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An Examination of Parent Play Beliefs and Involvement in Early Learning among Immigrant and U.S.-Born Families in Home Visiting

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An Examination of Parent Play Beliefs and Involvement in Early Learning among Immigrant and U.S.-Born Families in Home Visiting

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ABSTRACT

The number of immigrant families enrolled in child development home visiting programs is on the rise. For this reason, it is important to establish effective home visiting practices for immigrant parents. This way, programs can effectively serve immigrant families and meet their needs. Extant literature has driven home visiting programs to recognize that play is a critical component in improving child development outcomes, and that parents are the primary facilitators of these play activities. Given that cultural background shapes the formation of parent play beliefs, research should be culture specific to appropriately inform efforts that improve programming for immigrant families. The unique needs of immigrant families encourage culturally-specific research that intentionally focuses on immigrant parents of young children. The study's purpose was to examine demographic trends in immigrant and U.S.-born families, as well as examine parent beliefs and involvement. Results of the study show distinctions between subsamples in specific demographic variables, relationships between education level and parent play beliefs, as well as parent beliefs specific to pretend play according to immigrant status. The study's outcomes have implications for culturally-responsive early learning practices that may be used to support parent engagement within the context of home visiting. Home visiting programs may use this knowledge of immigrant families to inform program development that is adaptable and meets the needs of families from various countries and backgrounds.

Chapter I: Introduction

In 2015 alone, there were over 11 million infants and toddlers under the age of 3 years living in the United States. Among these 11 million children, 5.3 million (i.e., 45%) lived in low-income families and 2.7 million (i.e., 23%) lived in poor families (Jiang, Granja, & Koball, 2017). Low-income families have an income that is less than two times the federal poverty threshold. Poor families have an income that is below the federal poverty threshold (Jiang et al., 2017). This demonstrates that our very youngest children are more likely than older children, and two times more likely than older adults, to be living in poor families. When compared to their higher income counterparts, infants and toddlers living in low socioeconomic environments are at a greater risk for physical, social-emotional, and cognitive delays at the time of kindergarten entry (Gershoff, 2003). Unfortunately, children who live in poverty are exposed to several socioeconomic risk factors that may lead to delays in development (Halle et al., 2009). More than half of young children who live in poverty are from racial or ethnic minority backgrounds and come from homes where English is not the primary language. Additionally, 69% of African American and 63% of Hispanic infants and toddlers live in low-income families, which is disproportionately higher than the percentage of White infants and toddlers who live in low-income families (33%) (Jiang et al., 2017).

Children of immigrant parents are more likely to be low-income than children who have native, U.S.-born parents (Koball & Dogulas-Hall, 2004). The National Center for Children in Poverty (Jiang et al., 2017) reports that 53% of infants and toddlers with immigrant parents qualify as low-income. In coming years, this percentage is expected to rise, making the support of immigrant families a long-term need. The U.S. Census Bureau (2015) indicates that between the years 2014 and 2060, the immigrant population is projected to grow from 42 million to 78

million, an increase of 85%. Attention to immigrant families is needed because immigrant parents are more than twice as likely to have less than a high school diploma or equivalent, are less likely to receive financial assistance for child care services, are less likely to have their children enrolled in early intervention programs, and are more likely to speak a primary household language other than English (Firgens & Matthews, 2012; Karoly & Gonzalez, 2011; Park & McHugh, 2014). These risk factors place children of immigrant parents at an elevated risk for developmental delays and poor educational outcomes, as research indicates linkages between demographic factors (e.g., socioeconomic status, parent educational attainment, access to financial support, enrollment in early intervention services, primary language in the home) and child development outcomes (Hertz, 2006; Landale, Thomas, & Van Hook, 2011; Park & McHugh, 2014). For example, research conducted by Princiotta and Flanagan (2006) shows that at kindergarten entry 73% of third generation White children demonstrated basic reading proficiency and 34% understood the beginning sounds of words, compared with only 42% of first-generation Mexican-American children who demonstrated the ability to recognize letters and 14% who demonstrated the ability to understand the beginning sounds of words. Due to these differences, it is imperative to determine effective home visiting practices for immigrant parents so that programs can serve these families and meet their needs.

