting from studies on parents' beliefs of child-level skills, an emerging literature base has initiated the examination of parents' beliefs about their own involvement in education. Some of this work looks qualitatively at perceptions of parental roles. For instance, Mexican and South American mothers of first graders in the US highlighted their belief in the centrality of the maternal role in their children's academic and overall life experiences (Durand, 2011).

Also examining perceptions of parental roles, Walker et al. (2011) explored the psychological motivations for involvement that may be held by Latino parents of first through sixth graders. Parents' beliefs that they and schools share responsibility for learning, in addition to involvement invitations from the student, predicted home-based involvement activities. In contrast, perceptions of pragmatic barriers and invitations from the teacher predicted school-

based involvement activities. These findings suggest that specific opportunities for parents and teachers to jointly define their shared responsibilities, as well as specific invitations for involvement, may be important to facilitating family involvement in education (Walker et al., 2011). This implication coincides with the qualitative information obtained from the mothers in Durand's (2011) study, in that Latina mothers value their own involvement in their children's learning but that their conceptualization of family involvement may contrast with teachers' expectations of family involvement. Clarifying the beliefs and role constructions of parents and the school may be beneficial.

In addition to parents' beliefs about their direct involvement in their children's education, emerging research is illuminating parents' beliefs about their roles (i.e., "role constructions" in the Hoover-Dempsey model; Hoover-Dempsey et al., 2005) in supporting their preschoolers' kindergarten transition. Shields (2009) qualitatively explored the perspectives of two parents of children transitioning to primary school from an inner-city London nursery. Both parents observed that home-school communication was bidirectional in nursery school, while they perceived communication in primary school to be limited to prescribed meeting times. The parent-teacher relationship had become more distant and less reciprocal and partnership-based. A similar shift in parents' perceived roles can be seen across the transition from preschool to elementary school in the US, where parents report less communication, trust, and respect for teachers in elementary school than for those in preschool (Pianta et al., 2001, as cited in Malsch et al., 2011; Wildenger & McIntyre, 2011). Furthermore, communication specifically during the transition may be lacking, despite parents' desire for more information and support from their children's elementary school prior to kindergarten entry (Wildenger & McIntyre, 2011).

Measurement of parents' beliefs. Both the limited depth and breadth in the extant literature on parents' beliefs about school readiness and transition roles present a challenge for researchers and practitioners attempting to address parents' kindergarten transition needs. Currently, psychometrically-strong measures of parents' expectations are not available, particularly as pertains to parents' beliefs about their own roles and involvement in school readiness. Researchers seem to rely on interviews of small numbers of parents (e.g., La Paro et al., 2003) or on unvalidated questionnaires (e.g., McIntyre, Eckert, Fiese, DiGennaro, & Wildenger, 2007). However, this growing body of research points to possible dimensions of parents' beliefs regarding their preschoolers' transition to kindergarten.

At the elementary and secondary school level, Walker et al. (2005) developed a multidimensional questionnaire of parental involvement in education, not specific to kindergarten transition. One dimension of this measure is parental "role constructions." Parental role constructions were defined as parents' beliefs about their own responsibilities for children's education. Following a series of studies beginning with qualitative interviews of elementary school parents through quantitative studies of various questionnaire revisions (a scale development process combining theory and measurement), a 23-item measure was developed that yields three factors: school-focused role constructions ($\alpha = .63$), parent-focused role constructions ($\alpha = .62$), and partnership-focused role constructions ($\alpha = .72$). Items asked parents to rate the degree to which they agreed that specific activities were their responsibility. Activities included volunteering at school, communicating with the teacher, helping with homework, staying on top of things at school, explaining tough assignments, and talking with other parents. This scale has been validated in economically (< \$10,000 to > \$50,000 per year) and racially

diverse (29.2% Hispanic; 31.7% Caucasian) samples of parents with children in grades K-6 (Walker et al., 2005).

While Walker et al. (2005) examined involvement beliefs of parents throughout elementary school, other researchers have focused their study of parents' beliefs to the period of kindergarten transition (e.g., La Paro et al., 2003; McIntyre et al., 2007; Wildenger & McIntyre, 2011). For instance, family workers employed by a school district collaborated to develop parent interviews on topics like how *helpful* parents found various transition activities to be (school-offered vs. home-based; La Paro et al., 2003). In recognition of the gap in the literature reporting parents' beliefs about the transition process, a 57-item survey was developed (Family Experiences and Involvement in Transition [FEIT]; McIntyre et al., 2007). The FEIT was "rationally derived" (p. 84) by the researchers to cover five domains (i.e., child educational history, parents' concerns [i.e., worries] regarding transition, parent-identified needs [for help, activity suggestions, or information] during transition, parent-reported involvement specific transition-related activities, and family sociodemographic information). McIntyre et al. (2007) developed the measure to study parents' perspectives on their children's kindergarten transition preparation. The measure was later expanded to 72 items (Wildenger & McIntyre, 2011). However, no information was provided about how or why it was revised. Psychometric data were not reported for either version of the FEIT; so, its validity and reliability are unclear. Also, La Paro and McIntyre's respective teams neglected to seek input from stakeholders to assist in measure development, and so issues that would be important to parents during the kindergarten transition may not be adequately captured or may have limited social acceptability (Hitchcock et al., 2005).

The 2007 FEIT was administered to families of early education program graduates in the month prior to kindergarten in an urban school district (McIntyre et al., 2007). In a separate study, the 2011 FEIT was completed by an independent sample of families two weeks after starting kindergarten in urban, suburban, and rural school districts (Wildenger & McIntyre, 2011). Both samples were predominantly White families; fewer than one-third had annual family incomes less than $15,000 (McIntyre et al., 2007; Wildenger & McIntyre, 2011). Findings showed that most families in both studies wanted more involvement in planning the kindergarten transition and desired more information about the school's expectations for their children. These descriptive analyses support qualitative reports of parents' beliefs about the value of family involvement in school readiness (Durand, 2011; Shields, 2009).

While McIntyre and her team have worked with their own survey of parents' perspectives (McIntyre et al., 2007; Wildenger & McIntyre, 2011), others have relied on a set of six items on parental beliefs about child-specific school readiness skills that is used in the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K). These items require parents to rate the importance that various child-level skills have for kindergarten readiness. Recognizing the importance of working with psychometrically validated measures, Morgan and DiPerna (2007) sought to examine the reliability and structural validity of the ECLS-K parental beliefs items. Based upon the predominantly White sample, the items held together as a single factor about parents' school readiness beliefs. However, Morgan and DiPerna questioned the breadth of this beliefs indicator and called for advancements in measurement and greater understanding of parents' beliefs.

Summary and Purpose

School readiness is a complex, multidimensional construct that encompasses child-specific skills and behaviors, family-level competence, and the process of kindergarten transition over time. As such, a critical component is the ecological and transactional relationships-based process of transitioning from preschool or HS through kindergarten (Rimm-Kaufman & Pianta, 2000; Sheridan et al., 2008). To best support the transition process, family involvement through the transition should be integrated within collaborative home-school partnerships. However, the literature has largely ignored practices that support parents of transitioning children.

Regardless of demographic background, parents value involvement in their children's education (La Paro et al., 2003). Beyond small qualitative studies (Durand, 2011; Shields, 2009), however, few studies examine what parents believe to be their own roles or involvement in the school readiness and transition process. Existing beliefs measures have neglected parents' input during the scale construction process (e.g., Wildenger & McIntyre, 2011). The most reliable measure has not been used in HS and does not highlight the kindergarten transition period (Walker et al., 2005). Thus, significant gaps are present.

Addressing these gaps would aid administration of HS programs, as consulting with parents to establish school readiness goals represents HS performance standards (45 CFR 1307.3 (b) (1) (iii), as amended; US DHHS, n.d.). Furthermore, obtaining an understanding of the relationship between parents' role expectations (i.e., involvement beliefs) and parents' involvement behaviors would enhance the utility of measures of involvement beliefs. As noted by local HS partners, programs would be better positioned to support family involvement in school readiness and transition. As such, the current study aims to address the above needs and to

provide significant contributions to the local and national HS communities by achieving three aims and seven objectives.

Aim 1. The primary aim is to develop and validate via partnership a practical and psychometrically-sound measure, the Family Expectations for School Readiness Involvement scale (FESRI), that can be used by HS programs as they work with ethnically-diverse parents to prepare for kindergarten and support them in the transition process. This study builds upon documented partnership approaches (such as those by Gaskins, 1994; Hitchcock et al., 2005; Fantuzzo et al., 2000; Manz et al., 2004). Therefore, the first objective is to engage HS families in a series of focus groups to discern their beliefs about parents' roles and involvement that can facilitate the kindergarten transition (Objective 1). As such, additional objectives related to the primary aim are to develop preliminary English- and Spanish-language versions of the FESRI, based upon the findings from the focus groups (Objective 2); and to establish content and face validity for the FESRI through reviews by HS parents, HS staff, and experts in the area of early education and family involvement (Objective 3).

The fourth critical objective is to establish the structural validity and internal consistency of the FESRI with a large sample of HS parents (Objective 4). Parents' beliefs about their roles and involvement in school readiness and kindergarten transition have not been extensively researched. The few existing measures of these beliefs have been poorly developed, inadequately validated, or not focused on school readiness and kindergarten transition. Thus, the final structure of the FESRI cannot be predicted with certainty. However, prior research has suggested that parent-generated themes may cover domains like parent-centered activities, transition preparation, or location of activities. Because these topics pertain to the overarching construct of

parents' beliefs about school readiness roles, the FESRI dimensions are anticipated to be internally consistent.

A unique contribution of this study is the examination of the factorial invariance of the FESRI across language versions (English and Spanish; Objective 5). The English FESRI and Spanish FESRI are hypothesized to demonstrate factorial invariance because English- and Spanish-speaking parents in the current sample are served by the same HS program and, therefore, would not be expected to differ systematically from one another. Although prior work by McWayne et al. (2014) suggests that linguistic and related cultural variations may affect the factor structure of scales, parents' role beliefs may be influenced by exposure to services and involvement invitations (e.g., Hoover-Dempsey et al., 2005; Reese & Gallimore, 2000; Walker et al., 2011). So, the shared experience of the common HS program and its engaged preschool culture is expected to contribute more than language to the FESRI structure. A corollary to this objective is to evaluate the factorial invariance of the FESRI across age groups, given that parents of younger HS students may hold different expectations for their roles than parents of older HS students.

Aim 2. A secondary aim of the current research is to discern the multivariate relationships among HS families' demographic characteristics and the FESRI dimensions by examining how HS families' demographic variables relate to primary caregivers' beliefs about their roles and involvement in kindergarten transition (Objective 6). Parents' beliefs about their roles and involvement in preparing their HS children for kindergarten are expected to vary in regard to demographic, cultural, and other background variables. Characteristics that may contribute to variability in FESRI-measured parental beliefs are hypothesized to be those that reflect families' histories with school systems and other service providers, given the influence of

exposure to services. These variables include parent education, number of older siblings, child's disability status, participation in prior early childhood programs, and years enrolled in HS. However, with the use of the FESRI, the current work greatly extends the measurement of parents' beliefs and will thus report exploratory findings. Multivariate relationships have not been sufficiently studied, so little direct empirical basis is available for this hypothesis regarding demographic characteristics. Although studies of family involvement behaviors have demonstrated important connections among demographics, specific relationships between demographics and involvement behaviors have been inconsistent across the literature (Manz, 2012).

Aim 3. The final aim of this study is to examine the relationship between family involvement beliefs and family involvement behaviors by exploring how local HS parents' beliefs about their roles relate to family involvement behaviors (Objective 7). Limited work in school readiness has specifically compared family involvement beliefs with family involvement behaviors. However, that limited research has demonstrated that parents desire and value involvement (La Paro et al., 2003), particularly as it relates to their children (Bartel, 2010). Furthermore, work by Green et al. (2007) has suggested that parents' beliefs about their roles may predict school-based involvement. Thus, it is hypothesized that involvement beliefs, as indicated by the FESRI, will be positively associated with family involvement behaviors.

Chapter II: Literature Review

Many factors contribute to parents' decisions to be involved in their children's education, as well as the ways in which they choose to be involved (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005). According to the model of the family involvement process outlined by Hoover-Dempsey and colleagues (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005), influences on the decision to be involved include parents' beliefs about their own roles (parental role constructions), their self-efficacy to help their children educationally, and opportunities and invitations for involvement. Once parents have chosen to be involved, the specific forms (i.e., involvement behaviors) seem to be shaped by their particular skills and knowledge, pragmatic demands (e.g., time, energy), and specific opportunities and invitations. Given that the process of family involvement must begin with the decision to become involved, understanding why parents become involved in their children's education is important. Therefore, parents' beliefs and role constructions regarding family involvement will be the underlying theme of the current review.

Notably, as suggested by Hoover-Dempsey et al. (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005), education beliefs held by parents of young children influence the types of involvement behaviors in which the parents engage. For example, parents' ratings of how important it is for their children to learn a range of skills prior to kindergarten correlated with their reports of how much they engaged their kindergarten children in mathematics-related activities (Musun-Miller & Blevins-Knabe, 1998). By viewing mathematical concepts as being of low importance or interest to their preschoolers (Cannon & Ginsburg, 2008), parents were perhaps less likely to engage their children in math skills-building activities. Furthermore, in qualitative work by Reese and Gallimore (2000), immigrant Latino

parents reported beliefs that literacy acquisition was not a developmentally possible skill for children younger than 5-years old, and thus did not recognize emergent literacy skills as a component of school readiness. However, after being asked by preschool teachers to read books to their children at home, parents noticed that toddler-aged siblings demonstrated interest in reading. As a result, their beliefs about readiness for learning expanded. Their involvement behaviors consequently changed, as they then began reading with their other children prior to the start of preschool.

Despite the powerful message provided by the works of Musun-Miller and Blevins-Knabe (1998) and of Reese and Gallimore (2000), subsequent research is equivocal regarding parents' beliefs about young children's school readiness. In particular, its scope is limited largely to identifying what families believe are the competencies needed by children to successfully begin school (e.g., Achhpal, Goldman, & Rohner, 2007; Barbarin et al., 2008). Specifically cited skills tend to be behaviors related to social competence, self-regulation, independence, and motor functioning; and factual knowledge related to nominal knowledge, language/early literacy, and numeracy (Barbarin et al., 2008).

In recent years, researchers have begun to shift their focus to parents' beliefs about their own involvement within the school readiness and transition process. Limitations abound, however, because this literature is still in its nascent phase. These limitations, as well as strengths in the literature, will be reviewed in the current chapter within three main topics: parents' beliefs about school readiness and involvement, the relationship between family involvement beliefs and behaviors, and measurement of parents' beliefs.

Parents' Beliefs about School Readiness and Involvement

Given that the literature on parents' beliefs about their own involvement in school readiness and transition is just now emerging, solid comparisons across demographic characteristics cannot be made yet. However, Hoover-Dempsey et al. (2005) and Whitaker and Hoover-Dempsey (2013) have noted that parents' involvement beliefs are socially constructed and thus influenced by interactions with their key social groups (also see Hoover-Dempsey & Sandler, 1997) and their previous experiences with formal schooling (Gonzalez et al., 2013). In fact, individual studies are beginning to suggest both similarities and differences in involvement beliefs across various groups. Some work has suggested that family characteristics such as ethnic background relate to differences in parents' beliefs about their own involvement and about school readiness in general.

For instance, Barbarin et al. (2008) found that parents from different ethnic groups differentially cited certain skills as key to school readiness for their public preschool children. In this analysis of responses to open-ended questions provided by 452 economically and ethnically diverse parents, social competence and self-regulation were named as school readiness skills more frequently by Latino American and European American parents than by African American parents. This difference was found among low-income groups, but not among non-poor groups. Nominal knowledge and inferential reasoning were provided as responses equally across ethnic groups. Thus according to Barbarin and colleagues' work, ethnic background may relate to parents' beliefs on child-level school readiness skills within low-income populations, while ethnicity may relate less to beliefs within higher-income groups.

While Barbarin et al. (2008) and Chan (2012) examined parents' beliefs about important school readiness skills for their preschool children, parents' beliefs about their own roles and

involvement were not explored. In contrast, Durand (2011), Walker et al. (2011), and Zarate (2007) studied parents' beliefs specific to involvement. In Durand's work, six Mexican and South American immigrant, low-income mothers of first-grade students participated in an ethnographic case study. Semi-structured interviews were conducted in the families' own homes by ethnographers who had established relationships with the participants over a 2-year period (Durand, 2011). In their interviews, these mothers emphasized their belief in the maternal role as key. The raised themes paralleled cultural values of the mother-child relationship, *familismo* (familism), and *educación* (education). A common perspective amongst the interviewed mothers was that they did want to be involved in their children's education but did not grasp teachers' expectations. Another common theme was the salient difference between maternal expectations and teacher expectations for involvement. This contrast is particularly important to note when considering the relationship between parents' involvement beliefs and their actual involvement behaviors.

Other qualitative work on beliefs regarding family involvement in education has surveyed Latino American families of middle- and high-school students (Zarate, 2007). Family involvement in academic activities (e.g., attending parent-teacher conferences, signing homework, asking about homework, having high standards for academic performance, going to the library with their children) was considered important. However, these families more frequently cited their involvement in other aspects of their children's lives ("life participation"), which underscores the multi-dimensional nature of family involvement (Epstein, 1995) and fits within the ecological theory perspective (Bronfenbrenner, 1979). Life participation activities included behaviors like being aware of the child's peer group, teaching good morals and respect of others, communicating with the child, discussing future planning, and establishing trust with

the child. Families' acculturation levels did not change their beliefs regarding the importance of both academic and life involvement. This same study also surveyed school personnel (i.e., teachers, counselors, and principals), finding that school staff were unclear on best practices for involving families and that schools tended to lack a clear organizational vision for family involvement. Staff also more highly valued activities that were directly pertinent to school, like participation in parent-teacher organizations, open houses, and parent-teacher conferences. Many surveyed teachers tended to focus their own interactions with parents on scenarios of negative behavior or worsening academic performance (Zarate, 2007). As observed by the mothers who were interviewed by Durand (2011), the involvement beliefs of students' families often contrast with the perspectives of school personnel (Zarate, 2007). This contrast, coupled with negatively focused home-school interactions has the potential to impact families' involvement behaviors.

Relationship transactions between the home and school were examined by Walker et al. (2011) using a quantitative research approach with parent-completed questionnaires. Home-school relationship transactions were important to a sample of 147 predominantly low-income Latino parents of first- through sixth-grade urban students (Walker et al., 2011). In alignment with the model offered by Hoover-Dempsey et al. (2005), specific motivations for different types of family involvement were also examined. Beliefs that parents and schools are partners who together are responsible for learning predicted home-based involvement activities. Invitations from the teacher and perceptions of pragmatic barriers (e.g., time), however, predicted school-based involvement activities (Walker et al., 2011). This preliminary work begins to suggest that partnership-based approaches and invitations for involvement may facilitate Latino family involvement, as they may be a better fit with the involvement beliefs of many Latino families.

Bartel (2010) and her graduate students interviewed African American parents of third through sixth grade students in a Title I school about motivations for their involvement in their children's education. Seventy-four parents completed semi-structured baseline interviews; 26 of these participants completed an additional interview one year later. Between baseline and the second interview, two interventions were implemented that were geared toward facilitating family involvement (summer adult education classes and three interactive homework assignments during the fall). The research design of this study was not rigorous enough to draw clear conclusions about the interventions. However, some patterns emerged in the parent interviews about their involvement beliefs. Specifically, parents tended to believe that having many roles in their children's education was their responsibility. Activities that parents saw as directly pertaining to their child were more likely to be endorsed as part of that responsibility than activities perceived as aiding the school (e.g., volunteering for field trips) or the parents themselves (e.g., talking to other parents from the school; Bartel, 2010). Here, child-centered activities seemed to be key to parents' beliefs about their roles, which in turn would likely influence their actual involvement (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005).

In a wider grade-level range than the qualitative work by Bartel (2010) regarding the family involvement beliefs of parents of children in third through sixth grade, Green et al. (2007) examined involvement beliefs in a group of parents of children in first through sixth grade. A socioeconomically and ethnically diverse group of 853 parents completed the study questionnaire, which included a subscale on parental beliefs related to what home- and school-based activities they should do and how active they should be in their children's education. Both home-based and school-based involvement were predicted by parental perceptions of invitations,

motivational beliefs, and perceived life resources (e.g., time and energy). These relationships maintained even when parental income and education were considered. Of note, parent-reported motivation for involvement varied for younger (Grades 1-4) and older (Grades 5-6) children. Parents of younger children reported that home-based involvement motivations included child invitations, parental self-efficacy, role activity beliefs ("parental beliefs," as considered by the current study), and perceived resources. Most of these motivators also predicted home-based involvement for parents of older children. However, parental role activity beliefs did not. Similarities across age groups held for school-based involvement, the exception being that perceived resources and role activity beliefs seemed most salient to parents of older children (Green et al., 2007). Though interesting, these results are limited by the study's use of cross-sectional data to draw conclusions about family involvement decreasing with child age. The conclusions are further limited by the lack of comparison of cultural groups, as involvement beliefs may vary subtly by demographic or other group membership (Hoover-Dempsey et al., 2005).

Looking at even younger grade levels than either Green et al. (2007) or Bartel (2010), Wildenger and McIntyre (2011) focused their examination of parents' beliefs to those beliefs expressly surrounding the transition from preschool to kindergarten. These beliefs were examined via survey of 86 predominantly White/Caucasian parents (81.4% White/Caucasian; 10.5% Black/African American; 4.7% Asian; 1.2% Hispanic/Latino), about one-quarter (27.9%) of whom were of low income (Wildenger & McIntyre, 2011). In this particular survey, "transition concerns" referred specifically to worries or fears that parents may have about kindergarten transition; "transition needs" referred to any additional help or information that parents might have wished to have prior to kindergarten. Within Wildenger and McIntyre's

sample, few concerns related to kindergarten transition (e.g., getting used to a new school, following directions, separation from family, getting along with peers, toilet training) were reported (reported as percentage of sample completing the Family Experiences and Involvement in Transition; FEIT). Despite having few concerns, larger percentages of this sample reported various transition needs (i.e., information or activities that would have been helpful as they planned the kindergarten transition). For instance, more than half the sample indicated they would have liked to know the academic expectations for kindergarten (53.5%) or their child's current skills (47.7%). While a fourth of responding parents indicated they did not need help in planning for the kindergarten transition (26.7%), about one-third reported needing to know what they could have done as parents to prepare for the transition (38.4%). As these results highlight, parents' beliefs about involvement vary, as do their concerns and needs in preparing their children for kindergarten.

In contrast to the quantitative approach taken by Wildenger and McIntyre (2011), Shields (2009) qualitatively reported the perspectives of two mothers in the United Kingdom (UK) who had recently experienced the transition from an inner-city London preschool (i.e., nursery school) to formal schooling (i.e., primary school). One mother was an African-Caribbean, single parent who was unemployed at the time of her semi-structured interview. The other mother was an American married to a Briton; she held a senior-level position in a global corporation. Similar themes emerged in the interviews of both UK mothers. Both indicated a noticeable shift in their relationship with the school setting. During nursery school, both mothers had strong relationships with their children's teachers and felt involved and informed. In contrast, their respective relationships with their children's primary school teachers were more distal and less engaging. From the parents' perspectives, opportunities for family involvement at the nursery school were

more direct and partnership-based while at the primary-school level they were more structured and distinct (Shields, 2009). Still, involvement was valued by the parents across these early grade levels.

Overall, findings are beginning to suggest that demographics may relate to parents' family involvement beliefs. However, specific relationships between demographic variables and involvement beliefs have been inconsistent across the extant literature. In some samples, income level and parental education associate with differences in parents' beliefs (e.g., Barbarin et al., 2008); for other samples, these socioeconomic variables seem not to matter to the same extent (e.g., Green et al., 2007; Wildenger & McIntyre, 2011). However, few studies to date have directly compared parents' family involvement beliefs across demographic variables like various socioeconomic status indicators. Across samples, though, the vast majority of parents, regardless of ethnic background, indicate that they believe that they hold at least partial responsibility and desire involvement in their children's education (e.g., Bartel, 2010: Durand, 2011; Walker et al., 2011; Wildenger & McIntyre, 2011).

Specific multivariate relationships between demographic characteristics and family involvement beliefs cannot be hypothesized at this time. Not enough is known yet. However, it is important to begin to better study those relationships because such knowledge will help inform researchers and practitioners seeking to support families' involvement through the transition process between preschool and kindergarten. For instance, the reviewed work (e.g., Durand, 2011; Green et al., 2007; Shields, 2009; Walker et al., 2011; Wildenger & McIntyre, 2011) suggests the presence of several challenges to family involvement across the transition period. These challenges seem to largely stem from the shift in the parent-teacher relationship that tends to occur between preschool into elementary school, particularly for parents of Head Start (HS)

graduates (Pianta et al., 2001, as cited in Malsch et al., 2011). Three examples of these parent-reported challenges include that parents do not understand the school's expectations (for them or for their children), do not know what to do to prepare their children for school, and lack encouragement (including invitations) from the school. Regardless of demographic background, parents want to be involved in their children's education and have reported wanting more information on how they can do so.

Relationship Between Family Involvement Beliefs and Behaviors

With the limited attention that has been given to the study of parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school, little is understood about the relationship between family involvement beliefs and family involvement behaviors. However, the work that has been completed provides a valuable foundation. This beginning lends support to the importance of advancing the study of parents' beliefs and expectations for their own roles across the kindergarten transition process (see Hoover-Dempsey et al., 2005). For instance, research has begun to demonstrate the positive correlation between parents' self-efficacy beliefs regarding education and their family involvement behaviors (Green et al., 2007; Waanders, Mendez, & Downer, 2007). Family involvement, in turn, relates positively to children's school success (Bulotsky-Shearer et al., 2012; Englund et al., 2004; Ingram et al., 2007; Johnson, Martinez-Cantu, Jacobson, & Weir, 2012; Roopnarine et al., 2006; Sénéchal & LeFevre, 2002). As La Paro et al. (2003) underscore, parents generally value and participate in school readiness activities when such activities are offered. However, individual parents do not engage in all offered activities. Facilitators and barriers to involvement would be critical for researchers and practitioners to know, particularly those factors that are beyond pragmatic issues. A potential influence on involvement behaviors is involvement beliefs held by

parents (Hoover-Dempsey et al., 2005). Parents hold many different views on the importance of various school readiness domains and skills (Barbarin et al., 2008). Logically, these beliefs could shape what parents then do to prepare themselves and their children for kindergarten. This inference is supported by Reese and Gallimore (2000), as referenced above regarding Latino parents' reading behaviors prior to their children's formal schooling. It is further supported in the work by Musun-Miller and Blevins-Knabe (1998) that suggested that parents' beliefs about the importance of their young children learning a range of skills positively related to the parents' math related-involvement activities.

Another interview-based study contributes evidence for the relationship between family involvement beliefs and behaviors. African American parents were more likely to list a particular activity as important for involvement when it directly pertained to supporting their elementary-school children rather than to supporting the school or themselves (Bartel, 2010). Family involvement in children's education was clearly important to the interviewed parents. The direct target of involvement activities, however, seemed to matter. While the participants in this study were less likely to list involvement activities aimed towards the parents themselves (e.g., talking with other parents; Bartel, 2010), other parent samples have cited wanting to receive more support in the transition process (McIntyre et al., 2007; Wildenger & McIntyre, 2011). Perhaps the difference between these groups of parents is the age of their children. As some work has shown, family involvement at the middle school level may differ from involvement at the elementary school level (Green et al., 2007). The same may be true at even younger child ages. This question, though, has yet to have been answered satisfactorily.

In addition to child age or grade in school, the setting of family involvement (e.g., school or home) may contribute to different parents' beliefs and behaviors. Across first through sixth

grade students' ethnically diverse parents, parents' beliefs about involvement predicted school-based involvement behaviors, but not home-based involvement (Green et al., 2007). This finding may connect with the work by Bartel (2010), in which African American parents cited child-centered involvement activities. Perhaps the location or context of involvement interacts with family involvement beliefs, in that beliefs related to particular settings may tap into variability of prior experiences.

Walker et al. (2011) also examined what predictors may contribute to different involvement activities. At odds with the findings of Green et al. (2007), parents' beliefs did not predict parent-reported school-based involvement. Rather, parental perceptions of pragmatic barriers and teachers' invitations for involvement predicted school-based involvement. Home-based activities, however, were predicted by partnership-focused parental beliefs, as well as students' invitations for involvement (Walker et al., 2011). Demographically, Wildenger and McIntyre (2011) found family involvement to correlate positively with maternal education. Parents whose children had participated in an early education program and who resided in a suburban or rural district (rather than urban) reported significantly more involvement activities. This difference by school setting was maintained when income was considered as a co-variate (Wildenger & McIntyre, 2011).

The repeated importance of involvement invitations at the elementary-school level (Walker et al., 2011) resonates with work by Giallo and colleagues (2010) with Australian parents of children transitioning into primary school. Giallo et al. found that parents, on average, became more involved after being empowered with information about school expectations, their potential roles, and possible family involvement activities. In addition to preliminarily aligning with the findings related to involvement invitations (Walker et al., 2011), Giallo et al.'s work

corroborates reports by Latina American mothers (Durand, 2011) and by British mothers (Shields, 2009) that they wanted to be involved but did not always understand or agree with the school's expectations for family involvement. On the whole, the message regarding the nature of the relationship between family involvement beliefs and family involvement behaviors is still developing.

Measurement of Parents' Beliefs on Involvement

Current measures of parents' beliefs regarding school readiness or kindergarten transition typically address child-level skills (e.g., Morgan & DiPerna, 2007). When parents' beliefs regarding their own involvement are measured, it tends to occur at the elementary-school level or older. Highlighting this area's degree of underdevelopment, the tools currently used to assess parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school are limited to interviews—which would be cumbersome to implement on a large-scale or at a program-wide level—or to poorly developed or unvalidated questionnaires. The remainder of this section examines the validity of existing ways of measuring parents' beliefs about their involvement in their children's education.

Family Experiences and Involvement in Transition (FEIT). Developed in at least two iterations (i.e., McIntyre et al., 2007; Wildenger & McIntyre, 2011), the FEIT is a questionnaire completed by parents of transitioning kindergartners that encompasses child educational history, family sociodemographic information, family's concerns (i.e., worries) regarding transition, family-identified needs (for help or more information) during transition, and family-reported involvement in transition-related activities. Three of these five domains pertain to the family's perspective on transition: concerns, needs, and involvement. However, family input was not included in the FEIT scale development process.

The first version of the FEIT consisted of 57 items (McIntyre et al., 2007). An important strength is that it was developed to study families' perspectives on their children's transition preparation. Furthermore, its five dimensions make empirical sense. However, this strength derives from one of its weaknesses. Though the researchers indicate that the FEIT was "rationally derived" (p. 84), it is unclear from the published article what that phrase means and what was the measure development process. Furthermore, psychometric data were not reported. Finally, the generalizability of this particular measure is unclear. It was administered to an urban, predominantly White/Caucasian sample in the August prior to kindergarten. Thus, only a single geographic setting and a single time point were examined. Because the sample was relatively homogenous in terms of both ethnicity and income (less than one-third of participants had an annual family income less than $15,000), the FEIT's applicability to other ethnic and socioeconomic groups is vague.

Wildenger and McIntyre (2011) later revised and administered the FEIT to a new, independent sample of parents. The new version included 72 items, though the authors did not provide information about the rationale or methodology used to revise it. Again, validity and reliability data were not included. This administration of the FEIT addressed some of the weaknesses from the 2007 study. Parents in urban, suburban, and rural school districts completed the FEIT two weeks after the start of kindergarten. So together, the work by McIntyre et al. (2007) and by Wildenger and McIntyre covered a range of districts and multiple time points in the transition process. Still, some weaknesses remain. In addition to not explaining the revision of the 57-item FEIT (McIntyre et al., 2007) into the 72-item FEIT and not reporting psychometric data, the sample in this latter study (Wildenger & McIntyre, 2011) was still predominantly White/Caucasian with more than two-thirds having an annual income greater than

$15,000. Finally, families' perspectives were not examined during the preschool portion of the transition process.

Parental beliefs survey of the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K). Understanding the importance of using valid and reliable instruments, Morgan and DiPerna (2007) attempted to examine the psychometric properties of the six-item parental beliefs survey that has been a part of the ECLS-K, as well as of the 1993 National Household Education Survey. This particular measure asked parents to rate the importance towards school readiness of various child skills. Prior to Morgan and DiPerna, no research had reported estimates of the survey's validity and reliability. A strength of their work was its attempt to apply exploratory factor analysis (EFA) procedures to a large dataset comprised of responses from 13,693 parents of 4- to 7-year-old children attending kindergarten for the first time. They randomly divided the sample into two demographically-equivalent groups and then conducted EFA separately for each group. Yet, Morgan and DiPerna recognized that the measure has limited breadth, has measurement weaknesses, and leads to limited understanding of families' beliefs. A further limitation of this measure is that it surveys parents' beliefs on the importance of various child-level skills (e.g., counting, sharing, drawing, being calm, knowing letters), not on family involvement. Like the samples that completed the FEIT, this large sample was predominantly White. Finally, though a single factor emerged for each group in the full sample, the items that loaded to the factor differed for each sample. With the psychometric structure of this survey varying by sample, it is problematic to conclude that the item set holds together as a strong measure. Plus, the small number of items (i.e., six) leads to difficulty in claiming alternative, multiple-factor structures.

Parental role constructions. The strongest existing scale of parents' beliefs is one component of a multidimensional questionnaire of family involvement in education that covers the elementary through secondary school levels (Walker et al., 2005). The "parental role constructions" measure is one of the dimensions covered by this larger questionnaire. Specifically, the 23-item parental role constructions measure examines parents' beliefs about their responsibilities for their children's education. A series of measure development articles (summarized by Walker et al., 2005) documents the multi-step process that began with qualitative studies to develop the measure through a combination of theory and measurement. Conducted independently of the larger questionnaire, quantitative evaluations of the role constructions measure yielded three factors of parents' involvement beliefs: school-focused, parent-focused, and partnership-focused role constructions (Walker et al., 2005). The three-factor structure of this role constructions measure fits well with prior research that has identified family involvement as a multi-dimensional construct (Epstein, 1995; Fantuzzo et al., 2000; Grolnick & Slowiaczek, 1994; Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; LeFevre & Shaw, 2011).

A strength of this particular parental beliefs measure (Walker et al., 2005) is that, in contrast to other measures like the FEIT (McIntyre et al., 2007; Wildenger & McIntyre, 2011), it has been tested in economically diverse samples (less than $10,000 to more than $50,000 income per year), in racially diverse samples (29.2% Hispanic; 31.7% Caucasian), and in a range of grades (Grades K – 6). However, weaknesses include that it has not been examined in HS or other preschool settings and that it does not consider kindergarten transition, which are likely to raise different concerns for parents. Furthermore, although the parental role constructions measure yields three factors that align theoretically with contexts identified in prior research on

family involvement, two of those factors have limited internal consistency (α = .63 for school-focused and α = .62 for parent-focused; Walker et al., 2005).

Summary of measurement of parents' beliefs. Morgan and DiPerna (2007) have highlighted that the measurement of parents' beliefs about school readiness is an area of research still in need of further development. Two groups of researchers have taken the measurement of parents' beliefs specifically into the domain of family involvement. Walker et al. (2005) present the most developed measure that could be located in the extant literature, while McIntyre centers the focus onto parents' beliefs about involvement exclusively through the kindergarten transition process (McIntyre et al., 2007; Wildenger & McIntyre, 2011). Further, the work by both research groups also signifies recognition that parents' beliefs on their own involvement might change depending on time point, setting, or demographic group (also see Hoover-Dempsey et al., 2005). McIntyre et al. (2007) and Wildenger and McIntyre (2011), for instance, have distributed the FEIT at multiple points in the kindergarten transition process and have begun examining different geographic settings (i.e., urban, rural, and suburban school districts). Meanwhile, Walker et al. have administered their parental role constructions measure to widely diverse samples of parents.

Overall, however, research in this domain is still new and so maintains several limitations. One primary issue is how little work has specifically examined parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school, rather than their beliefs about skills needed by their children. Although the existing qualitative research has provided important insight into parents' beliefs about family involvement, the published research has been small case studies that have lacked strong qualitative methodology. Similarly, the existing quantitative research also demonstrates weaker methodology. Surveys have been

poorly developed (e.g., only expert-driven), have neglected the input of parents during content development, and have lacked adequate data on the reliability and validity of relevant scales. Much of the research has been in predominantly White samples. The most reliable and tested measure (parental role constructions scale; Walker et al., 2005) has not been used in the HS population and does not cover kindergarten transition. As the field continues its empirical examination of this construct, perhaps its conceptualization will become more consistent.

Summary of Need

As discussed, few studies specifically have examined parents' beliefs and expectations of their own involvement in the school readiness and transition process. The research that has been published faces several limitations, particularly as pertains to issues of measurement. At least two other primary gaps were noted. First, the extant literature has insufficiently examined the multivariate relationships between family characteristics and parents' beliefs about involvement in kindergarten transition. Any themes within that area may largely be extrapolated by drawing connections between disparate, individual studies. Finally, limited work has evaluated the associations between parents' beliefs about involvement with actual or self-reported involvement behaviors. Some research has examined the relationship between family involvement beliefs and behaviors in elementary school (Bartel, 2010; Green et al., 2007), though not quite at the level of early learning and kindergarten transition. Given the contextual differences between preschool (particularly, HS) and elementary school, it will be important for the field to learn more about families' early involvement concerns, beliefs, and behaviors. Thus, a critical first step is the development of a socially-acceptable and psychometrically-sound measure of parents' beliefs about parental roles and involvement in preparing their young children for kindergarten.

Chapter III: Method

Participants and Setting

Participants for the current study were parents from a regional Head Start (HS) program serving urban and rural families in the Northeast. Reflecting local demographics, this HS serves a largely Latino population. However, participants from all ethnic backgrounds were included in the study. Data (e.g., demographic and HS enrollment variables) were also collected about their children enrolled in the program.

This regional HS operates a large number of center-based HS classrooms (56 in first project year; 39 in second project year) across several urban and rural school districts. Each classroom has at least one bilingual teacher or teaching assistant. These classrooms serve approximately 1000 families (1145 children from 1081 families in first project year; 979 children from 902 families in second project year). In addition to the center-based program, families also routinely receive home visits from a Family Engagement Partner (home visitor) every two months. Families may participate in HS for one to two years. To qualify for program enrollment, children must be between the ages of 3- to 5-years old and families' income cannot exceed federal poverty guidelines. The average income of enrolled families is $10,000.

Table 1 details the demographic characteristics of participants in the study's focus groups and field test. In brief, the current samples were predominantly Latino, English-speaking (with sizeable percentage speaking Spanish or both languages), and from two-parent households, with annual family income less than $20,000. About 40% have had some contact with their children's future elementary school. A large portion of participants were in their first year of HS.

One-third (32%) of the parents who are associated with this regional HS program have completed high school or GED (25% have less than a high school education; 43% have an

Associate's degree or higher). Over half of parents (63%) are employed. Although most children have two-parent families (58%), a sizable portion has single-parent families (42%). English is the primary language for 61% of parents; 35% of parents speak Spanish as their primary language (% bilingual was not known). Comparing these program-wide demographics with the percentages presented in Table 1 reveals that the field test sample was more representative of the regional HS program than was the focus group sample.

Recruitment. Through partnership between the university researchers and HS, participants were recruited and provided written informed consent in their preferred language separately for the focus group series and the field test of the study-developed measure, "Family Expectations for School Readiness Involvement" (FESRI). At the onset of the study, each family was assigned a unique identification number to ensure confidentiality. In the first year of the project (2012-2013), HS parents were invited to participate in a series of focus groups. Families were recruited to focus groups by HS personnel (e.g., classroom teachers, Family Engagement Partners, and Parent Policy Council) and by program-wide flyers announcing meeting times, locations, and incentives.

In the second year of the project (2013-2014), recruitment for the field test was open to all enrolled HS families, including those who had participated in focus groups. Families who had participated in the focus groups were screened from the field test's scaling analyses but were included in all remaining analyses. Although multiple family members may have participated in the focus groups, only the primary caregiver in each family was eligible to complete the field test. For field test recruitment purposes, the primary caregiver was defined as the adult who completed the HS enrollment paperwork. Informational fliers and packets with the study measures were distributed to all enrolled families through their child's classroom during the first

half of the academic year (September – December 2013). Parents choosing to complete the study returned completed packets to HS staff.

Measures

Family characteristics. After providing informed consent for the study, focus group and field test participants completed a study-specific demographic form (see Appendix A for the English demographic form and Appendix B for the Spanish demographic form) that sought demographic information such as the parent and child race/ethnicities, parent and child age, parent relationship to child (e.g., mother), parent and child gender, family type (e.g., one parent, two parents, foster, relative/grandparent), parent education, parent employment status, parent and child primary language(s), number of older siblings, child disability status, child years enrolled in HS, and child and family's immigration history. This form also collected information about parents' potential contact with their child's future elementary school.

Family Expectations for School Readiness Involvement (FESRI). As is clear in reviewing the extant literature, a psychometrically-sound and socially valid measure of parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school does not exist. Thus, the primary aim of the current research was to develop, using partnership with key stakeholders (HS staff and parents), a meaningful measure that assesses these beliefs, the FESRI. The final format and structure of the FESRI are detailed in Chapter IV, Results. In general, the measure was developed in partnership with and based on feedback from HS staff and families. The underlying constructs of the FESRI were investigated through a two-step process involving exploratory factor analysis (EFA) and Rasch modeling (Smith, Conrad, Chang, & Piazza, 2002). The FESRI was made available in both English and Spanish, so that

parents could complete it in their preferred language during the field test. The English and Spanish versions of the measure are provided in Appendices C and D, respectively.

Family Involvement Questionnaire (FIQ). The family involvement behaviors of study participants were assessed during the field test using a parent self-report measure: the Family Involvement Questionnaire (FIQ; Fantuzzo et al., 2000). The FIQ estimates families' level and types of involvement in their children's early education. Specifically, it was developed for use with a low-income ethnically-diverse urban population of parents with children in preschool through first grade. It was developed collaboratively by researchers with the aid of teachers and parents from a large urban school district in the northeastern US. It contains 42 items, which are measured on a four-point Likert scale of the frequency that each behavior occurs (i.e., 1 = Rarely, 2 = Sometimes, 3 = Often, 4 = Always). The measure requires approximately 10 to 15 min to complete. Congruent with earlier definitions of family involvement (Epstein, 1995), the FIQ is comprised of three reliable dimensions: school-based involvement (α = .85), home-based involvement (α = .85), and home-school communication (α = .81). Previous work has validated the FIQ in African American (Fantuzzo et al., 2000) and Latino preschoolers (McWayne et al., 2014), as well as in African American elementary school students (Manz et al., 2004). Validation samples geographically represent large urban (Fantuzzo et al., 2000), small urban (McWayne et al., 2014), and rural areas (McWayne et al., 2014). Participants in the current study's field test could complete the FIQ in either English or Spanish. Current analyses were conducted using each dimension's raw scores.

Previously, a confirmatory factor analysis was completed to verify the applicability of the FIQ dimensions for the regional HS program (Manz, 2012). Based upon FIQ data from 339 families, goodness-of-fit statistics confirmed the viability of the three-factor model. Fit statistics

were: comparative fit index (*CFI*) = 0.975, normed fit index (*NFI*) = 0.956, Tucker-Lewis index (*TLI*) = 0.972, and root-mean-square error of approximation (*RMSEA*) = 0.06 (Hu & Bentler, 1999). All of these statistics met recommended standards (*CFI*, *NFI*, and *TLI* above 0.95; *RMSEA* below 0.80; Kline, 2010). Therefore, the applicability of the FIQ factors for the current sample was confirmed.

Procedures

A Project Partnership Team (PPT) was formed and is comprised of Community Partners (two English- and Spanish-speaking parents and one English-speaking parent of HS students), a HS Program Liaison (a HS administrator), and two university-based researchers. Support was provided to HS to help offset time and resources used for the current study. As compensation for project contributions, support was also provided to HS parent activity funds.

Formulating the PPT. HS administration nominated the Program Liaison, a HS administrator (i.e., Director of Family Engagement) who served on the PPT by participating in collaborative project decisions, attending PPT meetings, and serving as the communications liaison between HS and the researchers. The Program Liaison nominated local HS parents to serve as the Community Partners. The Community Partners facilitated family engagement during focus groups and reviewed the FESRI for content and face validity. To reduce the time required by an individual Community Partner, three HS parents rotated their participation in facilitating focus groups' engagement.

Together, the PPT collaboratively planned the informed consent process; open-ended questions and content goals for focus group meetings; focus group recruitment; focus group meeting space and scheduling logistics; field test recruitment; field test data collection needs; family incentives delivery; and dissemination of project outcomes to the HS community. An

additional HS administrator participated with the PPT periodically during the study period in person and via email to discuss progress and continuously plan study activities.

Development of the FESRI. Utilizing a participatory action research framework to design a scale offers the advantage of enhancing cultural sensitivity and meaningfulness to the people who might use and benefit from the information it yields by actively partnering with stakeholders through collaborative decision-making at all stages of the research process (Hitchcock et al., 2005). In addition, focus groups are an especially effective method for accessing the perspectives of stakeholders, namely parents of young children (Gaskins, 1994). The saturation method was used to derive content for the FESRI. Following this approach, new focus groups were held with new participants until the content collected was qualitatively exhausted ("theoretical saturation"). In alignment with a participatory action research framework, focus group meetings and content review by the PPT occurred iteratively until a satisfactory and socially valid FESRI was drafted. Thus, two rounds of focus groups were needed, with PPT members convening during and after each round. Each focus group session lasted about 90 minutes. Focus groups were open to both English- and Spanish-speaking families, with HS-based interpreters available. Table 2 summarizes the number of participants who attended each focus group.

Each focus group meeting was co-facilitated by one to two university personnel (e.g., trained graduate students and associate professor), with one to two Community Partners facilitating parent engagement in discussions. All seven university-based facilitators were White; one had a working receptive comprehension of Spanish; five were female; three were married; and one had children. Of the three Community Partners, two were Latino (one was White); two were bilingual in English and Spanish; two were female; two were married (one was divorced);

and all three had children. Facilitators had guidelines that outlined the informed consent process, included sample open-ended questions and prompts, and included behavioral tips for facilitating discussion (adapted from Vaughn, Schumm, & Sinagub, 1996).

Focus group meetings were audio-recorded to ensure all parent feedback was captured. Also for this purpose, an independent observer (e.g., trained graduate student) wrote notes and observations during the meetings. Refreshments and travel compensation of $5 per participating family were offered. Focus groups were convened at different HS centers (1 rural, 3 urban centers) to allow for geographical sampling and to try to maximize participation across HS centers. Meetings were scheduled at times to maximize convenience to participants, including immediately prior to routine Parent Policy Council sessions.

First round of focus groups. In the first round of focus groups, parents responded to open-ended questions via group discussion regarding their expectations and beliefs about parents' roles and involvement in school readiness and the kindergarten transition. Examples of facilitating questions are "What kinds of things do you do to get ready for kindergarten? What do other parents/families do?", "What do you do to get your child ready?", "What do you do to get yourself ready for kindergarten?", and "What's difficult?" Four unique focus groups were held in this first round. After the fourth group, the PPT agreed that theoretical saturation was achieved.

The two university-based researchers independently reviewed notes and recordings from all focus groups to identify and code the major themes and contributing key ideas that reflected the parents' beliefs about their roles and expectations for their children's kindergarten transition. They then discussed their reviews until consensus was reached regarding themes and key ideas generated by the focus groups. The major themes and underlying key ideas were summarized and shared with the HS Program Liaison and Community Partners. The PPT reached agreement

that the focus group content summary accurately captured all major themes and beliefs. This summary was the basis for deriving an initial list of 97 items for the pilot FESRI. Items were generated from phrases used by focus group members, as well as the intent of commonly expressed ideas or beliefs (Morgan, 1997).

Spanish-speaking parents. Several Spanish-speaking parents attended the above focus groups; however, they provided only limited input to group discussion via bilingual peers. Therefore, an attempt was made to hold a first-round focus group in Spanish for families who only spoke Spanish, as suggested by McWayne et al. (2014). In spite of interest expressed by Spanish-speaking families to their Family Engagement Partners, scheduling conflicts and difficulties obtaining child care prevented the completion of this focus group. Although they were unable to attend a meeting in person, 33 Spanish-speaking parents wanted to provide feedback about their expectations and beliefs about parents' roles and involvement in school readiness and the kindergarten transition. So, these parents shared input anonymously via telephone with their routine Family Engagement Partners and asked that their input be shared with the research team. To be sensitive to the time restraints of these parents, demographic data were not collected. Their anonymous input was provided by HS project partners to the research team.

Following analysis procedures similar to those used for the data from Round 1 focus groups, two researchers independently reviewed the content feedback provided by this group of Spanish-speaking parents to identify and code the major themes and key ideas. They then discussed their reviews until consensus was reached regarding whether the content sufficiently overlapped with the feedback provided by the focus groups. The major themes identified by the focus groups were also reflected in the Spanish-speaking parents' feedback. Significant overlap

was also noted in the major ideas under each theme. The degree of overlap suggested that the development of the pilot FESRI could continue at this stage without replicating the focus group procedures in Spanish. However, as is discussed below, the Spanish-speaking parents also identified unique concerns. Thus, more extensive work with this demographic group may be needed in the future (McWayne et al., 2014).

Second round of focus groups. A second round of focus groups was then held to ensure that the drafted FESRI items were satisfactory and accurately reflective of initial feedback (Morgan, 1997; Vaughn et al., 1996). Families from the first round of focus groups were individually invited via email and telephone to participate in the second round. Families who had not yet participated in the study were also invited to the second round through their Family Engagement Partners and recruitment flyers. During this second round of focus groups, participants were shown the initial list of 97 possible FESRI items, listed across the major themes that had been generated during the first round. They were asked to rate each potential item on whether they agreed or disagreed that the item was important in assessing parents' involvement beliefs. Participants also made suggestions for wording revisions during group discussion about readability and potential administration peculiarities. Finally, they provided suggestions via group discussion about what content should be added or omitted. Feedback from these focus groups was summarized and independently reviewed by the two researchers who had coding the Round 1 feedback. Discussion then progressed until agreement was achieved regarding FESRI item revision; 51 initial items were removed through this process. The now 46-item FESRI was brought to the PPT for further review and feedback; the PPT was satisfied with this reduced FESRI draft.

Expert panel review. The 46-item version of the FESRI then underwent expert review by seven doctoral-level early childhood researchers with backgrounds in developmental psychology, applied psychology, and education. They were selected for their combined expertise, which included early development, early education and learning, early school experiences, kindergarten transition, and school readiness, as well as the ecological factors that support or hinder development and learning. Three panelists held particular interest in these areas for young ethnic minority, language minority, and immigrant children. All panelists have published and presented on these topics through various outlets, including research articles in peer-reviewed journals, chapters in edited books, workshops, and presentations at national conferences. They have also taught or clinically trained undergraduate and graduate students. Several panelists have had applied experiences through their previous work as practitioners (e.g., school psychologist, clinical psychologist, preschool teacher assistant, guidance counselor, family educator, pediatric social worker) working directly with young children and their families.

A cultural consultant also participated in this review by providing feedback specifically related to the measure's relevance and sensitivity to the experiences of Latino American families, given the current sample's high percentage of families from Latino backgrounds. The cultural consultant was selected based upon her expertise in the sociocultural and ecological factors that support the success of Latino children in schools and in cultural interpretations of child development. She is a researcher and professor, with a doctorate in applied developmental and educational psychology. She has co-led service-learning experiences, bringing undergraduate students to Puerto Rico to serve in educational and community organizations. Similar to the expert panelists, the cultural consultant has published and presented her work on family

involvement among Latino families of young school children, and has also conducted applied work in public schools as a teacher and early childhood specialist.

Expert review of the FESRI was sought to ascertain its alignment with existing knowledge and theory on school readiness and kindergarten transition constructs. The expert panel members and cultural consultant rated each FESRI item's relevance to the indicated theme of HS parents' beliefs. They then responded to open-ended questions about the measure's alignment with existing knowledge. The expert panel and cultural consultant's feedback was summarized and used in discussion between the researchers until the FESRI was further revised to a 36-item version. Item wordings were also revised based on feedback provided by the expert panel and cultural consultant.

FESRI refinement. The measure's directions and response format were drafted to be family-friendly and understandable. FESRI respondents are asked to rate each item on a four-point Likert scale of agreement with each presented belief (i.e., 1 = Do not agree, 2 = Agree a little, 3 = Agree a lot, 4 = Strongly agree). This version of the FESRI was then reviewed by the PPT for readability and potential administration peculiarities. Minor wording was changed for one item based on feedback from a bilingual Community Partner and the Program Liaison. The PPT agreed that this 36-item version of the FESRI, including directions and response format, was satisfactory.

Translation of FESRI. The 36-item FESRI was then translated into Spanish by a hired, university-based translator. The Spanish version was independently back-translated and reviewed by a bilingual Community Partner for accuracy, readability, and potential administration peculiarities (Hitchock et al., 2005). Only minor wording changes were made through this review.

Data collection for field test. Following field test recruitment, study packets containing an informed consent form, demographic form, FESRI, and FIQ were distributed through the classrooms to families program-wide. Families were invited to ask their teacher or Family Engagement Partner (i.e., HS home visitor) for assistance as needed in completing study measures. This approach is particularly advantageous as familiar staff members who routinely work with the family can assist individuals who may have literacy difficulties. Participants primarily chose to take the study packets home and returned them to their child's HS classroom teacher. To control for order effects, the presentation order of the FESRI and FIQ was counterbalanced across participants. As compensation, all field test participants received a "school kit" for their child that consisted of supplies commonly used by young students (e.g., ruler bookmark, crayons, pencil, pencil case, small notebook).

Data Analyses

To address the objective of establishing the structural validity and internal consistency of the FESRI, data from the field test were analyzed to identify reliable, latent constructs of parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school. Following preliminary data examination, a two-part scaling analysis procedure was undertaken: EFA and Rasch modeling. As part of the preliminary analyses, the following procedures were completed in SPSS 22: review of database for accuracy of data entry, qualitative examination of response patterns to ascertain possible implications for the measure and its social acceptability, and calculation of item kurtosis and skewness scores for normality. Conservative standards suggest that scores must be within $\pm$ 2 times the item's standard error (Thorndike & Thorndike-Christ, 2010).

Exploratory factor analysis (EFA). Following the preliminary analysis, EFA was conducted in SPSS 22. A series of principal axis factoring analyses was applied to determine a statistically-sound and theoretically-meaningful factor structure for the English FESRI. To help determine the most parsimonious factor structure (Fabrigar, Wegener, MacCallum, & Stahan, 1999), both oblique and orthogonal rotations were considered for multi-factor solutions. As recommended by McDermott (1993), the following criteria were used to identify and examine EFA solutions: (a) eigenvalues ≥ 1; (b) $> 5\%$ explained variance; (c) visual analysis for noticeable drop in a Cattell scree plot; (d) initial item loading criterion of .40 (.35 was considered to increase the number of loading items); (e) factor reliability coefficient (α) $\geq .70$; and (f) statistically significant Unit Weighted Interfactor Correlations (r) of .30 to .60. The final recommended factor structure was selected based upon which solution met the above criteria and presented a theoretically-sound factor structure.

Rasch modeling. The third step involved further investigation of the latent dimensions identified through the EFA and of specific item functioning through Rasch item and person analyses. This third step was completed to obtain the unique and complementary information Rasch analysis adds over and beyond that which is obtained in EFA. In contrast to the sample-dependent findings associated with classical test theory (e.g., EFA), the findings obtained through Rasch analyses are free from sample biases (Gerber et al., 2006). The Rasch model also maintains several other advantages. It allows for transformation of Likert-type data to interval-level data (log odds), which satisfies the main assumption of parametric statistics. This method also combines item and person metrics (to examine the item-person interaction). Therefore, it uses all information from persons and from items in calculations of estimates, thereby satisfying Fisher's (1922) sufficient statistics criterion. Final advantages of using Rasch over methods

based on true score theory are that data do not have to be normally distributed and missing data are not restrictive (Fox & Jones, 1998).

Following recommended procedures by Smith et al. (2002), several aspects of the FESRI were examined in the Rasch analysis. Data for both the English and Spanish FESRI were included; missing data were not imputed. Unique to Rasch, the category function of the Likert-scale response format (i.e., 1 = Do not agree, 2 = Agree a little, 3 = Agree a lot, 4 = Strongly Agree) was examined to establish whether participants responded as intended. As per Smith et al., category counts greater than 10 suggest that enough information is available for the response option. Also, average measures and steps measures for each category must be ordered from least to greatest value. Category probabilities were also examined to ensure that each response option occurred as most probable at one ability range along an ordered sequence. If the average measures, step measures, and category probabilities are ordered, it would suggest that the participants provided appropriate responses to the items.

For each item, the Mean-Square (MnSq) Infit statistic was examined, as it is sensitive to patterns of unexpected responding on items targeted for the person (Smith et al., 2002). The MnSq Outfit was also examined for each item; it is sensitive to aberrant behavior on items far from a person's level of a trait. MnSq statistics beyond the range of 0.6 to 1.4 provide evidence of misfit (Smith et al., 2002). Additionally, the item reliability index was examined to ascertain the consistency of item functioning (this metric is similar to internal consistency). The person separation index (person reliability) was examined to determine the replicability of person ordering on the trait. Item maps were reviewed to identify where items distribute in relation to persons along the latent trait (i.e., an indication of content representativeness and item difficulty). The Rasch analysis was conducted using WINSTEPS 3.72.3 (Linacre, 2011).

Factorial invariance. The factorial invariance of the FESRI across English- and Spanish-language versions was evaluated using the approach taken by Meredith (1993). Meredith described a four-level nested hierarchy of measurement invariance: configural invariance, weak (metric) invariance, strong invariance, and strict invariance. The constraints imposed across the two groups increase with each level. Configural invariance specifies that each underlying factor (or, latent variable) is equivalent across both groups. In addition to the configural invariance factor constraints, weak invariance requires equality of the items' (or, indicator variables') factor loadings. Strong invariance further constrains the model by requiring equality of the loadings and intercepts, while strict invariance requires equality of the loadings, intercepts, and residual variances. The change in model fit is examined across the invariance levels, with non-significant $\Delta\chi^2$ test supporting invariance.

These tests of model invariance were conducted to examine equivalence of the factor parameters across FESRI language versions (Hofer, Horn, & Eber, 1997). This analysis was conducted using Amos 22 (Arbuckle, 2013). When testing each level of invariance within Meredith's hierarchy of measurement invariance, model constraints used the English FESRI as the reference group. A parallel set of statistical procedures was applied to test the factorial invariance of the FESRI across child age groups (i.e., parents of 3-year-old children and parents of children at least 4-years old), with the older group used as the reference group. Full-information maximum likelihood estimation was used to handle missing data (Schumacker & Lomax, 2004).

Demographic correlations with parents' beliefs. Using recommendations by Scherbaum (2006), correlational analyses were conducted in SPSS 22 to examine how demographic and background variables (listed above) relate to primary caregivers' beliefs about

the parental roles and involvement as measured by their scores on the FESRI dimensions. Specifically, eta (η) was used when one variable was nominal or ordinal and the other variable was interval, the point-biserial correlation (r_{pb}) was used when one variable was dichotomous and the other was interval, and the Pearson correlation (r) was used when both variables were on an interval scale (Scherbaum, 2006).

Structural equation modeling (SEM). The final set of analyses was structural equation modeling (SEM; using Amos 22; Arbuckle, 2013) to explore the relationship between parents' beliefs about parental roles and involvement in kindergarten transition, and family involvement behaviors. Prior to conducting SEM, the assumptions of multivariate normality were checked. Although the initial intention was to examine the relationship between parents' involvement beliefs and their involvement behaviors in the context of their family characteristics (via various demographic indicators), the format of most of the collected demographic variables (i.e., dichotomous or nominal scale) is not recommended for SEM, particularly when included with other measurement types (e.g., ordinal or interval scale; Schumacker & Lomax, 2004). Thus, the hypothesized starting model (see Figure 1) was specified to include two latent variables: "family involvement beliefs" (measured by each FESRI factor as an indicator variable) and "family involvement behaviors" (measured by the three FIQ factors). "Family involvement beliefs" was hypothesized to be associated significantly with involvement behaviors, as suggested by prior literature (Green et al., 2007). Model identification was considered using the order condition (Schumacker & Lomax, 2004) and the three-indicator rule (Bollen, 1989).

After specifying the identified model and estimating its parameters, the model was tested to determine how well it fit the data. The criteria for indicating acceptable fit between the hypothesized model and the observed data was set as a non-significant chi-square fit ratio (χ^2), as

greater than .95 for *CFI*, goodness-of-fit index (*GFI*), and *TLI*, and as less than .05 for *RMSEA*, as recommended by Hu and Bentler (1999). If the fit indices did not suggest acceptable fit of the model to the data, then model modifications were considered. To improve model fit, possible changes were considered based upon the criteria of the Lagrange multiplier indices greater than 2.0 (Hopko et al., 2003), non-statistically significant path and co-variance estimates, and potential for theoretical support. Error co-variances were considered for possible addition to the model when indicator variables were not items on a single measure.

Sample size. For EFA, a minimum sample of 100 participants is needed, with 5 to 10 participants required per item (Fabrigar et al., 1999). Specific sample size guidelines are not available for Rasch modeling, although larger (e.g., > 100) samples work best. For SEM, the usual recommended minimal sample size is 200. However, Bentler and Chou (1987) recommend 10 participants per estimated (free) parameter in most cases. Given the attained sample size (N = 267), sample size requirements appeared to have been met. Figure 2 summarizes the sample sizes in each analysis phase. The response rate was 29.6%. Suggesting ideas about why the response rate was somewhat low, the HS Program Liaison observed that participants had commented about the length of the study packet (2-page informed consent document, 2-page demographic form, 2-page FESRI, and 2-page FIQ). The packet required time to complete, even though individual forms were easy to do.

Chapter IV: Results

Focus Groups

Across all four focus groups in the first round, group discussion was continuous and little direct encouragement was needed from the facilitators. As the discussions progressed, participants interacted more with each other than with the facilitators, as they shared ideas and suggestions with each other. For example, some parents described specific tools (such as a free website to help with English language learning) that they use to help prepare their children for kindergarten. Other parents often then asked for more information about those tools. Also, first-time parents began to ask the more experienced parents what kindergarten is like. Parents with children in older grades often spontaneously offered suggestions when their peers mentioned a concern or problem that they have faced. Parents also reinforced and validated each other's involvement. As one young mother offered to an older parent, "That's why they're doing so good, because they grew up with you so involved."

Five major themes were generated in the first round of focus groups. These major themes were Parent as Teacher, Awareness of Preschool-Kindergarten Differences, Desire for Communication, Importance of Relationships, and Support for the Parent. As shown in Table 3, several key ideas contributed to each theme.

The "Parent as Teacher" theme included an awareness of the child's skills and knowledge. This awareness ranged from what the child's skills are currently, what is expected, and what is age-appropriate. This theme also covered strategies and tools used by parents (or other primary caregivers): how parents learn about getting ready for school, what resources or information is accessed, and knowledge and use of specific strategies like modeling, book reading, and chores. As a group, this sample of parents was well-informed about the wide range

of skills needed by preschool children. Academic skills were easily listed, as an Egyptian mother of one child indicated, “They need to know colors, shapes, uppercase, lowercase letters, how to write their names…numbers up to 20.” Other described skills were behavioral, social-emotional, cultural, home responsibilities, interactions with adults, and life skills. Parents were passionate in describing the process of getting ready for kindergarten and the importance of being involved in their children’s education, even at this young stage. In a discussion about how parents learn about kindergarten, a Latino stepfather of seven children exclaimed, “It’s your job to find that information!” Parents tended to have the perspective that different strategies or tools may not work for individual children. “You take what he says and what somebody says and you implement it and you figure out what works for you. Like something that works for him might not work for you,” said a Latina mother with four children.

Parents’ comments that contributed to the “Awareness of Preschool-Kindergarten Differences” theme covered concrete issues like changes in routine for both children and families. Parents described some differences with happiness, as the differences signified the growing independence of their children. One White mother of three described the differences in classroom visit rules: “You can’t just show up and expect to be let in and see what’s going on. They’re growing up.” In addition to identifying the concrete changes across preschool and kindergarten, more subtle concerns about power and role shifts were also explored, such as whether parents should be permitted to visit their children in their kindergarten classroom. The differences between preschool and kindergarten seemed to raise a lot of negative emotions, including anxiety, fear, and distrust, particularly in the focus groups that had were in urban settings. For example, a Latina mother of two children stated that “When you go to public school, everybody sits down [at lunch] and nobody talks to them. They scream and shout to each

other." The overarching message was that the participating parents value involvement when their children are in Head Start (HS) and value continuing that involvement when their children are in kindergarten, yet they perceive a less welcoming atmosphere in elementary school. The topic of power and role shifts between HS and kindergarten was validated as particularly salient to the PPT's Program Liaison based on her work with many HS families over the years.

An important theme was parents' "Desire for Communication." The idea of communication focused on the one-to-one relationship level (i.e., parent-child, parent-teacher/school, teacher-child). The desire for communication touched on role conflicts between the parent and the teacher. Role conflicts arose around sensitive topics, like whose responsibility it is to teach about death, prejudice, and sexuality preferences. The overarching concern within this particular role conflict seemed to center on what happens when the message from the school differs from the family's values. Several parents mentioned using family dinnertime as an important opportunity to engage with their children and "ask the deeper questions" (White mother of three). Parents also reported wanting to receive a lot of information from the school about their children, as well as about the school itself. Concerns about safety were heatedly discussed. It is important to note, however, that two of the focus groups occurred within a week of the Sandy Hook Elementary School shooting (December 2012), and parents asked for a moment of silence before the focus groups. So, fears about their children's safety at school were at the forefront of their minds.

The "Importance of Relationships" was a fourth theme. Comments highlighted several one-to-one relationships, including parent-child, child-sibling, parent-teacher, and teacher-child. The relationships between parents, teachers, and children depended on knowing the child, respect, discipline, and trust. Older siblings were viewed as important role models. Some parents

described the reciprocal nature of relationships. As a Latino stepfather stated, “If you respect the teacher, she’s gonna give it back to you.” Another key idea about the importance of relationships pertained to emotions: the joys and fears of preparing for school, including a distrust of public schools. For example, some participants did not view kindergarten staff as emotionally supportive, saying that rather than being comforting, teachers just send students to the nurse if they cry. Others, particularly parents of children with identified disabilities, shared concerns about their children’s unique learning needs. As a group, participants raised concerns about safety, which spanned bus safety, bullying, strangers, and school crises. Part of these concerns related to distrust of the school system and school personnel. For instance, several parents recounted when an elementary school was “quick to call the police” over what they perceived to be minor incidents like young boys pretending their hands were guns.

The final major theme centered on “Support for the Parent,” which essentially was the reasons and types of self-preparation and ongoing support needed by someone as the parent of a child getting ready for kindergarten. A wide range of emotional reactions was described: joy, fear, excitement, sadness, relief, and stress. Parents often indicated that they anticipated reacting to their children’s reaction to starting kindergarten. An additional contributing factor was the need to cope with what one hears about other families’ experiences. Support can come from a variety of sources, including other family members, HS staff, and kindergarten staff.

Spanish-speaking parents. The feedback provided anonymously by the Spanish-speaking parents to their Family Engagement Partners spanned all five major themes that arose in the focus groups. Table 3 illustrates how most of the underlying key ideas were also raised by these parents. The most significant difference between the feedback provided by these parents and the feedback provided by parents in the focus groups seemed to be what was emphasized.

Although role conflicts were not voiced, several comments were shared that hinted at a fear or worry that public schools think poorly of these parents. They explicitly stated that they want their children's schools to know that they are involved, that they value learning, that they will do what is needed for their children, and that they prepared their children for kindergarten. For example, one provided quotation was, "I'm a mother that take care of my children." As shown in Table 3, some points were raised by this subset of parents that were not mentioned in the focus groups. Specifically, one parent mentioned the importance of health care in the kindergarten transition process. Another parent mentioned using the neighborhood for natural learning opportunities, though this concept was similar to the focus groups' ideas of using chores as natural learning opportunities. These parents also uniquely referred to transitioning to other grades after kindergarten.

Summary of focus groups. Overall, this group of HS parents appears to be well-educated about the broad set of knowledge that children are expected to know at the time of kindergarten entry. They implement a variety of strategies (e.g., repetition, modeling, rehearsal, book reading, conversations) to help prepare their children. These parents use many sources to learn about what to do to prepare for kindergarten, including HS-provided materials, other parents, and self-discovery. Importantly, this group of parents wants to be informed about their children and school policies, and they also generally worry about the changes that will happen from HS to public elementary school. These worries span the increase in teacher: student ratio, decrease in structure, increase or decrease in school hours, changes in the home-school relationship, and decrease in emotional support. A significant worry is about the cultural mismatch between themselves and the school context, alongside the accompanying need to prepare their children for social issues related to ethnicity, sexuality, disability, bullying, and

safety. Parents expressed a disconnect between what should be in families' control versus the school's (e.g., what to share about school crises). Participants also talked about things that they value (like teaching their children to respect teachers) that they have witnessed that other parents do not do.

Field Test

Preliminary analyses. No pattern of missing responses was noted. No item was missing more than three participants' responses. Two participants were missing more than 15% of the items and were dropped from the analyses. One of these participants only completed every other page of the field test packet. The other participant only completed the demographic form and first three items of the questionnaires.

An analysis of item kurtosis and skewness scores was conducted to examine how well item responses matched a normal curve. Desired skewness and kurtosis values are less than the absolute value of two times the corresponding item's standard error (SE; Thorndike & Thorndike-Christ, 2010). Preliminary analysis of item kurtosis scores indicates that 28 of 36 items had a positive kurtosis (kurtosis values = 0.74 – 11.39, SE = .349 – .352), indicating many participants responded in the same way to the item, as was observed during data entry. Four items had a negative kurtosis (kurtosis = -0.75 – -1.32, SE = .350 – .352), indicating that participants responded fairly evenly across response choices. These items were beliefs that tended to be debated more by focus group participants (e.g., "Kindergarten is more structured than preschool, "Children's safety in kindergarten worries parents more than in preschool," and "Parents needs to do different things to help their children in kindergarten than in preschool"). Four items fell within acceptable levels of kurtosis (kurtosis = -0.38 – 0.67, SE = .350 – .351). These acceptable items generally referred to help-related beliefs, including "It is easy for parents

to help their children start kindergarten," parents being able to obtain "answers to their questions," and "Talking to someone can help parents to feel better." Three of the items with positive or negative kurtosis were close to being within acceptable kurtosis levels (kurtosis = -0.75 – 0.77, SE = .349 – .352) and also related to help.

The skewness of each administered item was assessed, with 34 items found to be negatively skewed (skewness values = -3.64 – -0.40, SE = .175 – .176). This finding suggested that more participants selected responses indicative of stronger agreement (e.g., "agree a lot" or "strongly agree"). One item was positively skewed (skewness = 0.46, SE = .176), suggesting low agreement with "If parents have questions about their children starting kindergarten, they should ask other parents first"). The remaining item was not skewed (skewness = -.09, SE = .176). It referred to parents worrying about safety more in kindergarten than in preschool; it was one of the more debated topics during the focus groups. One negatively skewed item ("Kindergarten is more structured than preschool") was close to within acceptable limits. With only four possible responses, skewness and kurtosis should be interpreted with caution given the lack of a middle response category and decreased probability of data approximating a normal distribution (Finney & DiStefano, 2006).

Exploratory factor analysis (EFA). Although most items were not normally distributed, data were not transformed, as the implemented factor analysis extraction method (i.e., principal axis factoring) is recommended when multivariate normality is violated (Costello & Osborne, 2005; Fabrigar et al., 1999). Missing data were imputed in SPSS 22 by taking the linear trend of the data point for participants missing less than 15% of the data at random (Rubin, 1987).

The assumptions of EFA were met, with (a) adequate sample size (>5 subjects per item), (b) Bartlett's Test of Sphericity ($p < .001$), and (c) Kaiser-Meyer-Olkín Measure of Sampling

Adequacy (KMO = .872). Eigenvalues, percentage of explained variance, and a scree plot of the possible factor solutions were used to make initial decisions for further factor analysis. Using a criterion of >1, eigenvalues indicated up to a nine-factor solution, while examination of the percent of variance explained (using a criterion of ideal variance ≥5) narrowed possible models to up to a three-factor solution. The scree plot illustrated a drop after the third factor, suggesting a three-factor solution. Therefore, solutions of up to three factors were further investigated.

A one-factor model for the data was analyzed first. Using a .40 loading criterion (McDermott, 1993), Factor 1 contained 30 items and had a reliability coefficient (α = .93) that met desired criterion (≥ .70). A modified one-factor model was also investigated. By changing the loading criterion to .35, Factor 1 increased to 33 items. The reliability coefficient (α = .92) was similar.

A two-factor model for the data was analyzed next. First, a factor analysis using the oblique promax rotation was conducted. Using a .40 loading criterion, Factor 1 contained 23 items (α = .92), Factor 2 contained 8 items (α = .78), and no items were double-loaded. The unit weighted interfactor correlation between the two factors was statistically significant ($r = .43$, $p < .001$) and within the desired limits (.30 to .60; McDermott, 1993). Using a .35 loading criterion, an additional 2 items loaded onto Factor 1 (α = .92); Factor 2 did not change. The unit weighted interfactor correlation remained acceptable ($r = .45$, $p < .001$).

Second, a factor analysis using the orthogonal varimax rotation with a .40 loading criterion was conducted for the two-factor model. This initial model had 2 double-loading items. Including the double-loading items, Factor 1 contained 27 items (α = .93) and Factor 2 contained 8 items (α = .78). The unit weighted interfactor correlation between the two factors was acceptable ($r = .55$, $p < .001$). When the double-loaded items were removed from both factors,

internal consistency for each factor (Factor 1, α = .92; Factor 2, α = .74) and the interfactor correlation ($r = .42$, $p < .001$) remained within desired limits. When the loading criterion was increased to .35, the number of double-loading items increased to 8. Thus, that solution was not investigated further. With those 8 items removed, 20 items uniquely loaded onto Factor 1 (α = .90) and 6 items loaded onto Factor 2 (α = .73). The unit weighted interfactor correlation was acceptable ($r = .31$, $p < .001$).

Finally, three-factor solution models were examined. A three-factor model with promax rotation and .40 loading criterion produced 16 items on Factor 1 (α = .90), 10 items on Factor 2 (α = .82), 8 items on Factor 3 (α = .78) with no double loaders. Two of the unit weighted interfactor correlations were acceptable (between Factors 1 and 3, $r = .45$, $p < .001$; between Factors 2 and 3, $r = .34$, $p < .001$). The correlation between Factors 1 and 2 was slightly high ($r = .61$, $p < .001$). When a .35 loading criterion was used, 2 items became double-loaded, such that 17 items loaded onto Factor 1 (α = .91), 12 items loaded onto Factor 2 (α = .85), and 8 items loaded onto Factor 3 (α = .78). Although the interfactor correlations between Factors 1 and 3 ($r = .45$, $p < .001$) and between Factors 2 and 3 ($r = .37$, $p < .001$) continued to be acceptable, the correlation between Factors 1 and 2 worsened ($r = .69$, $p < .001$). With the two double-loaded items removed, the reliability coefficients for each factor were all above criterion (Factor 1, 15 items, α = .90; Factor 2, 10 items, α = .82; Factor 3, 8 items, α = .78). The interfactor correlations between Factors 1 and 3 and between Factors 2 and 3 did not change; the correlation between Factors 1 and 2 slightly improved ($r = .60$, $p < .001$).

Additionally, a three-factor structure with the varimax rotation was analyzed. Using a .40 starting criterion, 17 items loaded onto Factor 1 (α = .91), 14 items loaded onto Factor 2 (α = .87), 8 items contributed to Factor 3 (α = .78), including 3 items that double loaded onto Factors

1 and 2. The unit weighted interfactor correlations ranged from .39 to .74 (all $p < .001$). While the correlations between Factor 1 and Factor 3 ($r = .45$) and between Factor 2 and 3 ($r = .39$) were in the desired range of .30 to .60, the correlation between Factor 1 and Factor 2 ($r = .74$) was above criterion. To attempt to improve the factor structure, the 3 double-loading items were dropped. The correlation between Factors 1 and 2 decreased ($r = .62$, $p < .001$) to slightly above criterion. The other unit weighted interfactor correlations remained acceptable (between Factor 1 and 3, $r = .45$, $p < .001$; between Factor 2 and 3, $r = .38$, $p < .001$), as did each factor's internal consistency (Factor 1, $\alpha = .89$; Factor 2, $\alpha = .84$; Factor 3, $\alpha = .78$). When the factor loading criterion was lowered to .35 for the three-factor solution with varimax rotation, three additional items double-loaded onto Factors 1 and 2, and one additional item double-loaded onto Factors 2 and 3. By now including a total of 7 double-loading items within the model, each factor was internally consistent (Factor 1, $\alpha = .91$; Factor 2, $\alpha = .89$; Factor 3, $\alpha = .78$). The correlations between Factors 1 and 3 ($r = .45$, $p < .001$) and Factors 2 and 3 ($r = .44$, $p < .001$) were acceptable. However, the correlation between Factors 1 and 2 ($r = .81$, $p < .001$) was too high. When the 7 double-loading items were dropped, the factors' internal consistency remained acceptable (Factor 1, $\alpha = .87$; Factor 2, $\alpha = .82$; Factor 3, $\alpha = .75$). All interfactor correlations were within desired limits (between Factor 1 and 2, $r = .56$, $p < .001$; between Factor 1 and 3, $r = .44$, $p < .001$; between Factor 2 and 3, $r = .34$, $p < .001$), representing an improvement.

Taking the factor analysis data into consideration, the content of six possible solutions was examined. To maximize parsimony, solutions that retained double-loading items were not considered further. The remaining viable solutions (based upon statistical findings) were evaluated to determine which solution appeared to best represent theoretical and empirical literature as well as focus group discussions. The statistically viable solutions were: (a) one-

factor solution with .35 loading criterion, (b) two-factor promax rotation solution with .40 loading criterion, (c) two-factor promax rotation solution with .35 loading criterion, (d) two-factor varimax rotation solution with .40 loading criterion and double-loading items dropped, (e) two-factor varimax rotation solution with .35 loading criterion and double-loading items dropped, and (f) three-factor varimax rotation solution with .35 loading criterion and double-loading items dropped.

Although the one-factor solution was empirically sound, the three items that did not load onto the single factor were considered important to the construct because they generated a lot of discussion among focus group participants, suggesting great variability in beliefs and meaningfulness from a practice standpoint. All four 2-factor solutions were rejected due to significant theoretical overlap between the factors that reduced their meaningfulness. The three-factor solution (varimax rotation, .35 loading criterion, double-loading items removed) offered the cleanest and most interpretable model. Therefore, it was the best empirical and theoretical representation of the item structure of the FESRI. Factor 1 was labeled Relationships; Factor 2 was labeled Parent as Teacher; Factor 3 was labeled Preparing for Kindergarten. Table 4 outlines this factor structure.

Rasch modeling. Rasch analyses were independently applied to each factor from the selected three-factor solution. First, each factor was analyzed with all appreciably loading items. Then, if needed, modifications were considered to determine if the structure could be improved. Thus, for Factor 1 (Relationships), 12 items were initially entered. Observed count verified that enough information was available to conduct the analysis (see Table 5). Average measures, step measures (see Table 5), and a graph of item response probabilities (see Figure 3) verified proper ordering of the four response categories, and thus lent support to the response processes

component of the FESRI's construct validity. Item fit statistics were reviewed to determine fitting and misfitting items. Mean square (MnSq) Infit and MnSq Outfit values were within the desired range for 11 of the items. One item's MnSq statistics (Item 19 MnSq Infit = 1.42, MnSq Outfit = 1.46) were outside the desired range. The model was calibrated with this item removed. With Item 19 dropped, the category count for the lowest agreement response (Response Category 1, "Do not agree") indicated that insufficient information was available, as it was less than 10 (see Table 5; see Figure 3 for item response probability curve). However, because the infit and outfit statistics were within criteria for the remaining 11 items and Item 19's loss did not significantly alter the factor's theoretical meaning, it was removed as a part of the factor for remaining analyses.

Rasch modeling was used to calculate the item and person separation indices for the 11-item Factor 1. This model had a strong item-hierarchy consistency ($\alpha = .93$) that lay above the recommended .70 criterion value for item reliability (Smith et al., 2002). The person reliability ($\alpha = .42$) was somewhat low, though no standard criterion is available in the literature to evaluate this value objectively. Examining the item map (see Figure 4 for the item map of Factor 1 with and without Item 19) suggested that the current Relationships factor may not sufficiently represent all beliefs in this area (construct underrepresentation). Items clustered at the lower end, indicating that not enough rare (or "difficult") items were present. Examining the person measures on the item map, most participants strongly agreed (were highly "skilled") with the construct, suggesting that families who agree less with the Factor 1 concepts may not be represented in the sample. The person mean was higher than the item mean (when scaled along the same latent trait), suggesting that the current measure does not represent the full range of beliefs, particularly at the less common range.

For Factor 2 (Parent as Teacher), 10 items were initially entered. Observed count indicated that not enough information for the lowest agreement response (Response Category 1, "Do not agree"), as it was less than 10. However, sufficient information was available for the other three response categories (see Table 5). Still, average measures, step measures, and item response probabilities (see Figure 5) confirmed proper ordering of the four response categories. MnSq Infit values were within range for all items. MnSq Outfit values for all items except Item 9 (0.46) were acceptable. Table 5 and Figure 5 illustrate the category functioning of Factor 2 with Item 9 removed. When the model was reexamined with Item 9 removed, the fit statistics for the remaining items were within the desired range. The theoretical content of this factor was not strongly altered by removing this item. For the nine-item Parent as Teacher model, item reliability was strong ($\alpha = .93$), while person reliability was weak ($\alpha = .19$). The item map (see Figure 6 for the item map of Factor 2 with and without Item 9) had the same challenges as the Relationships factor, with items being flatly distributed along the scale.

For Factor 3 (Preparing for Kindergarten), seven items were initially entered. Observed count confirmed that enough information was available for the analysis. Average measures, step measures (see Table 5), and item response probabilities (see Figure 7) verified appropriate ordering of the four response categories. MnSq Infit and Outfit statistics were within range for all items. With all seven items retained in the model, both the item reliability ($\alpha = .98$) and person reliability ($\alpha = .67$) were acceptable. In examining the item map (see Figure 8), the person mean was higher than the item mean (when scaled along the same latent trait), and no items were in the difficult range. However, persons appeared to be more normally distributed along the trait in comparison with the other two factors.

Factorial invariance by language. Table 6 provides the results for the factorial invariance analysis between FESRI language versions. Model fit indices suggest that the models did not fit the sample data, regardless of invariance level. Thus, the findings must be considered cautiously. No significant differences in $\Delta\chi^2$ were found between the configural and weak invariance models, indicating weak invariance between the language versions. The finding of invariance at the weak level supports the comparison of the relationships between the factors across the language versions. Significant differences were found for the strong and strict invariance models, suggesting that equal mean intercepts and unique variances were too restrictive.

Factorial invariance by child age. Results for the factorial invariance analysis by child age (younger versus older children) are listed in Table 7. Examining the model fit indices showed lack of model fit for the sample data and need for caution in examining remaining statistics. Significant differences were found at across invariance levels for child age, suggesting lack of factorial invariance at the configural, weak, strong, and strict levels. Even constraining factor loadings to be equal was too restrictive.

Demographic correlations with parents' beliefs. As Table 8 shows, different demographic variables were significantly associated with each dimension of the FESRI. The number of years the reporting parent has been in the US (if not born in US), parent employment status, and whether the child was born in the US were significantly related to the Relationships dimension (Factor 1). Less agreement with the Relationships beliefs was associated with the parent being in the US for more years, the parent being employed full time (versus being unemployed), and the child being born in the US. Parent primary language was the only demographic variable that was significantly associated with the Parent as Teacher beliefs

dimension (Factor 2), with primarily Spanish-speaking parents agreeing less with this beliefs dimension than parents whose primary language was English.

In contrast, many demographic variables significantly associated with the Preparing for Kindergarten dimension (Factor 3). These variables were whether the parent was born in the US, number of years the parent has been in the US (if not born in US), both parent and child primary language(s), whether the parent attended school in the US, whether the child was born in the US, child race/ethnicity, whether the child was in his first Head Start year, whether the parent had received written information from the future elementary school, and whether the parent had visited the kindergarten classroom or elementary school. Specifically, less agreement with the Preparing for Kindergarten beliefs was associated with the parent being born in the US, foreign-born parent living in the US for more years, parent and child primary language being English, parent attending school in the US, child being born in the US, child race being White, being in the child's first Head Start year, not having received written information from the child's future elementary school, and not having visited the kindergarten classroom or school.

Structural equation modeling (SEM). The univariate normality of each indicator variable was checked, and all six had skewness and kurtosis values within the recommended range of -2 to +2 (Lomax, 2001). The number of needed scatterplots to examine each pair of variables was large (15), and so they were not examined for bivariate normality. The starting model (see Figure 1) was identified according to the order condition (Schumacker & Lomax, 2004) and the three-indicator rule (Bollen, 1989). Standardized factor loadings and the co-variance ranged from .35 to .87 and are listed in Table 9, along with the unstandardized values. All proposed paths were statistically significant ($p < .001$). This model was associated with a χ^2 $(8, N = 265) = 57.35$, $p < .001$, and the following fit indices: *CFI* = .880, *GFI* = .933, *TLI* = .776,

and *RMSEA* = .153. These fit indices suggested that the starting model did not provide an acceptable fit for the data. Therefore, model modification was conducted to attempt to improve model fit.

First, the significance of the standardized regression weights was examined. However, no variables were dropped because all had significant loadings. Second, a combination of theory and examination of Lagrange multiplier indices greater than 2.0 (Hopko et al., 2003) was used to determine the possibility of adding any free parameters. The plan was to modify the model one parameter at a time until an acceptable fit to the data was obtained. Using those criteria, only one parameter was selected as a possible addition to the starting model because it carried a large modification index value (20.63) and could be explained theoretically. A covariance was added between the measurement errors of the FIQ Home-based Involvement variable and the FESRI Parent As Teacher variable (see Figure 1). Given the potential overlap in home-based activities and parents' conceptualizations of how parents (at home) serve as their children's teachers, it is possible that there was measurement overlap between these two indicators, despite being on separate measures.

The modified model was identified, again according to the order condition (Schumacker & Lomax, 2004) and the three-indicator rule (Bollen, 1989). After adding the covariance between the measurement errors, the standardized factor loadings and co-variances for the modified model ranged from .33 to .87 (see Table 10). The associated fit indices were χ^2 (7, N = 265) = 34.46, $p < .001$; *CFI* = .933; *GFI* = .958; *TLI* = .857; and *RMSEA* = .122. Four of the five fit indices suggested that the modified model did not provide an acceptable fit for the data, while the fifth index (i.e., *GFI*) suggested acceptable fit. Although four of the indices did not suggest acceptable fit, the modified model did fit the data significantly better than the starting model

($\Delta\chi^2$ (1, N = 265) = 22.89, p < .001). Given the continued poor model fit, the next analysis step would have been to explore additional ways in which the model might be modified. No other potential parameter additions could be justified theoretically. Thus, no further model modifications were made.

Chapter V: Discussion

The primary aim for the current work was the development and testing of the Family Expectations for School Readiness Involvement scale (FESRI), a measure of parents' beliefs about parental roles and involvement in preparing their preschooler for kindergarten. Through the implementation of a partnership-based approach (Fantuzzo et al., 2000; Hitchock et al., 2005) centered on working together with a HS program liaison as well as HS parents themselves, the FESRI was developed with the intention of being socially acceptable to these key stakeholders, as well as psychometrically viable. The second aim pertained to exploring the associations between families' demographic and background characteristics with the parents' school readiness involvement beliefs, while the third aim examined the relationship between those beliefs and self-reported family involvement behaviors.

Aim 1: FESRI Development

Following the iterative, partnership-based process previously described Fantuzzo et al. (2000) and Hitchcock et al. (2005), the FESRI was developed and validated in a low-income, ethnically diverse sample of HS parents. In the first study phase, focus group discussions illuminated participating parents' great passion for their children's educational lives and for being actively involved even at the stage of preparing for kindergarten. This passion is bolstered by their excitement for the next stage in their children's development and also colored by concerns about the new environment. Across focus groups, as well as the input provided individually by Spanish-speaking parents, many ideas were shared relating to the major themes of Parent as Teacher, Awareness of Preschool-Kindergarten Differences, Desire for Communication, Importance of Relationships, and Support for the Parent. Families clearly favored many ways of being involved in their child's school readiness and kindergarten

transition, which underscores prior work highlighting that parents view their responsibility as encompassing many roles in their child's education (Bartel, 2010).

The partnering HS program fosters an atmosphere of family involvement that is consistent with HS's fundamental principles (US DHHS, 2003). This program's culture enhances parental awareness and use of many different strategies to prepare preschoolers for kindergarten, which were evident in the feedback from the current study's Phase 1 participants. Still, wide variability was noted in what parents expect about the kindergarten transition. More concrete roles (such as building children's academic knowledge and skills) seem to be understood better or more universally than are more subjective or personal roles (such as teaching or preparing their children for cultural differences).

Through anecdotes provided by focus group participants, it is clear that center-based HS programs coupled with home visits provide individualized support to families preparing for kindergarten. This individualized support increased parents' awareness of the concrete skills and competencies (e.g., pre-literacy and numeracy skills) required of their children. Participating in HS seems to have helped parents generate strategies to build those competencies in their children. However, there is room for program growth to support more personal goals, roles, and concerns.

Discussions around personal roles also brought out the distrust that some HS parents feel towards formal school systems, reiterating concerns raised by parents interviewed for previous studies (Durand, 2011; Shields, 2009). Participants hinted at fears that public schools think poorly of them as a group. For instance, a Spanish-speaking participant explicitly indicated that she wants the kindergarten teacher to know that she takes care of her child and that her child is prepared for school. The contrast between the socioeconomic and cultural background of study

participants and the culture of most public schools raises the question of whether a parent in the Majority culture would share or voice similar concerns.

The key ideas across the major themes discussed by focus group participants were transferred into a large pool of items specifically related to beliefs around the parental role or involvement in the school readiness and kindergarten transition process. These items were culled and edited iteratively between the research team, HS program liaison, HS parents, cultural consultant, and expert panel to ultimately lead to the FESRI version that was piloted. Each round of review contributed to the content and face validity of the measure. In fact, this process was one of the study's strengths, as the piloted measure aligned with stakeholders' experiences, as well as research-driven theory.

Quantitative analyses of the field test participants' FESRI responses revealed an internally consistent three-factor structure: Relationships, Parent as Teacher, and Preparing for Kindergarten. The Relationships factor ($\alpha = .87$) is comprised of beliefs pertaining to communication between the parent and another individual (e.g., child or teacher), the importance of positive relationships (i.e., between parent and child or teacher), and using relationships to obtain or provide support. Beliefs comprising the Parent as Teacher factor ($\alpha = .82$) relate to parents teaching children specific skills (both academic and non-academic) and teaching strategies that parents may use. The Preparing for Kindergarten factor ($\alpha = .75$) encompasses beliefs about preschool-kindergarten differences and parent-centered needs in getting ready for the kindergarten transition. Although exploratory factor analysis (EFA) suggests a psychometrically sound, three-factor measure, Rasch modeling suggests that more research is needed, particularly to identify more rare beliefs (more "difficult") and to survey parents with a

greater variety of beliefs (i.e., including those who agree less—are less "skilled"—with the FESRI items).

While the FESRI focuses on parental beliefs about their roles and involvement in school readiness and kindergarten transition, Walker et al.'s (2005) survey of parental role constructions highlights parental beliefs on family involvement in kindergarten through sixth grade. Three dimensions of parental role constructions were found: parent-, partnership-, and school-focused. Comparing these dimensions with those of the FESRI reveals overlap as well as divergence. Common concepts were parent-focused (Parent as Teacher) and partnership-focused (Relationships). This conceptual overlap points to a possible continuum of family involvement beliefs across time, from preschool through early middle school. However, other areas may be more specific to particular periods in time. At the preschool level, parents did not focus on school-oriented roles. Instead, beliefs related to preparing for kindergarten emerged from focus group discussion, and remained a robust factor in the quantitative phase of the study. This divergence from the Walker et al. survey is logical, given that role beliefs relating to preparing for kindergarten clearly are not applicable to parents of fourth graders, for example. Though, perhaps similar concerns may emerge at other transitions (e.g., from elementary to middle school).

Interestingly, Walker et al. (2005) discuss exploring an alternative two-factor model of parental role constructions. Rather than a family involvement beliefs scale that examines three areas of parental roles, they piloted a brief measure that surveys "active" roles (merging parent- and partnership-focused roles) and valence of parents' attitudes toward school based on their own experiences as students. Their concept of "valence toward school" is intriguing, given the current study's participants voicing several concerns regarding mistrust of schools. Even though

positive or negative attitudes toward school are not specifically beliefs about parents' roles in education, the valence of parental attitudes may shape involvement beliefs and perhaps in turn involvement behaviors.

The common experience of participating in the same HS program was hypothesized to have a stronger influence on beliefs (Hoover-Dempsey et al., 2005; Reese & Gallimore, 2000; Walker et al., 2011) than language. However, analyses of the factorial invariance of the two FESRI language versions preliminarily suggest that language (English versus Spanish) may influence the scale's structure. This finding aligns with other recent scale development work that showcased how linguistic variations might be influential (McWayne et al., 2014). Thus, the English FESRI appears to be more soundly developed from this first stage of scale construction than the translated Spanish FESRI. Although the equivalence of the content of the Spanish FESRI to the English FESRI was verified through back translation and verification by a Spanish-speaking parent, the underlying constructs may not be fully equivalent. In fact, the feedback provided by the Spanish-speaking parents hinted at constructs that may be unique to this group. Even prior research with parents of teenagers has suggested that Latino parents may envision family involvement to go beyond academics, to also encompass "life participation" (Zarate, 2007). Coupled with that observation, the lack of measurement invariance across language versions limits group comparison at this time (Gregorich, 2006) and highlights the necessity of deriving FESRI-Spanish items directly from parental feedback provided in Spanish (McWayne, Melzi, Schick, Kennedy, & Mundt, 2013).

Similar issues of group comparison are raised by the lack of measurement invariance across child age groups (Gregorich, 2006). Current analyses seem to suggest that child age (parents of 3-year olds versus of $\geq$ 4-year olds) may influence the FESRI's structure. Different

constructs may have varying degrees of relevance to parents of younger children compared with parents of older preschoolers. Although researchers have expanded the concept of school readiness to reflect a longitudinal process beginning in infancy (Rimm-Kaufman & Pianta, 2000; Sheridan et al., 2008), perhaps parents do not think about school readiness until an impending kindergarten registration becomes at the forefront of their minds. An alternative speculation is that the involvement behaviors of parents of toddlers differ in crucial ways from those of parents of older preschoolers (Manz, Gernhart, Bracaliello, Pressimone, & Eisenberg, 2014). As the current work suggests, involvement behaviors are associated with parents' involvement beliefs (see below). Thus, just as Manz et al. (2014) found that family involvement behaviors of toddlers' parents differ from the behaviors of preschoolers' parents in both practical scope (i.e., specific involvement activities) and theoretical construct (i.e., factor structure), perhaps parents' beliefs about their roles in school readiness similarly differ.

Aim 2: Associations Between Demographics and Parental Beliefs

The secondary aim of the current research was to begin to discern the multivariate relationships between families' demographic and background characteristics with parents' beliefs regarding their roles and involvement in school readiness and kindergarten transition. Beliefs were hypothesized to vary with demographic variables, particularly those that reflect parents' experiences with service providers and school systems (e.g., parent's education status, number of older siblings, child's disability status, participation in early childhood programs, and years enrolled in HS). For the current HS sample, some demographic variables were significantly associated with the FESRI dimensions, while others were not. Variations were also seen with regard to which family characteristics associated with each FESRI dimension.

In the current sample, parents who have been in the US for longer time periods (among foreign-born parents) and whose children were born in the US seemed to agree less with belief statements that reflected relationships-focused roles and involvement. Similarly, parents who were born in the US (or who have been in the US for more years, if foreign-born), who attended school in the US, whose children were born in the US, who identified their children as White, and whose primary language was English also seemed to agree less with the preparing for kindergarten construct. So, it appears that variables reflecting longer exposure to life in the US are negatively related to parental beliefs about relationships and preparing for kindergarten, as measured by the FESRI. These associations seem to reflect the sociocultural issues raised by focus group participants that highlight a level of distrust and poor alliance between low-income, ethnically diverse HS families and the public school system. This limited home-school connection may stem from cultural and economic differences between families and school personnel (García-Coll et al., 2002; Weisner, 2005). As reported in recent work, family involvement beliefs are constructed socially through prior experiences with formal schooling (Gonzalez et al., 2013) and through interactions with one's key social groups (Whitaker & Hoover-Dempsey, 2013). The valence of parents' attitudes towards school systems, regardless of how those perspectives are formed, merit growing empirical attention with respect to parental beliefs about their roles and involvement (Walker et al., 2005).

Limited formal contact with formal services (i.e., being in one's first HS year) and the receiving elementary school (i.e., no written information received and no classroom visit done) also seems associated with less agreement with preparing-for-kindergarten concepts. Prior research indicates that parents' involvement expanded after they were empowered with information about school and their potential roles (Giallo et al., 2010), which corroborates other

work showing a connection between some family involvement behaviors and knowledge of US schools (Suárez-Orozco & Páez, 2009). Therefore, it is not surprising that less agreement was found among families with less exposure to HS and to the receiving school. Whether this observation highlights limited awareness of ways to support a child's school readiness or parents not yet thinking about kindergarten remains to be distinguished.

Besides exposure to US culture, parents who were employed full time also appeared to agree less with the relationship-based roles. This finding perhaps reflects pragmatic barriers to involvement, in that by working full time outside the home one may have less time available to foster relationships with the school. In fact, pragmatic barriers such as employment are one of the influences on family involvement that have been noted in Hoover-Dempsey and colleagues' model (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005) as well as other family involvement research (e.g., Green et al., 2007; Walker et al., 2011). However, variables such as employment, which may indicate socioeconomic status, have often been found in the literature to not be predictive of home-based involvement for HS families (e.g., Fantuzzo et al., 2000; McWayne & Melzi, 2014). Although full-time employment currently related negatively to relationships beliefs, it did not relate to beliefs about parent-as-teacher and preparing-for-kindergarten roles, many of which take place in the home setting.

An interesting contrast is that parents whose self-reported primary language is Spanish seemed more likely to have lower agreement with the parent-as-teacher roles, while those whose primary language is English were more likely to have lower agreement with the preparing-for-kindergarten roles. While having English as one's primary language may similarly reflect longer exposure to US culture as variables like being born in the US, having Spanish as one's primary language may reflect less exposure to US culture or being less acculturated. Perhaps primarily

Spanish speakers reported less agreement with parent-as-teacher roles because of a contrasting belief that teaching school-readiness competencies is the school's responsibility. Or, perhaps this finding reflects beliefs around the developmental appropriateness of certain ideas or skills (Reese & Gallimore, 2000), though this possibility is less likely given no significant relationship between child age and the parent-as-teachers dimension. The lack of association between the parent-as-teacher beliefs and either country of origin or race/ethnicity may contribute evidence to the universality of some family involvement beliefs and their applicability across all low-income groups (McWayne & Melzi, 2014). So in that context, the significance of Spanish as the primary language may highlight language differences (Wong & Hughes, 2006) and less knowledge of the US school system (Suárez-Orozco & Páez, 2009). Additionally, HS typically offers multiple language-based accommodations such as bilingual staff and translated materials (McWayne & Melzi, 2014). HS services may be the main source of reciprocal interaction with formal US social systems. So, these primarily Spanish-speaking families perhaps are partially buffered with regard to relationships and preparing-for-kindergarten issues, both of which include beliefs related to support.

Unexpectedly, several indicators of prior contact with services were not significantly associated with any of the FESRI dimensions. Other unrelated background characteristics included child's disability status, past participation in Early HS, and older siblings. While parental income and education related to differences in parental beliefs in some research (Barbarin et al., 2008), they were not related in the current or other studies (Green et al., 2007; Wildenger & McIntyre, 2011). Taken together, the current findings partially support the hypothesis that parents' beliefs about parental roles and involvement in preparing their preschool child for elementary school relate to their prior experiences, particularly with school-related

services or systems. It might be possible that some variables relate to family involvement beliefs, while others relate more to family involvement behaviors. This distinction would need to be investigated through careful future research. The multivariate influences on family involvement beliefs are certainly complex and intertwined, as the many proposed levels of influence on family involvement evince (e.g., Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005). Much more research considering multiple mechanisms is needed before conclusions can be solidified.

Aim 3: Association Between Family Involvement Beliefs and Behaviors

The final aim of the project was to examine the relationship between parents' family involvement beliefs and family involvement behaviors. Model fit indices indicated poor fit with the sample data. Therefore, findings should be considered cautiously. Despite poor model fit, all hypothesized paths were statistically significant. Moreover, the covariance between family involvement beliefs and behaviors was significant and in the positive direction. Previous research has provided evidence of a relationship between involvement beliefs and behaviors at the elementary school level (Bartel, 2010; Green et al., 2007). Though it should be interpreted with caution, the current work suggests a similar connection during the school readiness and kindergarten transition process for this HS sample. One possibility for poor model fit but significant model parameters could be that not all variables of family involvement were represented (Schumacker & Lomax, 2004). As Hoover-Dempsey and colleagues' theoretical model illustrates, other variables that might need to be considered include parental self-efficacy, opportunities (including invitations) for involvement, actual parental skills and knowledge, and barriers/resources like time (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005).

Recognizing the potential impact of measurement error, model fit improved significantly when the error variances of the FESRI Parent As Teacher indicator and the FIQ Home-based Involvement indicator were covaried. However, the model still poorly fit the data. Multivariate normality was problematic for the current data and possibly negatively impacted model fit indices. When multivariate normality is violated, the Type I error rate increases, as the chi-square test tends to be biased upward. Also, fit indices tend to be biased downward, leading to over-rejection of correctly specified models with samples smaller than 250 (Finney & DiStefano, 2006).

Limitations and Future Recommendations

Study limitations should be considered when interpreting the current findings. First, data were collected cross-sectionally. Thus, only correlations between family involvement beliefs, demographics, and family involvement behaviors could be explored. Future research should examine the direction of the relationship between these constructs. For instance, a future aim would be to examine family involvement beliefs and behaviors longitudinally beginning at preschool entry, then again at kindergarten entry, and ultimately after kindergarten. Profiles of the stability or trajectory of beliefs and behaviors could be examined to better identify demographic relationships. Information about other contextual variables that influence family involvement (Hoover-Dempsey et al., 2005; Walker et al., 2005) should be incorporated to help gain a fuller picture of the mechanisms of family involvement and, in turn, child outcomes.

Second, study participants (particularly in the focus groups) were as a whole, a highly involved group of parents who tend to be active participants in HS activities. Focus group members even described value differences between themselves and what they have witnessed in other parents at their children's schools. So, a challenge in asking about parents' beliefs about

their roles and involvement in school readiness and the kindergarten transition process is obtaining information and perspectives from those who are less involved in school-oriented activities like Parent Policy Council. As the Rasch modeling analyses revealed, even field test participants tended to agree strongly with the involvement roles captured by the FESRI. Restricted information was obtained from parents who disagree with the FESRI concepts, particularly for the Relationships and Parent as Teacher dimensions. This bias potentially limits the generalizability of the study findings to other parents actively involved in school-focused activities (activities that only indirectly benefit their own children). Future research will need to engage parents who are not as routinely involved in HS programming itself, as their routine forms of involvement may be more subtle yet still important to support. Furthermore, the use of the FESRI is limited at this time to HS populations. If researchers or practitioners intend to apply it to other preschool populations, further validation is needed.

Additionally, the analyses of factorial invariance must be interpreted with caution and considered as exploratory glimpses into the invariance of the FESRI's structure across language versions and child age groups. Both sets of analyses were problematic for identical reasons. First, the sample sizes of the groups of interest (Spanish version and younger children) were smaller than the recommended 100 participants per group (Millsap, 2011). Additionally, large sample sizes (e.g., at least 500 participants per group) are recommended when indicator variables have fewer than five response choices (as with the FESRI's four choices) and when the number of indicator variables is greater than 20 (as with the current work's total of 29 items; Millsap, 2011). To develop a stronger understanding of the school readiness involvement beliefs held by primarily Spanish-speaking parents, the study's methodology (content development and scaling

analyses) should be repeated to specifically reach and engage this group of parents so that potential nuances in involvement beliefs can be elucidated.

While the feedback provided by the Spanish-speaking parents overlapped significantly with the feedback provided by the mainly English-speaking focus group participants, unique ideas were raised and warrant closer study. For instance, the Spanish-speaking parents mentioned parental roles in school readiness related to specific fears of being undervalued by schools, and needing to prove their current involvement and willingness to do what is needed for their children. Other uniquely mentioned involvement ideas covered other areas like healthcare, neighborhood activities, and post-kindergarten involvement.

Assuming that the potential lack of measurement invariance of the FESRI between parents of 3-year-old children and the parents of ≥ 4-year-old children would hold with more appropriate measurement and group sample sizes, it raises an interesting future research question for the family involvement construct. Beyond the need for larger sample sizes, the work by Manz et al. (2014) highlights the need to more closely examine family involvement in parents of younger children. Just as their behaviors may differ from those of parents of older preschoolers, their beliefs regarding their roles and involvement in the school readiness process may be quite distinctive.

One limitation of the current examination of the relationship between family involvement beliefs and behaviors was that both constructs were measured via parent self-report. The examination of that relationship should be expanded in future research by gathering data on how parents are involved in preparing for kindergarten and what involvement activities are completed specifically in the context of HS and later in the context of kindergarten at the receiving school. Although self-report measures offer a viable way to learn about family involvement, multi-modal

assessment techniques (e.g., self-report, coupled with observation or permanent products) will strengthen the validity of these findings (Shapiro & Kratochwill, 2000).

As participants in the focus groups demonstrated, parents quite readily entertain the discussion of school readiness or family involvement beliefs that directly pertain to their child (Bartel, 2010). Asking parents to focus on themselves can be a difficult paradigm shift for many individuals. So, although the major theme of "support for the parent" emerged during the focus group discussions, fewer and fewer items relevant to this concept were retained in the iterative development process for the FESRI. Interestingly, the Preparing for Kindergarten factor was the most robust of the three FESRI dimensions through the Rasch modeling analyses. It was also the most variable factor in terms of significant demographic associations. Though its contributing items pertain to parents' preparation and awareness of preschool-kindergarten differences, there is still an undercurrent of focus on the child. So while parents focus on their children's school readiness and kindergarten transition, program and school personnel may want to attend to supporting parents across this transition period so that parents may accomplish their own child-centered goals.

Conclusion

Overall, this work presents one of the few research studies that examine parents' beliefs about their roles or involvement in the school readiness and kindergarten transition process. In contrast with existing measures of parental beliefs (e.g., Wildenger & McIntyre, 2011; Walker et al., 2005), the content of the FESRI was generated and then confirmed by parents. Furthermore, it focuses specifically on HS families with children who are in the middle of the transition process. In addition to qualitatively validating the FESRI's content and format through both key stakeholders and research experts, the combined use of classical test theory (i.e., EFA) and item

response theory (i.e., Rasch modeling) presents a complementary and supportive examination of the measure's structure and internal consistency. Although more research is needed to continue refining the measure, particularly for primarily Spanish-speaking populations, feedback from diverse HS families as well as a cultural consultant lent support to the FESRI's viability.

The FESRI is a promising instrument for examining HS parents' beliefs regarding their roles and involvement in preparing their young children for elementary school and the kindergarten transition. As Hoover-Dempsey and colleagues' model postulates, multiple variables influence parents' decision to be involved in their child's education and the types of involvement activities they do (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005). Adapting the Hoover-Dempsey model to HS and other preschool populations, researchers can take a closer look at family involvement at the school readiness and kindergarten transition level. Given the emerging evidence provided by the current work on the relationship between family involvement beliefs and behaviors, HS programs may be able to use the FESRI to guide the planning of family involvement activities focused on preparing for kindergarten that fit with families' beliefs. The measure may also help guide conversations between staff and families as school readiness goals are collaboratively set, which aligns with HS performance standards on establishing school readiness goals (45 CFR 1307.3 (b) (1) (iii), as amended; US DHHS, n.d.).

Table 1

Demographics by Study Phase

	Round 1 focus groups		Field test	
	Parents (n = 31)	Children	Parents (n = 267)	Children
Age, in years (*M*, *SD*)	33.8 (7.1)	4.1 (1.1)	30.7 (6.6)	4.4 (0.5)
Gender (% female)	83.9	51.6	92.1	46.8
Relationship to child (% mother)	80.6		91.8	
Born in US (% yes)	71.0	90.3	56.9	92.1
Years in US (*M, SD*)[a]	24.4 (12.3)	2.8 (0.6)	12.3 (7.8)	2.4 (1.3)
Education status (% high school diploma or higher)	96.8		76.4	
Attended school in US (% yes)	83.9		72.7	
Ethnicity (%)				
Latino/Hispanic	51.6	45.2	63.3[b]	59.6
Black/African American	16.1	12.9	5.2	4.9
White	19.4	16.1	21.7	14.2
Other	3.2	3.2	8.2	1.9
Multiracial	9.7	22.6	7.1	19.1
Primary language (%)				
Spanish	19.4	6.5	34.5	26.2
English	54.8	67.7	47.9	53.2
Bilingual: Spanish/English	16.1	22.6	13.1	17.2
Bilingual: Other/English	6.5	3.2	1.5	1.5
Other	0.0	0.0	3.0	19
Family type (%)				
Two-parent		45.2		58.1
One-parent		25.8		28.1
Other		19.4		13.5
Marital status (% married)	32.3		33.3	
Employment (% unemployed)	67.7		48.3	
Family income (% less than $20K)	67.7		61.0	
Contact with future school (% yes)	38.7		40.1	
Current IEP (%)		22.6		25.1
Attended EHS (% yes)		3.5		38.2
First year in HS (% yes)		51.6		66.3
No. of older siblings (*M*, range)		1.4 (0 – 4)		1.2 (0 – 7)

Note. Percentages may not add to 100% due to missing data. EHS = Early Head Start. HS = Head Start.
[a] Among those who were not born in US. [b] Among Latino/Hispanic families, 154 provided information on their families' country of origin (56.5% were from Puerto Rico, 21.4% were from Dominican Republic, 12.3% were from Mexico, 9.7% were from multiple Latin American countries).

Table 2

Number of Participants in Each Focus Group

Round 1	New participants	Returning participants
Focus Group 1	14	
Focus Group 2	12	n/a[a]
Focus Group 3	3	2
Focus Group 4	2	1
Spanish Interviews	33	0
Round 2	**New participants**	**Participants from Round 1**
Focus Group 1	0	6
Focus Group 2	0	4
Focus Group 3	2	7
Focus Group 4	4	0

[a] Focus Groups 1 and 2 occurred concurrently.

Table 3

*Major Themes and Key Ideas Discussed by Round 1 Focus Group Participants (*n = *31)*

Major Theme	Key Idea	Contributing Concepts
(1) Parent as teacher[#]	Awareness of child's skills & knowledge (currently, what is expected, what is age-appropriate)[#]	• Academics (colors, shapes, letters, numbers, sounds, print name)[#] • Behavioral (sitting still)[#] • Social & emotional (making friends, accepting differences, standing up for self)[#] • Cultural (including religion & language/dialect)[#] • Responsibilities (chores at home, homework)[#] • Interactions with adults (respect to parents, respect to teachers) • Life skills[#] (independence)[#]
	Strategies & tools used by parent[#]	• Learn from personal past experiences (of oneself, from experiences with older children)[#] • Learn from other parents • Resources/information provided by HS[#] • Resources/information provided by kindergarten[#] • Figure it out on one's own[#] (come up with own ideas, it is parent's job)[#] • Make it work for one's own child & family • Knowledge & use of specific strategies[#] ▪ Variety of strategies implemented: e.g., repetition, modeling, rehearsal, book reading, conversations
(2) Awareness of preschool – kindergarten differences[#]	Routines[#]	• Mealtime (lunchroom, snacks)[#] • Bus[#] • Homework[#] • Bedtime[#] • Morning • Parent's own schedule (do it need to be adjusted) • Family's schedule & routine
	Power & role shifts[#]	• Visiting child in classroom[#] • Amount of individual attention received from teacher[#] • Invitations from school • Child's level of independence as a learner[#] • Parent values parent involvement when in HS (in home, in school, in community)[#] • Parent values parent involvement when in kindergarten[#] (in home, in school, in community)
(3) Desire for	Between	• Communication between parent & child[#]

communication[#]	individuals[#]	• Communication between parent & teacher (or school – school crisis plan, absences, problems, successes, who initiates)[#] • Communication between teacher & child
	Role conflicts	• Who is responsible for telling child about different issues or ideas (ethnicity, sexuality, disability, bullying, safety, school crisis events like school shooting or deaths) • Who should tell child about those different issues or ideas • Who decides how much or what to tell the child • What happens when message from school is different from what parent wants or values
(4) Importance of relationships[#]	Between individuals[#]	• Relationship between parent & child (respect, discipline, knowing one's child)[#] • Relationship between child & siblings (siblings as models for younger child) • Relationship between parent & teacher (mutual respect, trust)[#] • Relationship between teacher & child (respect, discipline, emotional support)[#]
	Concerns & distrust of schools[#]	• Concerns about children entering kindergarten with a disability[#] • School will be quick to call police • Safety concerns (bullying, strangers, school crisis)[#]
(5) Support for the parent[#]	Preparing oneself as the parent of a child starting kindergarten[#]	• Range of emotional reactions (joys, fears, excited, sad, relieved, stress)[#] • Parent reacting to child's reaction • Obtaining support for emotions from family • Obtaining support for emotions from HS staff[#] • Obtaining support for emotions from kindergarten/elementary school staff • Coping with what one hears about others' families
Observations unique to Spanish-speaking parents' (n = 33) anonymous input		
• Importance of health care for kindergarten transition • Use of neighborhood for natural learning opportunities • Transition to other grades after kindergarten • Importance of kindergarten/school personnel knowing that parents are available, take care of their children, and prepare their children for kindergarten		

HS = Head Start.
[#] Concept was also discussed in anonymous feedback provided by Spanish-speaking parents.

Table 4

Factor Loadings for Dimensions of the FESRI-English

Item content by factor	Factor loading[a]
Relationships (12 items, α = .87):	
19. Talking to someone can help parents feel better about their children starting kindergarten.[b]	.44
20. Parents and their children's kindergarten teacher should talk with each other about their children's strengths and interests.	.48
24. It is helpful for kindergarten teachers to know about what parents do at home to help their children learn.	.55
25. Parents need to talk to their children about responsibility.	.56
27. Parents need to talk to their children about how kindergarten will be different from preschool.	.59
28. A good relationship between parents and the kindergarten teacher is important for children's learning.	.71
29. Making routines like for bedtime and homework will help children to succeed in kindergarten.	.55
30. Parents can help their children if they are nervous about starting kindergarten.	.56
31. If parents have questions about their children starting kindergarten, they should ask teachers first.	.48
33. Children do better in school if they know that their family cares about them.	.58
34. Parents are their children's most important teacher as they grow and learn.	.49
35. It is important for parents to talk to their children about feelings.	.69
Parent as Teacher (10 items, α = .82):	
1. Parents can teach their children about things like letters and counting.	.63
2. Parents can teach their children about making friends.	.45
3. Parents need to talk to their children about standing up for themselves.	.46

4. Parents teach their children about their culture or language.	.46
5. Asking children questions helps their minds to grow and think better.	.62
6. Children learn by trying some things on their own.	.46
8. Parents can teach their children important things that are not taught in school.	.61
9. Parents can teach their children about things like asking permission and having respect.[b]	.64
10. Parents need to teach their children about safety topics like strangers, seatbelts, and fire safety.	.50
11. Parents can use their children's interests to teach them.	.58
Preparing for Kindergarten (7 items, α = .75):	
12. Kindergarten is more structured than preschool.	.43
15. It is easy for parents to help their children start kindergarten.	.60
16. Parents need to do different things to help their children in kindergarten than in preschool.	.64
17. Parents know or can figure out how to get answers to their questions about kindergarten.	.60
18. Information from their children's future elementary school helps parents to figure out how to get ready for kindergarten.	.46
32. Children's safety in kindergarten worries parents more than in preschool.	.49
36. If parents have questions about their children starting kindergarten, they should ask other parents first.	.47

Double-loading items:	Factor 1 loading[c]	Factor 2 loading[c]	Factor 3 loading[c]
7. Parents can use information from their children's preschool to figure out how to get ready for kindergarten.	.38	.40	
13. Parents and children should talk with each other about how school is going.	.48	.44	
14. Parents know or can figure out what works to help their children succeed in kindergarten.		.37	.50
21. Children succeed better in school if their parents and	.55	.37	

kindergarten teacher work together as a team.		
22. Children's education starts at home with their family.	.45	.49
23. Parents and their children's kindergarten teacher should talk with each other about their children's challenges.	.58	.47
26. It is okay to ask to talk to the kindergarten teacher, even if it is not parent conference time.	.62	.37

Note. FESRI-English = Family Expectations for School Readiness Involvement – English. *n* = 192. Appreciable loadings set to .35.
[a] Entries are varimax rotated loadings. [b] Item was removed through Rasch analyses. [c] Only appreciable loadings displayed.

Table 5

Rating Scale Function

Response option	Observed count	Average measure	Step measure
Factor 1, all items			
1	13	1.15	none
2	97	1.24	-1.64
3	622	1.84	-0.45
4	2349	3.65	2.09
Factor 1, Item 19 removed			
1	8	1.43	none
2	67	1.48	-1.53
3	540	1.88	-0.63
4	2210	3.62	2.16
Factor 2, all items			
1	6	0.82	none
2	64	1.38	-1.64
3	402	2.01	-0.26
4	2114	3.49	1.90
Factor 2, Item 9 removed			
1	6	0.75	none
2	64	1.34	-1.58
3	384	1.94	-0.25
4	1875	3.25	1.83
Factor 3, all items			
1	182	-0.67	none
2	365	-0.06	-1.05
3	517	0.80	0.03
4	721	1.59	1.02

Table 6

Non-standardized Parameter Estimates and Fit Indices for Measurement Invariance Models for FESRI Language (English n = *192; Spanish* n = *66)*

Parameter	Configural		Weak		Strong		Strict	
	E	S	E	S	E	S	E	S
k1-20	0.25***	0.30***	0.26***	[a]	0.27***	[a]	0.27***	[a]
k1-24	0.34***	0.37***	0.35***	[a]	0.35***	[a]	0.36***	[a]
k1-25	0.25***	0.27***	0.26***	[a]	0.26***	[a]	0.26***	[a]
k1-27	0.43***	0.35***	0.41***	[a]	0.43***	[a]	0.43***	[a]
k1-28	0.38***	0.25***	0.34***	[a]	0.36***	[a]	0.36***	[a]
k1-29	0.22***	0.25***	0.23***	[a]	0.24***	[a]	0.23***	[a]
k1-30	0.34***	0.22**	0.32***	[a]	0.33***	[a]	0.32***	[a]
k1-31	0.31***	0.19***	0.27***	[a]	0.29***	[a]	0.31***	[a]
k1-33	0.35***	0.25***	0.33***	[a]	0.34***	[a]	0.35***	[a]
k1-34	0.19***	0.15***	0.18***	[a]	0.19***	[a]	0.19***	[a]
k1-35	0.30***	0.24***	0.29***	[a]	0.29***	[a]	0.29***	[a]
k2-1	0.28***	0.20**	0.27***	[a]	0.28***	[a]	0.26***	[a]
k2-2	0.38***	0.26***	0.36***	[a]	0.36***	[a]	0.36***	[a]
k2-3	0.24***	0.28***	0.25***	[a]	0.26***	[a]	0.26***	[a]
k2-4	0.23***	0.23***	0.24***	[a]	0.24***	[a]	0.24***	[a]
k2-5	0.26***	0.21***	0.26***	[a]	0.26***	[a]	0.25***	[a]
k2-6	0.26***	0.42***	0.29***	[a]	0.29***	[a]	0.30***	[a]
k2-8	0.33***	0.30***	0.32***	[a]	0.33***	[a]	0.33***	[a]
k2-10	0.11***	0.09**	0.10***	[a]	0.10***	[a]	0.10***	[a]
k2-11	0.31***	0.25***	0.30***	[a]	0.30***	[a]	0.30***	[a]
k3-12	0.39***	0.24	0.36***	[a]	0.39***	[a]	0.38***	[a]
k3-15	0.56***	0.48***	0.55***	[a]	0.57***	[a]	0.57***	[a]
k3-16	0.64***	0.40***	0.57***	[a]	0.61***	[a]	0.62***	[a]
k3-17	0.60***	0.54***	0.59***	[a]	0.62***	[a]	0.62***	[a]
k3-18	0.46***	0.34***	0.43***	[a]	0.45***	[a]	0.46***	[a]
k3-32	0.52***	0.10	0.43***	[a]	0.48***	[a]	0.45***	[a]
k3-36	0.42***	0.32*	0.40***	[a]	0.44***	[a]	0.45***	[a]
s1	3.83***	3.79***	3.83***	3.79***	3.83***	[a]	3.83***	[a]
s2	3.69***	3.76***	3.70***	3.76***	3.72***	[a]	3.72***	[a]
s3	3.74***	3.77***	3.74***	3.77***	3.75***	[a]	3.76***	[a]
s4	3.78***	3.85***	3.78***	3.85***	3.81***	[a]	3.81***	[a]
s5	3.87***	3.79***	3.87***	3.79***	3.86***	[a]	3.85***	[a]
s6	3.72***	3.49***	3.72***	3.49***	3.69***	[a]	3.67***	[a]
s8	3.70***	3.65***	3.70***	3.65***	3.70***	[a]	3.70***	[a]
s10	3.94***	3.94***	3.94***	3.94***	3.94***	[a]	3.94***	[a]
s11	3.78***	3.71***	3.78***	3.71***	3.77***	[a]	3.77***	[a]
s12	2.85***	3.11***	2.85***	3.12***	2.87***	[a]	2.87***	[a]
s15	3.06***	3.29***	3.06***	3.29***	3.05***	[a]	3.04***	[a]
s16	2.95***	3.27***	2.95***	3.27***	2.95***	[a]	2.95***	[a]
s17	3.20***	3.48***	3.20***	3.48***	3.19***	[a]	3.19***	[a]

s18	3.47***	3.68***	3.47***	3.68***	3.46***	[a]	3.46***	[a]
s20	3.76***	3.82***	3.78***	3.82***	3.76***	[a]	3.76***	[a]
s24	3.62***	3.61***	3.62***	3.61***	3.60***	[a]	3.60***	[a]
s25	3.85***	3.83***	3.85***	3.83***	3.84***	[a]	3.84***	[a]
s27	3.61***	3.73***	3.61***	3.73***	3.63***	[a]	3.62***	[a]
s28	3.73***	3.83***	3.73***	3.83***	3.74***	[a]	3.74***	[a]
s29	3.86***	3.85***	3.86***	3.85***	3.84***	[a]	3.85***	[a]
s30	3.72***	3.71***	3.72***	3.71***	3.72***	[a]	3.71***	[a]
s31	3.57***	3.83***	3.57***	3.83***	3.67***	[a]	3.62***	[a]
s32	2.63***	3.01***	2.63***	3.01***	2.66***	[a]	2.66***	[a]
s33	3.71***	3.77***	3.71***	3.77***	3.71***	[a]	3.71***	[a]
s34	3.87***	3.89***	3.87***	3.89***	3.86***	[a]	3.87***	[a]
s35	3.83***	3.84***	3.83***	3.84***	3.82***	[a]	3.82***	[a]
s36	2.26***	2.70***	2.26***	2.70***	2.31***	[a]	2.32***	[a]
h1	0.08***	0.22***	0.08***	0.21***	0.08***	0.21***	0.12***	[a]
h2	0.18***	0.18***	0.18***	0.16***	0.19***	0.17***	0.18***	[a]
h3	0.21***	0.25***	0.21***	0.25***	0.21***	0.25***	0.22***	[a]
h4	0.18***	0.14***	0.18***	0.13***	0.18***	0.13***	0.17***	[a]
h5	0.06***	0.15***	0.06***	0.15***	0.06***	0.15***	0.09***	[a]
h6	0.24***	0.32***	0.24***	0.37***	0.24***	0.39***	0.27***	[a]
h8	0.21***	0.38***	0.21***	0.38***	0.21***	0.38***	0.25***	[a]
h10	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	[a]
h11	0.12***	0.18***	0.12***	0.18***	0.12***	0.18***	0.13***	[a]
h12	0.88***	0.86***	0.89***	0.87***	0.89***	0.87***	0.88***	[a]
h15	0.46***	0.51***	0.45***	0.50***	0.46***	0.51***	0.78***	[a]
h16	0.64***	0.60***	0.66***	0.60***	0.65***	0.59***	0.63***	[a]
h17	0.31***	0.16***	0.31***	0.17***	0.31***	0.18***	0.27***	[a]
h18	0.28***	0.19***	0.28***	0.19***	0.28***	0.19***	0.26***	[a]
h20	0.15***	0.09***	0.14***	0.10***	0.14***	0.10***	0.13***	[a]
h24	0.25***	0.26***	0.25***	0.27***	0.25***	0.27***	0.25***	[a]
h25	0.10***	0.09***	0.09***	0.10***	0.09***	0.11***	0.10***	[a]
h27	0.20***	0.08***	0.21***	0.08***	0.21***	0.08***	0.17***	[a]
h28	0.13***	0.08***	0.13***	0.08***	0.13***	0.08***	0.12***	[a]
h29	0.08***	0.06***	0.08***	0.07***	0.08***	0.07***	0.08***	[a]
h30	0.14***	0.37***	0.14***	0.37***	0.14***	0.37***	0.20***	[a]
h31	0.31***	0.10***	0.31***	0.10***	0.32***	0.11***	0.26***	[a]
h32	0.93***	1.21***	0.95***	1.24***	0.94***	1.25***	1.02***	[a]
h33	0.20***	0.24***	0.20***	0.24***	0.20***	0.24***	0.21***	[a]
h34	0.08***	0.07***	0.08***	0.07***	0.08***	0.07***	0.08***	[a]
h35	0.07***	0.11***	0.07***	0.11***	0.07***	0.11***	0.08***	[a]
h36	0.94***	1.14***	0.94***	1.11***	0.94***	1.14***	0.99***	[a]
hf1	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.70***	1.00[b]	0.70***
hf2	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.79***	1.00[b]	0.90***
hf3	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.59***	1.00[b]	0.55***
cov1-2	0.67***	0.78***	0.66***	0.80***	0.67***	0.56***	0.68***	0.57***
cov1-3	0.58***	0.77***	0.57***	0.82***	0.58***	0.50***	0.58***	0.51***
cov2-3	0.50***	0.92***	0.49***	0.89***	0.50***	0.60***	0.52***	0.59***
a1	0[b]	[a]	0[b]	[a]	0[b]	0.19	0[b]	0.15
a2	0[b]	[a]	0[b]	[a]	0[b]	-0.08	0[b]	-0.12

a3	0[b] [a]	0[b] [a]	0[b] 0.51***	0[b] 0.51***
χ^2 (*df*)	1277.38 (642)***	1309.62 (669)***	1345.50 (690)***	1480.77 (717)***
$\Delta\chi^2$ (Δdf)	--	32.24 (27)	--	135.28(27)***
TLI	.687	.697	.699	.663
CFI	.734	.732	.725	.680
RMSEA	.062	.061	.061	.065

Note. FESRI = Family Expectations for School Readiness Involvement. E = English FESRI. S = Spanish FESRI. k1 = factor loading between latent variable 1 (Factor 1) and corresponding item. k2 = factor loading between latent variable 2 (Factor 2) and corresponding item. k3 = factor loading between latent variable 3 (Factor 3) and corresponding item. s = item intercept for corresponding item. h = item residual for corresponding item. hf = variance of latent variable. cov = covariance between latent variables. a = latent variable mean. *df* = degrees of freedom. *TLI* = Tucker-Lewis index. *CFI* = comparative fit index. *RMSEA* = root-mean-square error of approximation.

[a] Constrained to equality with English group. [b] Fixed at presented value.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7

Non-standardized Parameter Estimates and Fit Indices for Measurement Invariance Models for Child Age Group (older n *= 200; younger* n *= 45)*

Parameter	Configural		Weak		Strong		Strict	
	O	Y	O	Y	O	Y	O	Y
k1-20	0.27***	0.26***	0.27***	[a]	0.27***	[a]	0.27***	[a]
k1-24	0.33***	0.35***	0.34***	[a]	0.35***	[a]	0.35***	[a]
k1-25	0.24***	0.28***	0.25***	[a]	0.25***	[a]	0.26***	[a]
k1-27	0.40***	0.50***	0.43***	[a]	0.43***	[a]	0.42***	[a]
k1-28	0.31***	0.55***	0.34***	[a]	0.34***	[a]	0.35***	[a]
k1-29	0.25***	0.16**	0.34***	[a]	0.24***	[a]	0.24***	[a]
k1-30	0.34***	0.17	0.32***	[a]	0.33***	[a]	0.31***	[a]
k1-31	0.30***	0.21*	0.29***	[a]	0.30***	[a]	0.29***	[a]
k1-33	0.35***	0.18*	0.32***	[a]	0.33***	[a]	0.34***	[a]
k1-34	0.22***	0.02	0.18***	[a]	0.19***	[a]	0.20***	[a]
k1-35	0.31***	0.20***	0.29***	[a]	0.30***	[a]	0.30***	[a]
k2-1	0.28***	0.20***	0.25***	[a]	0.27***	[a]	0.27***	[a]
k2-2	0.36***	0.44***	0.38***	[a]	0.39***	[a]	0.38***	[a]
k2-3	0.28***	0.17	0.27***	[a]	0.28***	[a]	0.27***	[a]
k2-4	0.25***	0.27***	0.25***	[a]	0.25***	[a]	0.25***	[a]
k2-5	0.26***	0.17***	0.25***	[a]	0.25***	[a]	0.26***	[a]
k2-6	0.30***	0.22*	0.29***	[a]	0.29***	[a]	0.30***	[a]
k2-8	0.34***	0.15	0.31***	[a]	0.32***	[a]	0.33***	[a]
k2-10	0.10***	0.09**	0.10***	[a]	0.10***	[a]	0.10***	[a]
k2-11	0.30***	0.20***	0.29***	[a]	0.30***	[a]	0.30***	[a]
k3-12	0.40***	0.09	0.37***	[a]	0.38***	[a]	0.37***	[a]
k3-15	0.57***	0.66***	0.56***	[a]	0.58***	[a]	0.58***	[a]
k3-16	0.61***	0.42*	0.59***	[a]	0.61***	[a]	0.60***	[a]
k3-17	0.60***	0.53***	0.58***	[a]	0.59***	[a]	0.59***	[a]
k3-18	0.45***	0.48***	0.45***	[a]	0.45***	[a]	0.45***	[a]
k3-32	0.47***	0.36***	0.46***	[a]	0.47***	[a]	0.47***	[a]
k3-36	0.50***	0.22***	0.46***	[a]	0.47***	[a]	0.46***	[a]
s1	3.80***	3.91***	3.80***	3.91***	3.83***	[a]	3.82***	[a]
s2	3.70***	3.76***	3.70***	3.76***	3.70***	[a]	3.70***	[a]
s3	3.75***	3.71***	3.75***	3.71***	3.74***	[a]	3.74***	[a]
s4	3.79***	3.82***	3.79***	3.82***	3.79***	[a]	3.79***	[a]
s5	3.84***	3.87***	3.84***	3.87***	3.84***	[a]	3.84***	[a]
s6	3.67***	3.60***	3.67***	3.60***	3.65***	[a]	3.65***	[a]
s8	3.68***	3.69***	3.68***	3.69***	3.67***	[a]	3.67***	[a]
s10	3.94***	3.93***	3.94***	3.93***	3.93***	[a]	3.93***	[a]
s11	3.75***	3.80***	3.75***	3.80***	3.75***	[a]	3.75***	[a]
s12	2.93***	2.73***	2.93***	2.74***	2.90***	[a]	2.90***	[a]
s15	3.13***	2.97***	3.13***	2.97***	3.12***	[a]	3.11***	[a]
s16	3.04***	2.78***	3.04***	2.78***	3.02***	[a]	3.01***	[a]
s17	3.25***	3.29***	3.25***	3.30***	3.26***	[a]	3.27***	[a]

s18	3.51***	3.56***	3.51***	3.56***	3.52***	[a]	3.52***	[a]
s20	3.76***	3.78***	3.76***	3.78***	3.75***	[a]	3.76***	[a]
s24	3.61***	3.60***	3.61***	3.60***	3.60***	[a]	3.60***	[a]
s25	3.85***	3.82***	3.85***	3.82***	3.84***	[a]	3.84***	[a]
s27	3.62***	3.71***	3.62***	3.71***	3.63***	[a]	3.63***	[a]
s28	3.78***	3.67***	3.78***	3.67***	3.76***	[a]	3.75***	[a]
s29	3.85***	3.87***	3.85***	3.87***	3.84***	[a]	3.85***	[a]
s30	3.73***	3.67***	3.73***	3.67***	3.72***	[a]	3.71***	[a]
s31	3.63***	3.62***	3.63***	3.62***	3.62***	[a]	3.62***	[a]
s32	2.74***	2.62***	2.74***	2.62***	2.72***	[a]	2.72***	[a]
s33	3.71***	3.78***	3.71***	3.78***	3.72***	[a]	3.72***	[a]
s34	3.85***	3.96***	3.85***	3.96***	3.87***	[a]	3.86***	[a]
s35	3.81***	3.93***	3.81***	3.92***	3.82***	[a]	3.83***	[a]
s36	2.35***	2.42***	2.35***	2.42***	2.37***	[a]	2.37***	[a]
h1	0.13***	0.04***	0.14***	0.04***	0.13***	0.04***	0.12***	[a]
h2	0.20***	0.78**	0.19***	0.11***	0.19***	0.12***	0.18***	[a]
h3	0.16***	0.49***	0.16***	0.50***	0.16***	0.50***	0.22***	[a]
h4	0.17***	0.16***	0.17***	0.18***	0.17***	0.18***	0.17***	[a]
h5	0.09***	0.09***	0.09***	0.08***	0.09***	0.08***	0.09***	[a]
h6	0.26***	0.41***	0.26***	0.40***	0.27***	0.41***	0.29***	[a]
h8	0.25***	0.33***	0.26***	0.33***	0.26***	0.33***	0.26***	[a]
h10	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	[a]
h11	0.15***	0.12***	0.15***	0.11***	0.15***	0.11***	0.14***	[a]
h12	0.82***	1.10***	0.82***	1.01***	0.82***	1.08***	0.88***	[a]
h15	0.42***	0.53***	0.42***	0.63***	0.42***	0.65***	0.46***	[a]
h16	0.60***	0.98***	0.60***	0.88***	0.60***	0.92***	0.66***	[a]
h17	0.28***	0.38***	0.28***	0.38***	0.28***	0.39***	0.30***	[a]
h18	0.26***	0.25**	0.25***	0.31***	0.26***	0.32***	0.26***	[a]
h20	0.13***	0.15***	0.13***	0.15***	0.13***	0.15***	0.14***	[a]
h24	0.26***	0.30***	0.26***	0.29***	0.26***	0.30***	0.26***	[a]
h25	0.09***	0.16***	0.09***	0.16***	0.09***	0.16***	0.10***	[a]
h27	0.20***	0.05**	0.19***	0.10***	0.19***	0.11***	0.18***	[a]
h28	0.12***	0.05*	0.12***	0.16***	0.12***	0.19***	0.13***	[a]
h29	0.08***	0.09***	0.08***	0.10***	0.08***	0.10***	0.08***	[a]
h30	0.14***	0.51***	0.14***	0.51***	0.14***	0.52***	0.21***	[a]
h31	0.24***	0.41***	0.24***	0.42***	0.24***	0.42***	0.28***	[a]
h32	0.99***	1.17***	1.00***	1.10***	0.99***	1.11***	1.01***	[a]
h33	0.22***	0.19***	0.23***	0.18***	0.22***	0.18***	0.22***	[a]
h34	0.08***	0.04***	0.09***	0.05***	0.09***	0.05***	0.08***	[a]
h35	0.08***	0.07***	0.08***	0.07***	0.08***	0.07***	0.08***	[a]
h36	0.92***	1.08***	0.93***	1.06***	0.93***	1.07***	0.96***	[a]
hf1	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.71***	1.00[b]	0.80***
hf2	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.67***	1.00[b]	0.66**
hf3	1.00[b]	[a]	1.00[b]	[a]	1.00[b]	0.76**	1.00[b]	0.86**
cov1-2	0.66***	0.69***	0.65***	0.86***	0.66***	0.58***	0.66***	0.56***
cov1-3	0.63***	0.36*	0.62***	0.52***	0.63***	0.35*	0.64***	0.38*
cov2-3	0.57***	0.39*	0.57***	0.45**	0.58***	0.28	0.58***	0.24
a1	0[b]	[a]	0[b]	[a]	0[b]	0.15	0[b]	0.09
a2	0[b]	[a]	0[b]	[a]	0[b]	0.17	0[b]	0.11

a3	0[b] [a]	0[b] [a]	0[b] -0.09	0[b] -0.09
χ^2 (*df*)	1182.62 (642)***	1252.18 (669)***	1276.55 (690)***	1395.63 (717)***
$\Delta\chi^2$ (Δdf)	--	69.55 (27)***	--	119.09 (27)***
TLI	.711	.701	.709	.676
CFI	.755	.736	.734	.692
RMSEA	.059	.060	.059	.062

Note. FESRI = Family Expectations for School Readiness Involvement. O = older child group. Y = younger child group. k1 = factor loading between latent variable 1 (Factor 1) and corresponding item. k2 = factor loading between latent variable 2 (Factor 2) and corresponding item. k3 = factor loading between latent variable 3 (Factor 3) and corresponding item. s = item intercept for corresponding item. h = item residual for corresponding item. hf = variance of latent variable. cov = covariance between latent variables. a = latent variable mean. *df* = degrees of freedom. *TLI* = Tucker-Lewis index. *CFI* = comparative fit index. *RMSEA* = root-mean-square error of approximation.

[a] Constrained to equality with older child group. [b] Fixed at presented value.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Demographic Associations with FESRI Dimensions

	Relationships	Parent as Teacher	Preparing for Kindergarten
Parent-level variables			
Gender[a]	-.01	-.02	-.03
Age[b]	.07	.11	.06
Born in US[a]	.05	-.14	.19**
Years in US[b]	-.30**	-.05	-.20*
Primary language[c]	.06	.21*	.21*
Race/ethnicity[c]	.10	.16	.22
Country of origin[c]	.12	.15	.21
Education completed[c]	.18	.23	.13
Attended school in US[a]	.11	-.05	.18**
Employment status[c]	.21*	.14	.15
Income range[c]	.15	.20	.16
Marital status[c]	.13	.10	.09
Relationship to child[c]	.07	.06	.06
Child-level variables			
Gender[a]	.03	-.06	-.05
Age[b]	.05	-.08	.05
Born in US[a]	.13*	-.04	.12*
Primary language[c]	.13	.13	.27**
Race/ethnicity[c]	.12	.19	.23*
Attended EHS[a]	-.05	-.01	-.09
First year in HS[a]	.07	.08	.17**
Current IEP[a]	-.04	-.03	-.05
Number of special education services[b]	.07	.04	.03
Number of older siblings[b]	-.02	.07	-.02
Family type	.11	.14	.12
Contact with future elementary school			
For another child[a]	-.01	-.11	-.05
Received written information[a]	-.04	-.07	-.14*
Kindergarten registration[a]	.10	.09	-.05
Visited kindergarten or school[a]	.02	-.00	-.14*
Other ways[a]	-.10	-.12	.06
Multiple contact types[b]	.00	.09	.12

Note. FESRI = Family Expectations for School Readiness Involvement. EHS = Early Head Start. HS = Head Start. IEP = individualized education plan.

[a] Association reported is point-biserial correlation (r_{pb}). [b] Association reported is Pearson correlation (r). [c] Association reported is eta (η).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9

*Non-standardized (Standardized) Parameter Estimates for Hypothesized Model (*N = *265)*

	Family involvement beliefs [LV]		Family involvement behaviors [LV]	
Indicator variables				
FESRI Relationships	2.95***	(.80)		
FESRI Parent as Teacher	1.71***	(.63)		
FESRI Preparing for Kindergarten	2.45***	(.56)		
FIQ School-based Involvement			5.56***	(.72)
FIQ Home-based Involvement			3.13***	(.56)
FIQ Home-school Communication			6.47***	(.87)
Residuals				
FESRI Relationships	4.88***			
FESRI Parent as Teacher	4.35***			
FESRI Preparing for Kindergarten	13.34***			
FIQ School-based Involvement			28.70***	
FIQ Home-based Involvement			21.71***	
FIQ Home-school Communication			13.93**	
Co-variance				
Family involvement behaviors [LV]	0.35***			

Note. LV = latent variable. FESRI = Family Expectations for School Readiness Involvement. FIQ = Family Involvement Questionnaire.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10

*Non-standardized (Standardized) Parameter Estimates for Modified Model (*N = *265)*

	Family involvement beliefs [LV]		Family involvement behaviors [LV]	
Indicator variables				
FESRI Relationships	2.86***	(.76)		
FESRI Parent as Teacher	1.54***	(.59)		
FESRI Preparing for Kindergarten	2.55***	(.58)		
FIQ School-based Involvement			5.55***	(.72)
FIQ Home-based Involvement			3.15***	(.56)
FIQ Home-school Communication			6.53***	(.87)
Residuals				
FESRI Relationships	5.42***			
FESRI Parent as Teacher	4.55***			
FESRI Preparing for Kindergarten	12.86***			
FIQ School-based Involvement			28.88***	
FIQ Home-based Involvement			21.92***	
FIQ Home-school Communication			13.16**	
Co-variances	Family involvement beliefs [LV]		FESRI Parent as Teacher Residual	
Family involvement behaviors [LV]	0.35***			
FIQ Home-school Communication Residual			3.33***	

Note. LV = latent variable. FESRI = Family Expectations for School Readiness Involvement. FIQ = Family Involvement Questionnaire.
* $p < .05$. ** $p < .01$. *** $p < .001$.

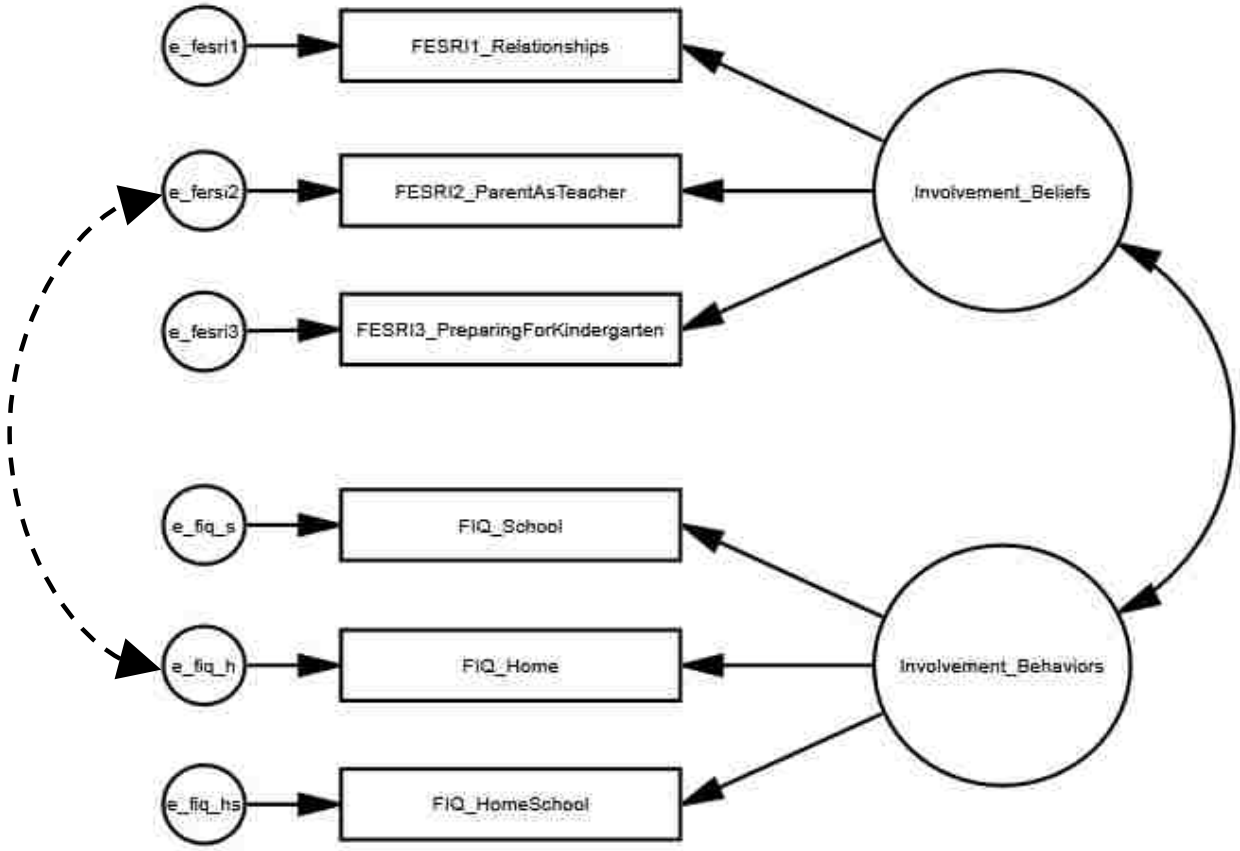


Figure 1. Model of family involvement beliefs and behaviors. FESRI = Family Expectations for School Readiness Involvement. FIQ = Family Involvement Questionnaire. Dashed path represents modification to the hypothesized model specification.

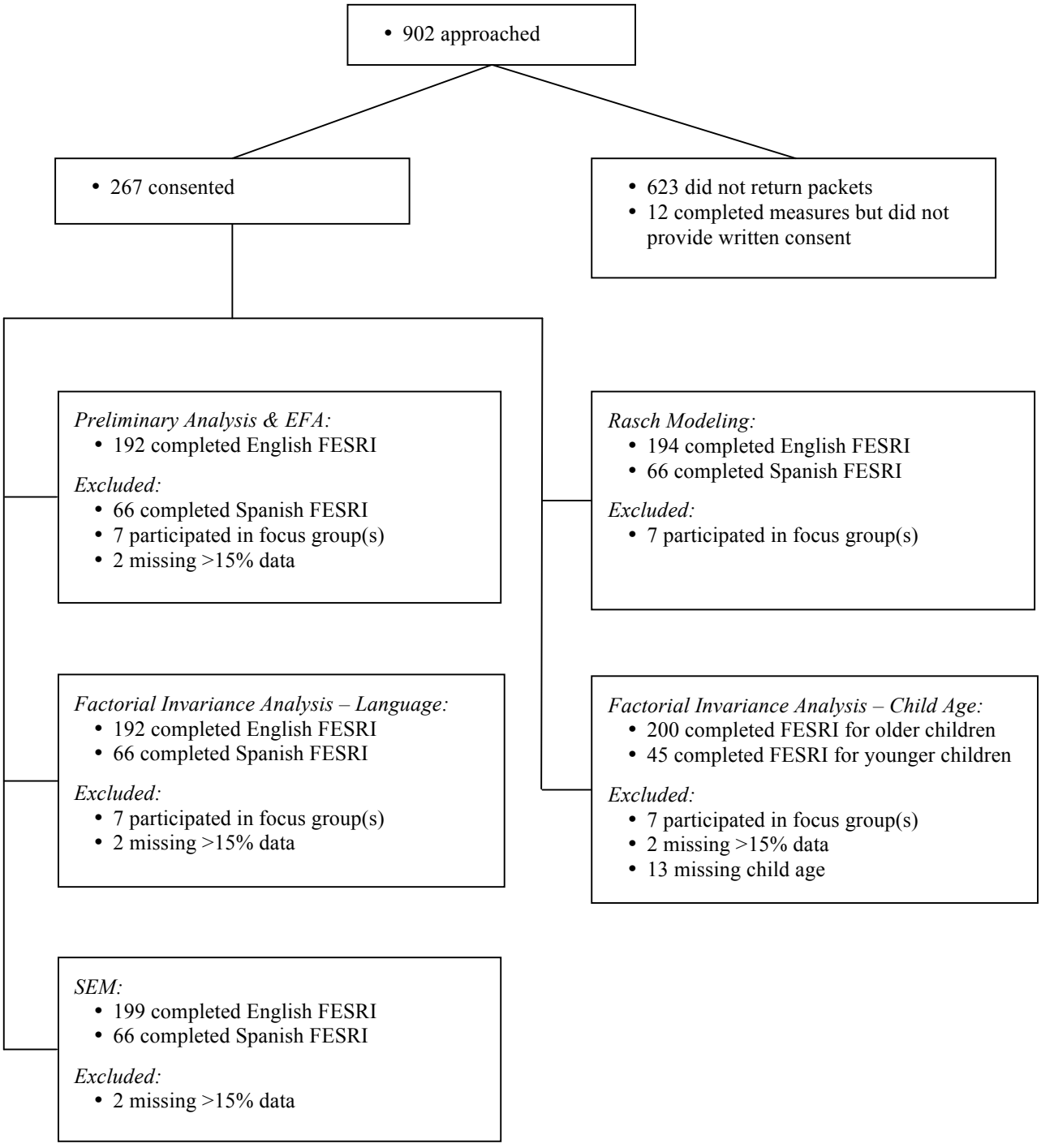
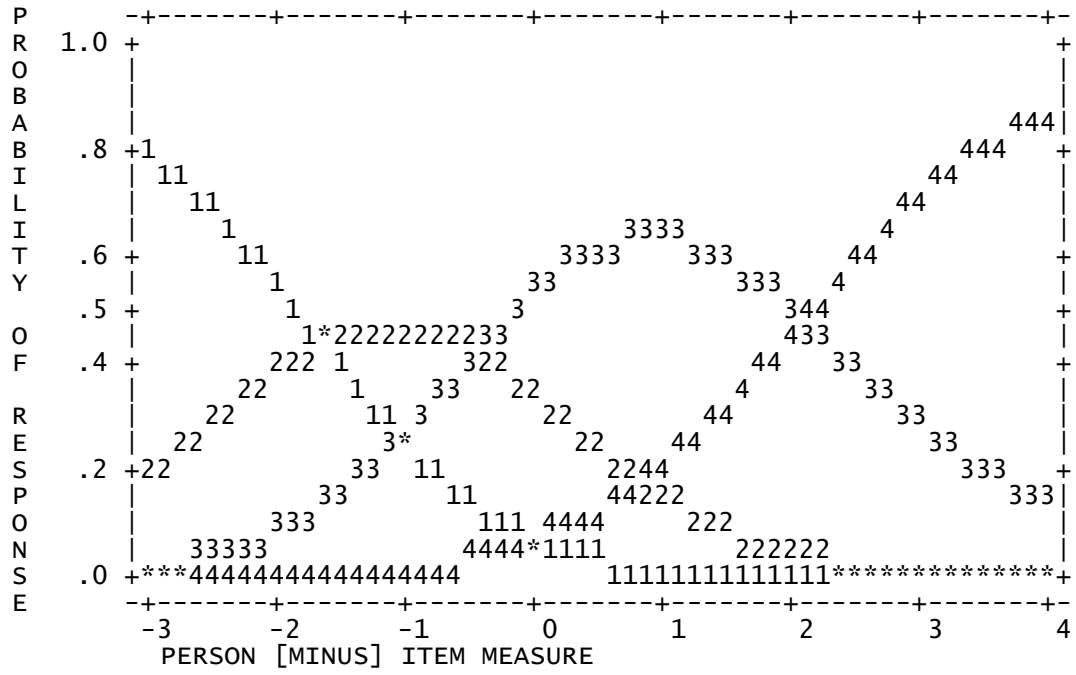


Figure 2. Participant flow chart throughout field test. EFA = exploratory factor analysis. FESRI = Family Expectations for School Readiness Involvement. SEM = structural equation modeling.

a.



b.

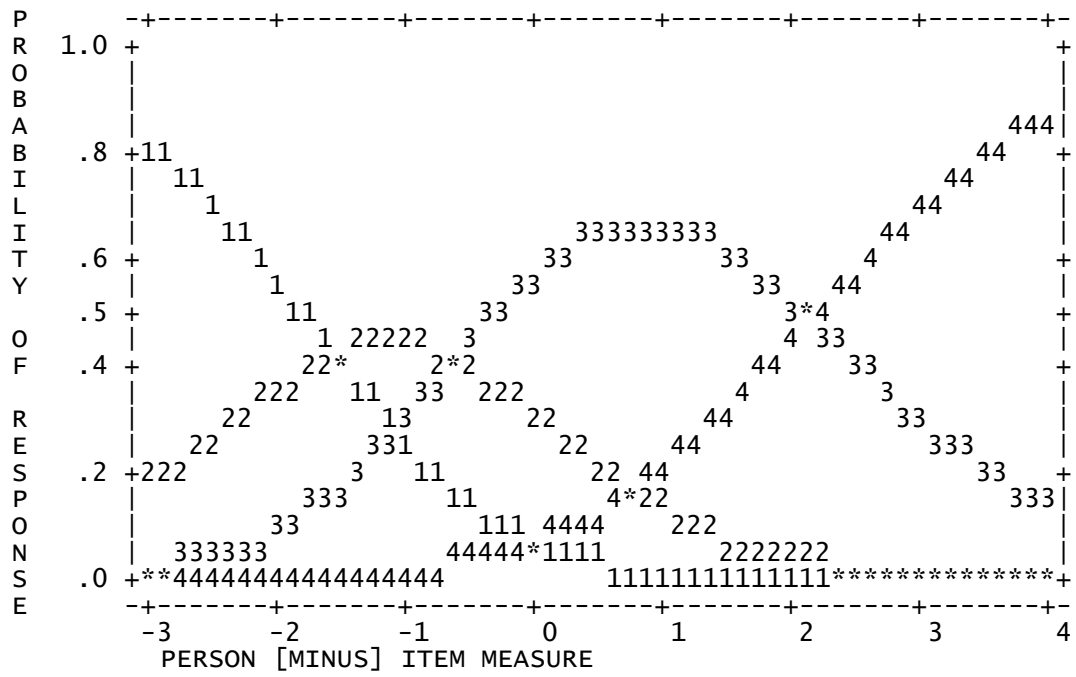
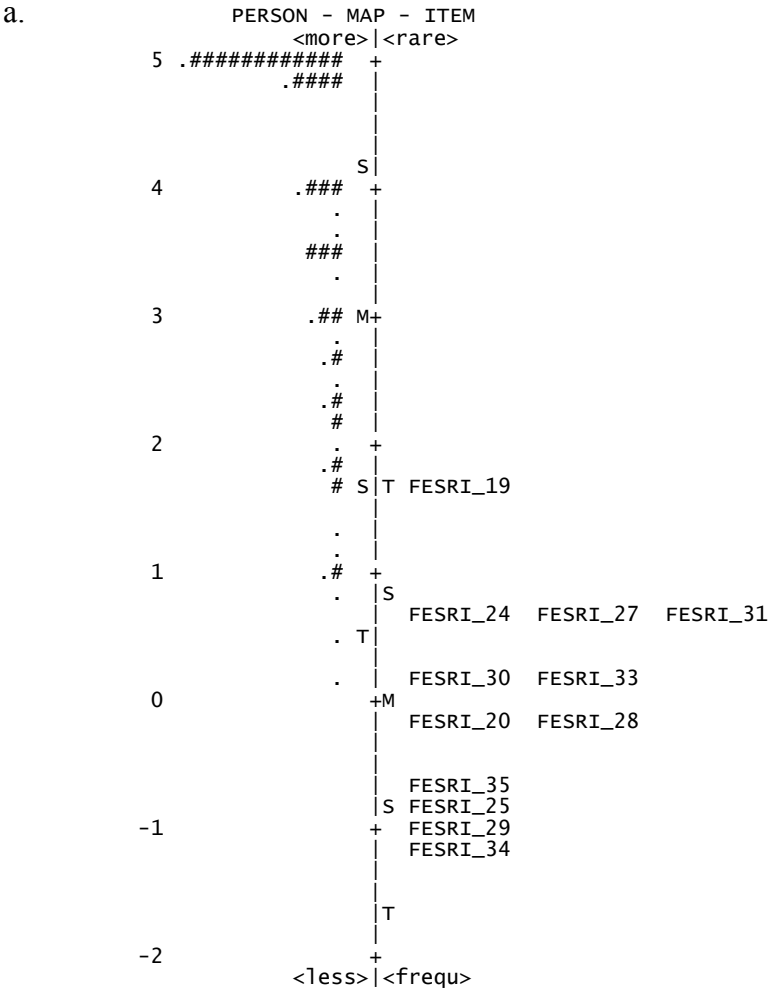


Figure 3. Rating category probability curve for FESRI Factor 1, all items (a) and with Item 19 removed (b). This figure demonstrates the probability of selecting each response option according to person ability.

a.



b.

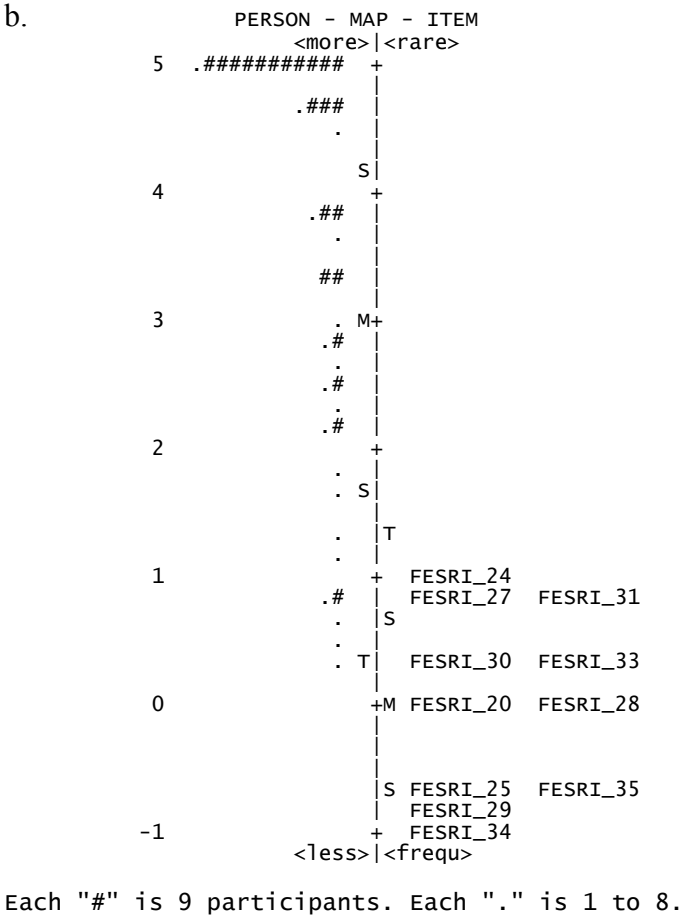
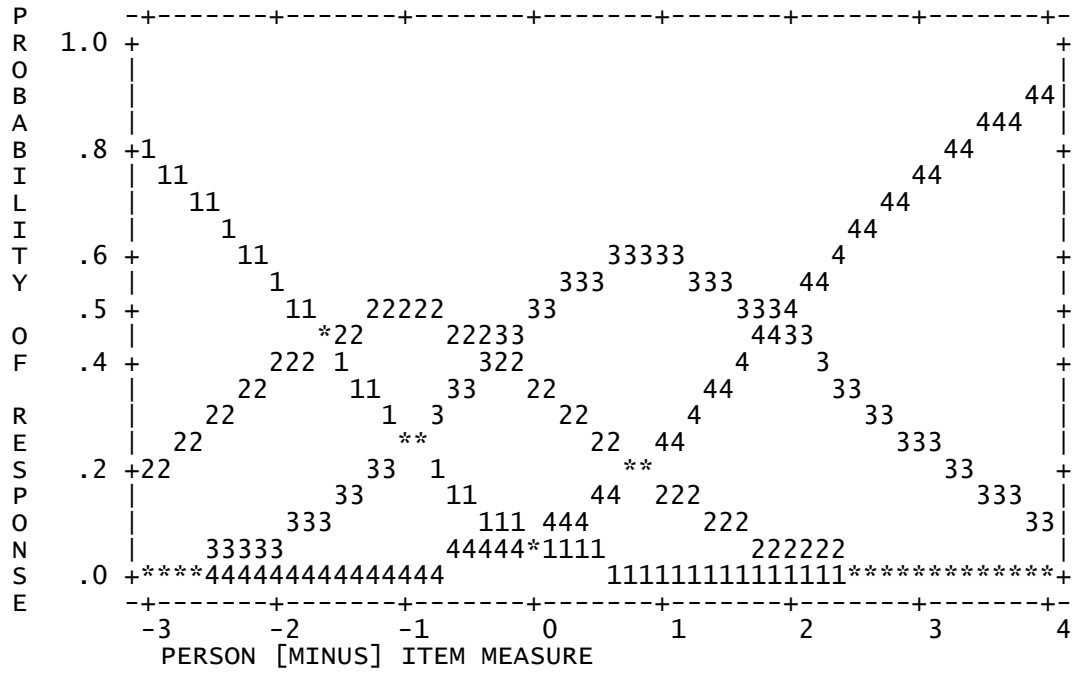


Figure 4. Item map for FESRI Factor 1, all items (a) and with Item 19 removed (b). This figure illustrates the relationship of item difficulty to person ability.

a.



b.

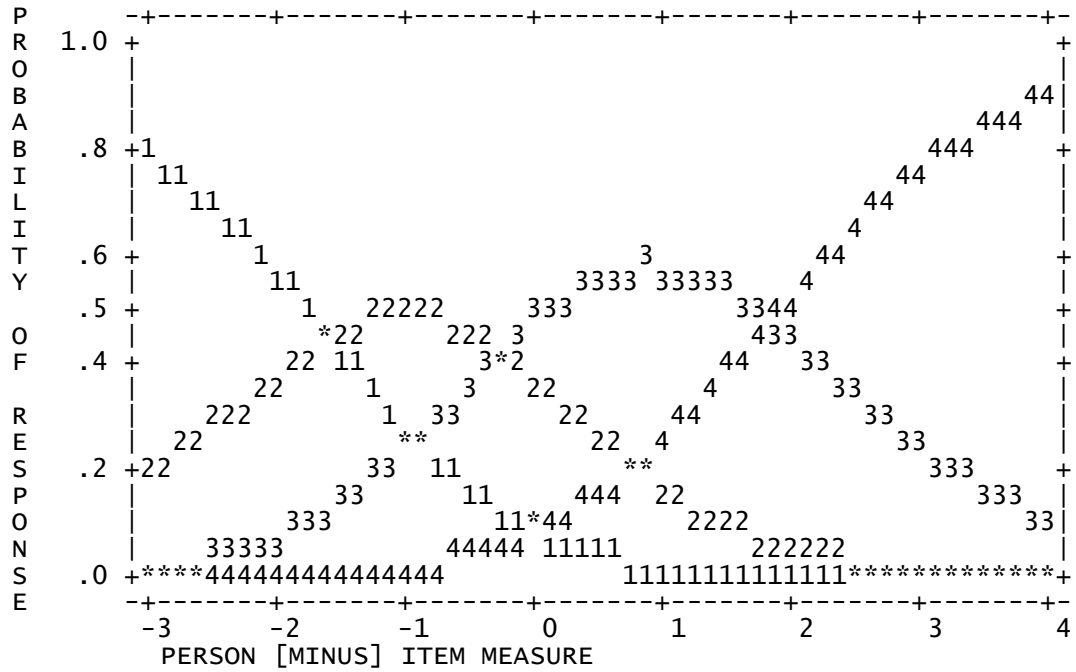
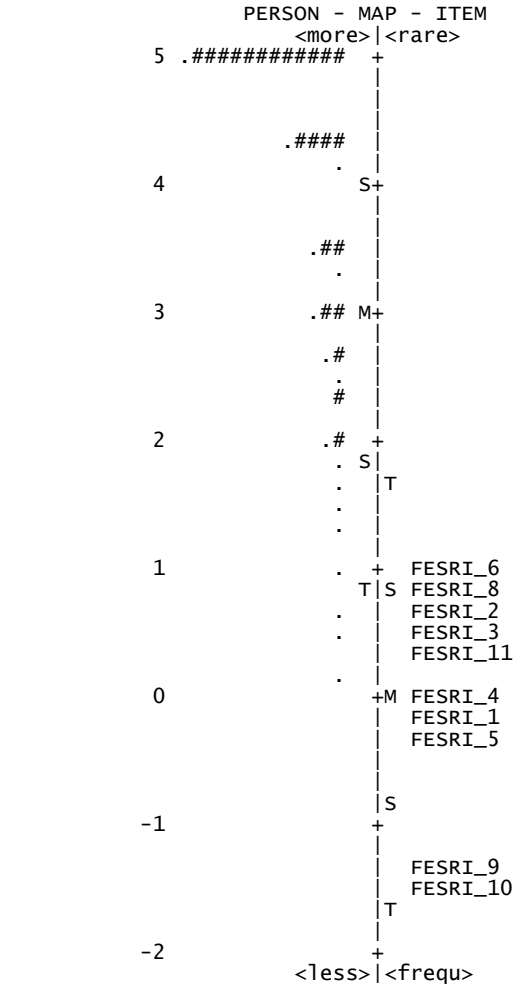


Figure 5. Rating category probability curve for FESRI Factor 2, all items (a) and with Item 9 removed (b). This figure demonstrates the probability of selecting each response option according to person ability.

a.



b.

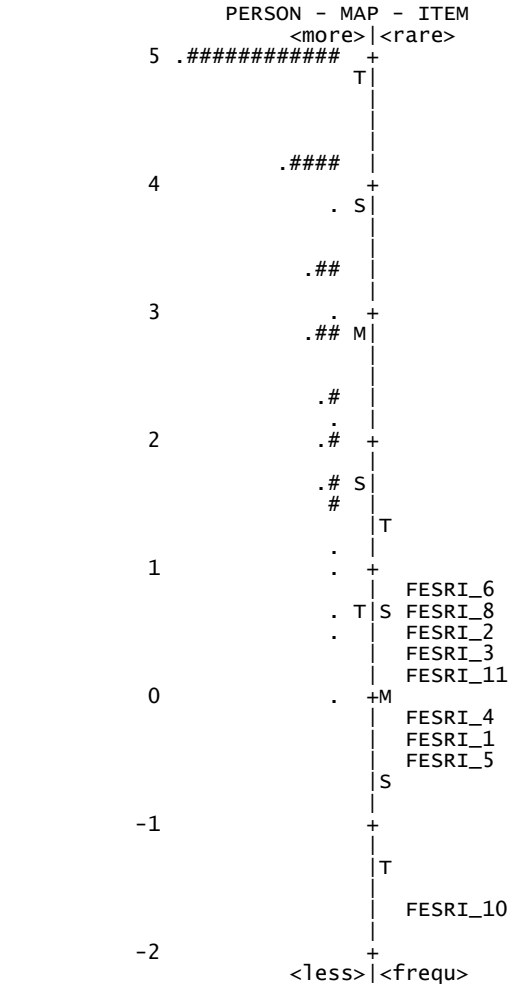


Figure 6. Item map for FESRI Factor 2, all items (a) and with Item 9 removed (b). This figure illustrates the relationship of item difficulty to person ability.

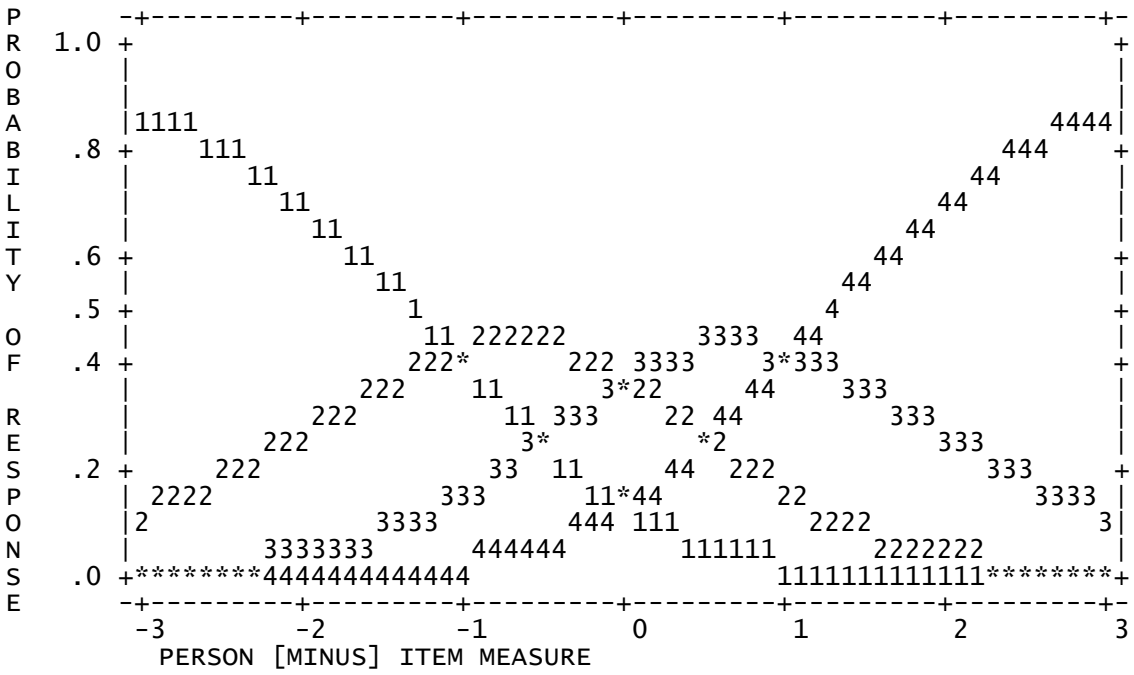
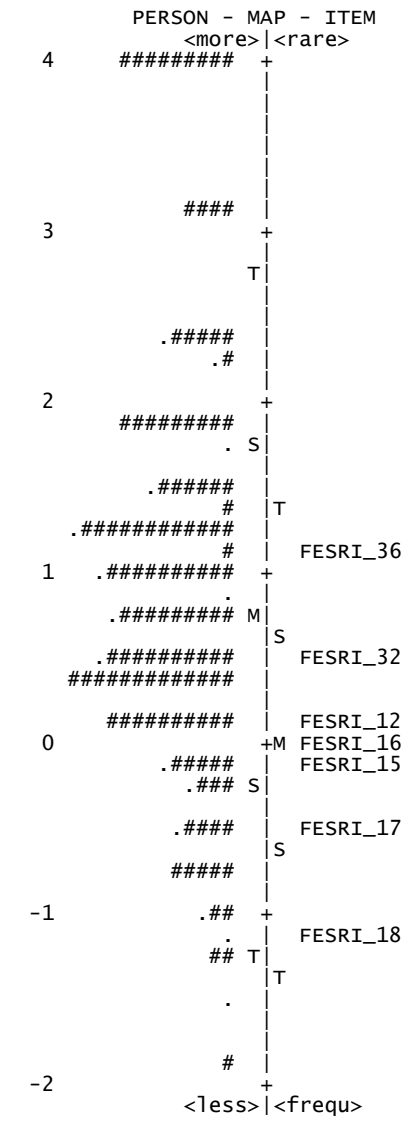


Figure 7. Rating category probability curve for FESRI Factor 3. This figure demonstrates the probability of selecting each response option according to person ability.



Each "#" is 2 participants. Each "." is 1.

Figure 8. Item map for FESRI Factor 3. This figure illustrates the relationship of item difficulty to person ability.

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Appendix A

Demographic Form – English

About your child:

Child's Date of Birth: _____ **Gender (check one):** ☐ Male ☐ Female

Is this your child's first year in Head Start? ☐ Yes ☐ No

Did your child participate in Early Head Start? ☐ Yes ☐ No

<u>Your</u> Relationship to This Child:

☐ Mother ☐ Grandparent ☐ Foster Parent

☐ Father ☐ Aunt or Uncle ☐ Other Relative

☐ Other. Please specify: _____

Child's Race / Ethnicity (check all that apply):

☐ Spanish / Hispanic / Latino ☐ Black / African American ☐ Asian

☐ White / Caucasian ☐ Native American, American Indian, or Alaskan Native

☐ Other. Please specify: _____

Child's Primary Language (check all that apply):

☐ Spanish ☐ English ☐ Other. Please specify: _____

Was your child born in the United States? ☐ Yes ☐ No

If no: How many years has he/she lived here? _____

What country was he/she born in? _____

Does your child have a current IEP? ☐ Yes ☐ No

If yes, which Early Intervention / IU services is your child is receiving (check all that apply)?

☐ Speech ☐ Language ☐ Hearing ☐ Development ☐ Vision

☐ Occupational / Physical Therapy ☐ Other. Please Specify: _____

Does your child have any siblings? ☐ No ☐ Yes *If yes, how many?* _____

Please provide siblings' ages _____

Family Type: ☐ Two Parents ☐ One Parent ☐ Relative / Grandparent ☐ Foster

☐ Other. Please specify: _____

Please continue on next page.

About you:

Your Date of Birth: _____ **Your Gender:** ☐ Male ☐ Female

Have you had contact with your child's future elementary school (check all that apply)?

☐ Yes, for another child
☐ Yes, kindergarten registration
☐ Yes, received written information
☐ Yes, visited kindergarten classroom or elementary school
☐ Yes, other. Please specify: _____
☐ No, not yet

Do you have <u>another</u> child currently enrolled in:

Early Head Start	☐ Yes	☐ No	Other Preschool	☐ Yes	☐ No
Head Start	☐ Yes	☐ No	Other Child Care (not school)	☐ Yes	☐ No

Your Race / Ethnicity (check all that apply):

☐ Spanish / Hispanic / Latino
☐ Black / African American
☐ Asian
☐ White / Caucasian
☐ Native American, American Indian, or Alaskan Native
☐ Other. Please specify: _____

Where is your family from? ☐ Puerto Rico ☐ Dominican Republic ☐ Mexico
☐ Other. Please specify: _____

Your Primary Language (check all that apply):

☐ Spanish ☐ English ☐ Other. Please specify: _____

Were you born in the United States? ☐ Yes ☐ No
How many years have you lived in the US? _____

Did you attend school in the US? ☐ Yes ☐ No **How many years?** _____

Marital Status: ☐ Married ☐ Never married ☐ Separated / Divorced ☐ Widowed

Number of years of school completed (check one):

☐ Less than 9th grade
☐ High school diploma
☐ Some college
☐ Technical school
☐ Some high school
☐ Earned GED
☐ Associate's
☐ Bachelor's or higher

Employment Status (check one): ☐ Full Time ☐ Part Time ☐ Unemployed

Please check the annual income range for the family:

☐ Under $10,000
☐ $10,001 - $15,000
☐ $15,001 - $20,000
☐ $20,001 - $25,000
☐ $25,001 - $30,000
☐ $30,001 - $35,000
☐ $35,001 - $40,000
☐ Over $40,001

Thank you!

Appendix B

Demographic Form – Spanish

Sobre su niño:

Fecha de Nacimiento del Niño: _____/_____/_____ **Sexo:** ☐Varón ☐Hembra

¿Es este año el primer año que su niño está en Head Start? ☐Sí ☐No

¿Participó su niño en Early Head Start? ☐Sí ☐No

<u>Su</u> relación con el niño:

☐Madre ☐Abuelo/Abuela ☐Padre/Madre de acogida
☐Padre ☐Tío/Tía ☐Otro pariente
☐Otro (Especifique por favor) _____

Raza/ Etnicidad del Niño (Escoja todos los que aplican):

☐Español/Hispano/Latino ☐Afro Americano ☐Asiático
☐Blanco ☐Nativo Americano/Nativo de Alaska
☐Otro (Especifique por favor) _____

Idioma primario del niño (Escoja todos los que aplican):

☐Español ☐Inglés ☐Otro (Especifique por favor) _____

¿Nació su niño en los Estados Unidos? ☐Sí ☐No

Si su respuesta es no: ¿Por cuántos años ha vivido su niño aquí? _____
¿En cuál país nació? _____

¿Tiene su niño un IEP actual? ☐Sí ☐No
Si su respuesta es sí, ¿cuales servicios de intervención / servicios de IU recibe su niño? (Escoja todos los que aplican)

☐Lenguaje ☐Idioma ☐Oído ☐Desarrollo ☐Visión
☐Terapia ocupacional / Terapia físico ☐Otro (Especifique por favor) _____

¿Tiene su niño hermanos o hermanas? ☐Sí ☐No
Si su respuesta es sí, ¿cuántos? _____
Las edades de los hermanos _____

Tipo de familia: ☐Dos padres ☐Un padre ☐Abuelo(a)/Pariente ☐Padres de acogida
☐Otro (Especifique por favor) _____

Continúe en la paginación siguiente, por favor.

Sobre Ud.:

Fecha de Nacimiento: _____/_____/_____ **Sexo:** ☐ Varón ☐ Hembra

¿Ha tenido contacto con la escuela futura de su niño? (Escoja todos los que aplican)

☐ Sí, para otro niño ☐ Sí, durante la inscripción de jardín de infancia (kindergarten)
☐ Sí, he recibido información escrito ☐ Sí, he visitado el aula o la escuela
☐ Sí, otro (Especifique por favor): _____
☐ Todavía no

¿Tiene Ud. <u>otro</u> niño matriculado actualmente en:

Early Head Start ☐Sí ☐No Otro guardería ☐Sí ☐No
Head Start ☐Sí ☐No Otro guardería (No escuela) ☐Sí ☐No

Su raza/etnicidad (Escoja todos los que aplican):

☐ Español/Hispano/Latino ☐ Afro Americano ☐ Asiático
☐ Blanco ☐ Nativo Americano/Nativo de Alaska
☐ Otro (Especifique por favor) _____

¿De dónde es su familia? ☐ Puerto Rico ☐ La Republica Dominicana ☐ México
☐ Otro (Especifique por favor) _____

Su Idioma Primario (Escoja todos los que aplican):

☐Español ☐Inglés ☐Otro (Especifique por favor) _____

¿Nació Ud. en los Estados Unidos? ☐Sí ☐No
¿Por cuántos años ha vivido en los Estados Unidos? _____
¿Asistió a la escuela en los Estados Unidos? ☐Sí ☐No *¿Cuántos años?* _____

Estado Civil: ☐Casado ☐Nunca Casado ☐Separado/Divorciado ☐Enviudado

Años de escuela completado (Escoja uno):

☐Menos de grado 9 ☐Bachillerato ☐Algún universidad ☐Escuela técnica
☐Algún escuela secundario ☐Gané un GED ☐Diplomado ☐Licenciatura o más

Estatus de empleo (Escoja uno): ☐Tiempo completo ☐Tiempo parcial ☐Desempleado

Escoja el ingreso anual de su familia:

☐Menos que $10,000 ☐$15,001 - $20,000 ☐$25,001 - $30,000 ☐$35,001 - $40,000
☐$10,001 - $15,000 ☐$20,001 - $25,000 ☐$30,001 - $35,000 ☐Más que $40,001

¡Gracias!

Appendix C

Family Expectations for School Readiness Involvement (FESRI) – English

Going to Kindergarten

Below are ideas that parents may have as their preschool (Head Start) children get ready for kindergarten. How much do *you* agree with each of these ideas? Please circle the letter that shows how much you agree.

		Do not agree	Agree a little	Agree a lot	Strongly agree
1.	Parents can teach their children about things like letters and counting.	A	A	A	A
2.	Parents can teach their children about making friends.	A	A	A	A
3.	Parents need to talk to their children about standing up for themselves.	A	A	A	A
4.	Parents teach their children about their culture or language.	A	A	A	A
5.	Asking children questions helps their minds to grow and think better.	A	A	A	A
6.	Children learn by trying some things on their own.	A	A	A	A
7.	Parents can use information from their children's preschool to figure out how to get ready for kindergarten.	A	A	A	A
8.	Parents can teach their children important things that are not taught in school.	A	A	A	A
9.	Parents can teach their children about things like asking permission and having respect.	A	A	A	A
10.	Parents need to teach their children about safety topics like strangers, seatbelts, and fire safety.	A	A	A	A
11.	Parents can use their children's interests to teach them.	A	A	A	A
12.	Kindergarten is more structured than preschool.	A	A	A	A
13.	Parents and children should talk with each other about how school is going.	A	A	A	A
14.	Parents know or can figure out what works to help their children succeed in kindergarten.	A	A	A	A
15.	It is easy for parents to help their children start kindergarten.	A	A	A	A
16.	Parents need to do different things to help their children in kindergarten than in preschool.	A	A	A	A
17.	Parents know or can figure out how to get answers to their questions about kindergarten.	A	A	A	A
18.	Information from their children's future elementary school helps parents to figure out how to get ready for kindergarten.	A	A	A	A

		Do not agree	Agree a little	Agree a lot	Strongly agree
19.	Talking to someone can help parents feel better about their children starting kindergarten.	A	A	A	A
20.	Parents and their children's kindergarten teacher should talk with each other about their children's strengths and interests.	A	A	A	A
21.	Children succeed better in school if their parents and kindergarten teacher work together as a team.	A	A	A	A
22.	Children's education starts at home with their family.	A	A	A	A
23.	Parents and their children's kindergarten teacher should talk with each other about their children's challenges.	A	A	A	A
24.	It is helpful for kindergarten teachers to know about what parents do at home to help their children learn.	A	A	A	A
25.	Parents need to talk to their children about responsibility.	A	A	A	A
26.	It is okay to ask to talk to the kindergarten teacher, even if it is not parent conference time.	A	A	A	A
27.	Parents need to talk to their children about how kindergarten will be different from preschool.	A	A	A	A
28.	A good relationship between parents and the kindergarten teacher is important for children's learning.	A	A	A	A
29.	Making routines like for bedtime and homework will help children to succeed in kindergarten.	A	A	A	A
30.	Parents can help their children if they are nervous about starting kindergarten.	A	A	A	A
31.	If parents have questions about their children starting kindergarten, they should ask teachers first.	A	A	A	A
32.	Children's safety in kindergarten worries parents more than in preschool.	A	A	A	A
33.	Children do better in school if they know that their family cares about them.	A	A	A	A
34.	Parents are their children's most important teacher as they grow and learn.	A	A	A	A
35.	It is important for parents to talk to their children about feelings.	A	A	A	A
36.	If parents have questions about their children starting kindergarten, they should ask other parents first.	A	A	A	A

Appendix D

Family Expectations for School Readiness Involvement (FESRI) – Spanish

Ir al Kindergarten

A continuación se presentan algunas ideas que los padres pueden tener como los niños del programa preescolar (de Head Start) se preparan para el kindergarten. ¿Cuál es *su* grado de acuerdo con cada una de estas ideas? Por favor, rodee la letra que se muestra cuánto está de acuerdo.

	No de acuerdo	De acuerdo un poco	De acuerdo mucho	Totalmente de acuerdo
1. Los padres pueden enseñar a sus hijos acerca de cosas como, por ejemplo, las letras del alfabeto y contar numerous.	A	A	A	A
2. Los padres pueden enseñar a sus hijos acerca de cómo hacer amigos.	A	A	A	A
3. Los padres necesitan hablar con sus hijos acerca de cómo defenderse a sí mismos.	A	A	A	A
4. Los padres enseñan a sus hijos acerca de su cultura y su lengua.	A	A	A	A
5. Hacer preguntas a los niños ayuda a que sus mentes crezcan y piensan mejor.	A	A	A	A
6. Los niños aprenden por tratar algunas cosas solos.	A	A	A	A
7. Los padres pueden usar la información del programa preescolar de los niños para aprender cómo prepararse para el kindergarten.	A	A	A	A
8. Los padres pueden enseñar a sus hijos cosas importantes que no enseña en la escuela.	A	A	A	A
9. Los padres pueden enseñar a sus hijos acerca de cosas como pedir permiso y respeto.	A	A	A	A
10. Los padres necesitan enseñar a sus hijos sobre temas relacionados con la seguridad; por ejemplo, extraños, cinturones de seguridad, y la seguridad contra incendios.	A	A	A	A
11. Los padres pueden utilizar los intereses de sus hijos para enseñarles.	A	A	A	A
12. Kindergarten es más estructurado que el programa preescolar.	A	A	A	A
13. Los padres y los hijos deben hablar juntos acerca de cómo los hijos están haciendo en la escuela.	A	A	A	A
14. Los padres saben o pueden aprender qué es lo que ayuda a sus hijos a tener éxito en el kindergarten.	A	A	A	A
15. Es fácil para los padres para ayudar a sus hijos a empezar el kindergarten.	A	A	A	A
16. Los padres tienen que hacer cosas diferentes para ayudar a sus hijos en el kindergarten en comparación al programa preescolar.	A	A	A	A
17. Los padres saben o pueden aprender cómo obtener respuestas a sus preguntas sobre el kindergarten.	A	A	A	A
18. Información de la escuela primaria de sus hijos ayudan a los padres a aprender cómo prepararse para el kindergarten.	A	A	A	A

	No de acuerdo	De acuerdo un poco	De acuerdo mucho	Totalmente de acuerdo
19. Hablando con otra persona puede ayudar a los padres se sienten mejor acerca de sus hijos comenzar el kindergarten.	A	A	A	A
20. Los padres y el maestro del kindergarten deben hablar juntos acerca de los puntos fuertes y intereses de los hijos.	A	A	A	A
21. Los niños obtienen más éxito en la escuela si sus padres y su maestro del kindergarten trabajan juntos como un equipo.	A	A	A	A
22. La educación de los niños comienza en casa con su familia.	A	A	A	A
23. Los padres y el maestro del kindergarten deben hablar juntos acerca de las dificultades de los hijos.	A	A	A	A
24. Es útil para los maestros del kindergarten a conocer lo que los padres hacen en casa para ayudar a sus hijos a aprender.	A	A	A	A
25. Los padres necesitan hablar con sus hijos acerca de la responsabilidad.	A	A	A	A
26. Está bien pedir hablar con el maestro de kindergarten, aunque no es tiempo de conferencia con los padres.	A	A	A	A
27. Los padres necesitan hablar con sus hijos acerca de cómo kindergarten será diferente desde el programa preescolar.	A	A	A	A
28. Una buena relación entre los padres y el maestro del kindergarten es importante para la educación de los niños.	A	A	A	A
29. Las rutinas, por ejemplo para la hora de dormir y deberes, ayudan a los niños a tener éxito en el kindergarten.	A	A	A	A
30. Los padres pueden ayudar a sus hijos si están nerviosos por comenzar el kindergarten.	A	A	A	A
31. Si los padres tienen preguntas sobre el inicio del kindergarten de sus hijos, deben preguntar a los maestros primero.	A	A	A	A
32. La seguridad de los niños preocupa a los padres más en el kindergarten que en el programa preescolar.	A	A	A	A
33. Los niños hacen mejor en la escuela si saben que su familia se preocupa por ellos.	A	A	A	A
34. Los padres son los maestros más importantes por sus hijos como sus hijos crecen y aprenden.	A	A	A	A
35. Es importante que los padres hablan a sus hijos sobre sus emociones.	A	A	A	A
36. Si los padres tienen preguntas sobre el inicio del kindergarten de sus hijos, deben preguntar a otros padres primero.	A	A	A	A

Vanessa J. Pressimone

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Education

Expected 8/2014 **PhD, School Psychology**
Specialization: Pediatric School Psychology
Pediatric School Psychology Leadership Endorsement
Lehigh University, Bethlehem, PA
APA-accredited and NASP-approved program
Dissertation: Head Start Families' School Readiness Beliefs and Transitioning Roles
Committee: Patricia H. Manz, PhD (chair), Robin Hojnoski, PhD, Christine M. McWayne, PhD, & L. Brook Sawyer, PhD

9/2010 **MEd, Human Development**
Lehigh University, Bethlehem, PA
Qualifying Project: Caregiver-Reports and Direct Observations of Language Interactions in the Latino, Bilingual Home
Committee: Patricia H. Manz, PhD (chair), Ageliki Nicolopoulou, PhD, & Romilia Ramirez, PhD

5/2006 **BA, Neuroscience & Behavior; Italian**
Vassar College, Poughkeepsie, NY
Senior Research: Observational ERP Study of the N400: Semantic-Error Detection in Monolingual English and Bilingual English/Italian Speakers
Research Advisor: Carol Christensen, PhD

8/2004 – 12/2004 **ECCO (Eastern Colleges Consortium) Program in Italian Studies**
Università di Bologna, Bologna, Italy

Certification

Effective 10/2012 School Psychologist (Educational Specialist I), Pennsylvania

Clinical Experience

Predoctoral Psychology Internship

7/2013 – Present **Psychology Intern, Department of Psychiatry/Psychology**
Blythedale Children's Hospital, Valhalla, NY

- Conduct comprehensive psychological & psychoeducational evaluations for inpatients & day hospital patients (ages 0 to 18+). Participate in multidisciplinary outpatient Early Intervention developmental and preschool special education evaluations. Administer psychosocial and developmental screenings for newly admitted infant and pediatric patients.
- Provide individual & group therapy to day hospital patients using cognitive-behavioral or play therapy techniques. Provide behavioral consultation and psychoeducation to hospital staff and families. Observe patients during therapeutic sessions with other disciplines, in classrooms, or with family members. Implement therapeutic crisis intervention as needed.

• Provide professional development talks to departmental and hospital staff. Participate in departmental, interdisciplinary care plan, and family meetings.

Fifth Year Practicum Placement

8/2012 – 5/2013 **Psychology Supervision Trainee, Lehigh University**
School Psychology Program, Bethlehem, PA
• Provided weekly 1:1 supervision & co-led group supervision to beginning & advanced predoctoral psychology trainees completing school- & hospital-based practica. Facilitated case conceptualization & planning.
• Directly observed & critiqued group counseling session led by supervisee.
• Received didactic training & licensed supervision through weekly seminar, outside readings, preparation, & assignments. Delineated personal model of supervision & developed resource guide.

Fourth Year Practicum Placements

9/2011 – 7/2012 **Psychology Trainee, Children's Hospital of Philadelphia**
Center for Management of ADHD, Philadelphia, PA
• Received referrals from primary care pediatricians. Provided consultation to underserved, low-income families of children with ADHD to support family engagement & home-school-health system collaborative care to promote functioning & to help families develop more positive parent-child & family-school-pediatrician relationships.
• Co-facilitated parent training group & provided brief phone follow-up sessions.

Sickle Cell Disease – Families Taking Control, Philadelphia, PA
• Conducted brief psychoeducational evaluations & screening of social-emotional functioning and coping related to sickle cell disease management.
• As member of multidisciplinary team (MDT), co-facilitated multi-family workshops to educate underserved parents & 6-12yo children in implementing a problem-solving model for challenges related to sickle cell disease management, school functioning, & psychosocial functioning.
• Provided individualized telephone booster sessions and follow-up.

Pediatric Feeding/Swallowing Center, King of Prussia & Philadelphia, PA
• Consulted MDT & families in the evaluation of behavioral and ecological contributors of feeding difficulties. Designed & recommended behavioral interventions & referrals.
• Provided in-service & resources to MDT for continuity of care with schools.

9/2011 – 6/2012 **Psychology Trainee, Upper Darby School District**
Beverly Hills Middle School, Upper Darby, PA
• Conducted kindergarten transition assessments. Conducted comprehensive psychoeducational evaluations to determine special education & Section 504 eligibility for 10-13yo students. Integrated

multidisciplinary reports. Provided feedback & recommendations to MDT and families. Served as pediatric health consultant to staff.

- Co-facilitated social skills training group for students with low-incidence disabilities. Counseled adolescents with emotional and behavioral difficulties using cognitive-behavioral strategies.

Third Year Practicum Placements

9/2010 – 8/2011 **Psychology Trainee, Lehigh Valley Health Network**
Pediatric Pulmonology Specialty Center, Bethlehem, PA

- Participated in MDT of tertiary care clinic focused on pulmonary diseases (e.g., cystic fibrosis, asthma). Served as behavioral health consultant to MDT & families.
- Completed comprehensive psychoeducational evaluation.
- Consulted with school personnel & families to design, implement, & evaluate home and classroom-based interventions for treatment compliance, behavior, & academics. Facilitated community outreach as appropriate.
- Led program development efforts to advance practicum program.

9/2010 – 7/2011 **Psychology Trainee, Allentown School District**
Lincoln Early Childhood Center, Central Elementary School, Raub Middle School, & others, Allentown School District, Allentown, PA

- Conducted comprehensive psychoeducational evaluations to determine special education eligibility for 4-13yo students. Completed functional behavior assessment & provided recommendations for individualized behavior plan.
- Consulted to develop & implement home- and classroom-interventions to improve behavior & academics. Co-led counseling groups.
- Developed & piloted Nutrition & Wellness Promotion Program for first & second grade students.

Course-based Practica

1/2009 – 6/2010 **Psychology Trainee, College of Education**
Assessment & Intervention in Educational Consultation; Behavioral Assessment; Consultation; IQ Assessment, Lehigh Univ., Bethlehem, PA

- Completed course-based clinical practica in educational & behavioral consultation using curriculum-based assessment, behavioral assessment, conjoint behavioral consultation, cognitive/achievement tests, clinical interviews, direct observations, and rating scales.
- Completed assessments, intervention, & consultation in suburban elementary schools & urban Head Start center.

Teaching Experience

9/2013 – Present **Session Leader, Predoctoral Internship Group Supervision**

- Lead monthly sessions of group supervision, guiding case discussion and presenting topics to facilitate professional growth. Topics have included therapeutic crisis intervention, changing definitions of intellectual disability, and the Bayley Scales of Infant and Toddler Development-3rd Edition.

12/2013 **Didactic Presenter, Department of Psychiatry/Psychology**
Blythedale Children's Hospital, Valhalla, NY
• Presented interactive lecture on the use of direct, systematic observations, and the Behavioral Observation of Students in Schools (BOSS) in particular.

2/2013 **Invited Lecturer: A Brief Introduction to Qualitative Research**
College of Education, Lehigh University, Bethlehem, PA
• Presented lecture to doctoral students in school psychology and special education on qualitative research methods and design.

6/2012 **In-service Presenter: Systems-Level Collaboration in the Treatment of Feeding and Swallowing Disorders**
Pediatric Feeding/Swallowing Center, CHOP, Philadelphia, PA
• Created and co-presented in-service to multidisciplinary feeding/swallowing team regarding cross-systems communication & collaboration with school districts to facilitate continuity of care & coordination of special education and 504 Plan services as indicated.
• Provided sample request letters, plans, & list of accommodations/modifications tailored to the team's patient populations. Led team through application by case discussion.

5/2010 **Workshop Co-Presenter: Cultural Influences on Shared Storybook Reading Between Children and Caregivers**
Parent-Child Home Program Conference, Uniondale, NY
• Co-presented didactic and interactive workshop to home visitors and supervisors of a national, early childhood home visiting program.

4/2010 – 5/2013 **Course-based Peer Instructor: Doctoral Health Psychology Coursework**
College of Education, Lehigh University, Bethlehem, PA
• Created & presented instructional material to doctoral-level peers. Developed & distributed related resource manuals of evidence-based interventions/practice. Courses and presented topics included:
- Assessment & Intervention in Educational Consultation: math for struggling learners
- Child Psychopathology: schizophrenia in children & adolescents
- Comprehensive School Health Programs: primary health care in the schools (school-based health clinics)
- Early Intervention: polymicrogyria & its complications
- Health/Pediatric Psychology: cardiovascular disease & obesity

Selected Research Experience

1/2012 – Present **Dissertation**
School Psychology Program, Lehigh University, Bethlehem, PA
Title: Head Start Families' School Readiness Beliefs and Transitioning Roles
Advisor: Patricia H. Manz, PhD
- Develop & pilot a psychometrically strong & socially valid measure of traditionally underserved parents' beliefs about their roles & involvement in preparing their preschool children for kindergarten.
- Responsibilities include study design, study implementation, data management, data analysis, & dissemination, as well as developing & maintaining collaborative partnership with Head Start program administration, and training & supervising doctoral students in facilitating focus groups to sensitively obtain parents' perspectives.
- Awarded federal grant to fund the study. Write required semi-annual progress reports & two policy briefs.

9/2008 – 9/2012 **Family Connections Coordinator, Project CARES (Children Able & Ready for Early Success)**
Lehigh University, Bethlehem, PA
Principal Investigator: Patricia H. Manz, PhD
- Served as research coordinator on program evaluation of early childhood home visiting program focused on school readiness & family involvement in the School District of Philadelphia.
- Maintained rapport with community partners, coordinated longitudinal data collection, managed large-scale database, quantitatively analyzed data, & disseminated findings. Trained & supported junior research assistants.

9/2008 – 10/2011 **Doctoral Qualifying Project Research**
School Psychology Program, Lehigh University, Bethlehem, PA
Title: Caregiver-Reports and Direct Observations of Language Interactions in the Latino, Bilingual Home
- Extended Project CARES through study of home language interactions between Latino, low-income parents & toddlers, & of how well self-reported language aligned with home language interactions.
- Responsibilities included study design, implementation, audio transcription, coding, data management, analyses, dissemination, as well as training doctoral students to code bilingual English/Spanish data.
- Awarded grant to partially support study implementation.

7/2006 – 7/2008 **Clinical Research Coordinator, Anesthesiology/Pain Management**
Weill Cornell Medical College/New York-Presbyterian Hospital, New York
- Managed regulatory procedures & performed patient screenings, recruitment, & evaluations for federal-, pharmaceutical-, & department-sponsored trials. Handled FDA-monitoring.
- Maintained patient contact & trust to ensure participation throughout study phases. Served as liaison between patients, physicians, & funding agencies.

Publications

Skupski, D. W., Abramovitz, S., Samuels, J., **Pressimone, V.**, & Kjaer, K. (2009). Adverse effects of combined spinal-epidural versus traditional epidural analgesia during labor. *International Journal of Gynecology & Obstetrics*, *106*, 242-245.

Kadner, A., **Pressimone, V. J.**, Lally, B. E., Salm, A. K., & Berrebi, A. S. (2006). Low-frequency hearing loss in prenatally stressed rats. *Neuroreport*, *17***,** 635-638.

Under Review

Manz, P. H., Gernhart, A., Bracaliello, C. B., **Pressimone, V. J.**, & Eisenberg, R. (2014). *Towards a conceptualization of parents' involvement in toddlers' learning: Preliminary development of the Parents Engagement and Provision for Toddler's Early Learning scale*. Manuscript accepted with revisions.

Pressimone, V. J., & Manz, P. H. (2014). *Parent-reports and direct observations of language interactions in the Latino, bilingual home*. Manuscript submitted for review.

Manz, P. H., Bracaliello, C. B., **Pressimone, V. J.**, Eisenberg, R. A., Curry, A., Fu, Q., & Zuniga, C. (2012). *Expressive vocabulary outcomes for low-income toddlers enrolled in the Parent-Child Home Program: An examination after the first year of home visiting services*. Manuscript submitted for review.

Refereed Presentations (since 2010)

Pressimone, V. J., & Manz, P. H. (2014, June). Head Start Parental Beliefs about Involvement Across the Kindergarten Transition. A poster presentation at Head Start's 12th National Research Conference, Washington, DC.

Eisenberg, R. A., Manzo, J., **Pressimone, V. J.**, Manz, P. H., Gernhart, A., & Ridgard, T. (2014, February). Home visiting for school readiness: Parent growth in storybook talk. A poster presentation at the annual convention of the National Association of School Psychologists, Washington, DC.

Pressimone, V. J., Leichman, E. S., & Vilardo, B. A. (2014, February). School readiness and the pediatrician. A poster presentation at the annual convention of the National Association of School Psychologists, Washington, DC.

Pressimone, V. J. (2013, February). Head Start parents' beliefs about their roles in their children's kindergarten transition. In P. H. Manz (Chair) & S. Sheridan (Discussant), *Responding to the Affordable Care Act: Advancing evidence-based home visiting*. A symposium presentation at the annual convention of the National Association of School Psychologists, Seattle, WA.

Pressimone, V., Krehbiel, C., Hostutler, C., Hermetet-Lindsay, K., Gray, L., Carson, K., Shapiro, E., & DuPaul, G. (2012, June). Pediatric school psychology: Advancing the training of doctoral level school psychologists. Pennsylvania Psychological Association's 2012 Annual Convention, Harrisburg, PA.

Bracaliello, C., **Pressimone, V.**, Eisenberg, R., & Manz, P. (2012, June). Family involvement: Examining the extended impact of home visiting on caregivers. A poster presentation at Head Start's 11th National Research Conference, Washington, DC.

Pressimone, V. J., & Manz, P. H. (2012, June). Defining language: A review of measures of the home language environment. A poster presentation at Head Start's 11th National Research Conference, Washington, DC.

Pressimone, V. J., & Manz, P. H. (2012, June). Measuring Head Start Families' expectations for their transitioning roles. A paper presentation at the annual Cross-University Collaborative Mentoring Conference, The University of Delaware, Newark, DE.

Bracaliello, C. B., Curry, A., Manz, P. H., Eisenberg, R., Muser, K., & **Pressimone, V. J.** (2012, February). The Family Involvement Questionnaire – Toddler version: Partnering with home visiting program families and staff. In S. S. Leff (Chair), *Developing measures in urban settings through participatory action research*. A symposium presentation at the annual convention of the National Association of School Psychologists, Philadelphia, PA.

Pressimone, V. J. (2012, February). Describing consistency between caregiver language report and Latino toddlers' experience. A Participant Information Exchange (PIE) Session presentation at the annual convention of the National Association of School Psychologists, Philadelphia, PA.

Pressimone, V. J., & Eisenberg, R. (2012, February). Latino caregivers' booksharing speech and accuracy of reported language. A poster presentation at the annual convention of the National Association of School Psychologists, Philadelphia, PA.

Pressimone, V. J., & Manz, P. H. (2011, June). Exploration of demographics when reported primary language is not the only language. A paper presentation at the annual Cross-University Collaborative Mentoring Conference, Lehigh University, Bethlehem, PA.

Manz, P. H., **Pressimone, V. J.**, Eisenberg, R., & Bracaliello, C. B. (2011, February). Cultural influence in Latino caregiver-toddler reading: Practice and research implications. A poster presentation at the annual convention of the National Association of School Psychologists, San Francisco, CA.

Pressimone, V. J., & Manz, P. H. (2011, February). Consistency, exploring toddler home experiences and caregiver reports of language. A poster presentation at the annual convention of the National Association of School Psychologists, San Francisco, CA.

Bracaliello, C. B., Manz, P. H., Ash, A., & **Pressimone, V. J.** (2010, June). A look into the black box of home visiting: Investigating the mediating effects of family involvement on child oral language outcomes. A poster presentation at Head Start's 10th National Research Conference, Washington, DC.

Manz, P. H., Bracaliello, C. B., Ash, A., **Pressimone, V. J.**, Zuniga, C., & Williams, P. (2010, June). Stylistic differences in book reading among English- and Spanish-speaking Caregivers and their toddlers. A poster presentation at Head Start's 10th National Research Conference, Washington, DC.

Pressimone, V. J., & Manz, P. H. (2010, June). Caregiver-toddler language interactions in the Latino, bilingual home language environment: An exploration of input consistency and oral language outcomes. A poster presentation at Head Start's 10th National Research Conference, Washington, DC.

Pressimone, V. J., & Manz, P. H. (2010, June). Exploring language in Latino, bilingual homes: When caregivers' reports and toddlers' observed experiences diverge. A paper presentation at the annual Cross-University Collaborative Mentoring Conference, Harvard University, Cambridge, MA.

Manz, P. H., Bracaliello, C. B., Ash, A., **Pressimone, V. J.**, Zuniga, C., & Williams, P. (2010, March). Parent-Child Home Program: Examination of toddler and caregiver benefits. A poster presentation at the annual convention of the National Association of School Psychologists, Chicago, IL.

Leadership & Professional Service

Grants & Awards

2013 **National Psychologist Trainee Register Credentialing Scholarship**
Funder: National Register of Health Service Psychologists

2012 **Early Care & Education Research Scholars: Head Start Graduate Student Research Grant**
Funder: U.S. Department of Health & Human Services, Office of Planning, Research, & Evaluation, Administration for Children & Families [$25,000]
Title: Head Start Families' School Readiness Beliefs & Transitioning Roles
Faculty Mentor: Patricia H. Manz, PhD

2010 **Core Competencies Grant**
Funder: Lehigh University, Bethlehem, PA
Title: Cross-University Collaborative Mentoring Conference [$2,500]
Faculty Advisor: Patricia H. Manz, PhD

2009 **Lehigh University Forum Student Research Grant**
Funder: Lehigh University, Bethlehem, PA
Title: Caregiver-Toddler Language Interactions in the Latino, Bilingual Home Environment: Exploring the Consistency Between Caregiver-Reported & Actual Input, & its Connection to Oral Language Outcomes [$150]
Advisor: Patricia H. Manz, PhD

National Service

2011 – 2014 **Peer Reviewer, National Association of School Psychologists Annual Convention**

2011, 2014 **Peer Reviewer, Head Start National Research Conference**

Local & Regional Service

12/2008 – Present **Interviewer, Alumni Admissions Program**
Vassar College, Poughkeepsie, NY
- Interview prospective undergraduates applying to Vassar.

12/2008 – 6/2012 **Appointed Doctoral Student Representative, Diversity Committee**
College of Education, Lehigh University, Bethlehem, PA
- Served as representative to faculty-staff-student diversity committee. Co-developed Equity & Community Initiative Grant program.

10/2011 **Invited Panelist, Graduate Leadership Panel, Board of Trustees Meeting**
Lehigh University, Bethlehem, PA
- Invited by Dr. Alan Snyder, Vice President & Vice Provost for Research & Graduate Programs to serve as panelist alongside other Lehigh

graduate student leaders. Presented to Board of Trustees on my leadership & service to the community.

9/2010 – 8/2011 **Co-chair, Cross-University Collaborative Mentoring Conference**
Lehigh University, Bethlehem, PA
• Led graduate student planning committee in planning, fundraising, & coordinating 11th annual conference for regional graduate students to gain mentoring on individual research from faculty of 9 leading universities.

1/2010 – 2/2010 **Invited Student Representative, Student Leadership Award Committee**
College of Education, Lehigh University, Bethlehem, PA
• Appointed by the Dean of the College to serve on this joint faculty-student-staff committee. Assisted in the selection of the winner of the 2010 award for recognition of outstanding leadership in service to the college & university.

12/2009 – 2/2010 **Doctoral Student Representative, Graduate Admissions Committee**
School Psychology Program, Lehigh University, Bethlehem, PA
• Served on the School Psychology Program Graduate Admissions Committee for selection of admitted students for Fall 2010 incoming cohort.

6/2009 – 8/2009 **Volunteer, Be Creative Summer Reading**
Bethlehem Area Public Library, South Side Branch, Bethlehem, PA
• Assisted with weekly reading programs for pre-readers and at-risk readers.

Professional Affiliations

2012 – Present APA Division 54, Society of Pediatric Psychology – Student Affiliate
2009 – Present APA Division 16, School Psychology – Student Affiliate
2008 – Present National Association of School Psychologists – Student Affiliate

Additional Skills & Professional Development

Language Skills: Conversational in Italian
9/2013 Therapeutic Crisis Intervention, Edition 6, Blythedale Children's Hospital
7/2011 NASP PREPaRE Training Workshop I, Crisis Prevention & Preparedness: Comprehensive School Crisis Team
6/2011 Diversity & Multicultural Competence Training, College of Education, Lehigh
5/2011 Responding to Disclosures of Child Abuse, PA Family Support Alliance
10/2010 Recognizing and Reporting Child Abuse, PA Family Support Alliance