Home Visiting

Early intervention services such as home visiting have been shown to mitigate the negative effects on families that may result from poverty, as well as engage and sustain involvement of immigrant families in home visiting programs (Raikes, 2006; Schwarz et al., 2012; Shonkoff & Phillips, 2000). Home visiting programs are services that are designed to support low-income pregnant mothers and families with children between the ages of birth to 5

years. Further, home visiting offers families feasible access to evidence-based child development services within the natural environment of their homes. This removes potential obstacles, such as the absence of transportation or child care for siblings. Home visiting services provide supports from a strengths-based perspective that is culturally sensitive and individualized for each family (Faison & Manz, 2016). A strengths-based perspective is a manner of viewing families as having the power and potential to enhance the home learning environment and overcome obstacles of economic instability, rather than viewing them as being 'at-risk' (Hammond, 2010). Therefore, this strengths-based orientation leads home visitors to discover family strengths through cooperation and partnership with parents. This requires programs to maintain a comprehensive view of the family so that home visitors may individualize services to each family's unique needs and preferences (Johnson, 2009).

Home visiting programs have existed in the United States since the 1880s and have been a primary means of promoting resilience among young children of socioeconomic disadvantage (Sweet & Appelbaum, 2004). Over time, early intervention services have gained national support. As of February 2018, 400 million dollars per year through fiscal year 2022 have been allocated to support Maternal, Infant and Early Childhood Home Visiting Program (MIECHV; HRSA, 2018). MIECHV was established in 2010 to ensure that at-risk pregnant women and families with young children receive the resources they need to successfully support their children to be emotionally, socially, and physically healthy, as well as ready to learn at kindergarten entry. In collaboration with the Administration for Children and Families (ACF), MIECHV provides funding to states, territories, and tribal entities to develop and implement evidence-based home visiting programs that will satisfy the needs of a given community. A

primary goal of these agencies is to confirm that home visiting programs use evidence-based practices to promote positive parenting that encourages child development and school readiness.

Child development focused programs aim to directly promote developmental parenting, recognizing its benefits for children's healthy growth and development (Korfmacher et al., 2008; Raikes et al, 2014). Developmental parenting directs parents to take notice of their child's development, and respond to it. Developmental parenting encompasses behaviors that support child learning and development through responsiveness, communication, warmth and encouragement. Examples of supportive activities are clapping hands for a baby's first steps, soothing a frustrated toddler, or encouraging a preschooler to sing along to a song. Parenting behaviors that provide direct support of early learning will result in positive child development outcomes (Cook et al., 2012; Roggman, Boyce, & Innocenti, 2008). However, to effectively engage parents with diverse needs and backgrounds in home visiting, the program's goals and mechanisms must be sensitive to the culturally-based values, beliefs, and interpersonal styles that define parenting behaviors (Green, McAllister, & Tarte, 2004).

The importance of parenting practices and child development outcomes has been examined through MIECHV to ensure that federal and state support is directed toward home visiting programs with rigorous research to affirm their effectiveness (Sama-Miller et al., 2017). To measure and confirm program effectiveness, the U.S. Department of Health and Human Services (DHHS) organized an extensive review of literature on home visiting programs, referred to as the Home Visiting Evidence for Effectiveness (HomVEE; Sama-Miller et al., 2017). Rigorous, scientific standards have been put into place and have enabled identification of 20 programs that meet the DHHS criteria for evidence-based service delivery models. One of the eight domains reviewed by HomVEE that is especially relevant to the current study is positive

parenting practices. Of HomVEE's 20 model programs, 14 of the programs are associated with favorable effects of positive parenting practices as a primary outcome variable. Positive parenting practices were measured based on a parent-child play interaction. This is because play is a context where parents may naturally exchange language and actively engage with their child. Common constructs were used to measure positive parenting practices during parent-child play interactions, including parent supportiveness, positive engagement, responsiveness, support of language acquisition, teaching activities, and warmth. Across programs and studies, these constructs were assessed using parent reported surveys, coded videotaped observations, or a combination of both. The quality of home visiting research on these parenting constructs is mixed, as there have been inconsistent findings for distinct elements of positive parenting and inconsistent significance across programs. For example, Chazan-Cohen, Raikes, and Vogel (2013) examined 17 Early Head Start (EHS) programs by examining parenting practices, the home environment, and child development outcomes across different EHS service delivery models (i.e., home-based, center-based, or a combination of both home- and center-based services). Families were randomly assigned to either a control group or a treatment group within each site. In measuring positive parenting practices, the authors measured parents support of their child's play and involvement in teaching activities. The researchers assessed families at three separate time points (i.e., child at age 2, child at age 3 and child at age 5). No effect was found for parents' supportiveness during play for any of the EHS service delivery models. However, compared to control groups, favorable outcomes were found in parent teaching activities. Love and colleagues (2002) conducted The Early Head Start Research and Evaluation project, evaluating 17 EHS programs across the United States. An experimental research design was utilized, in which the families across the 17 different EHS sites were randomly assigned to

be in either the EHS or control group. Based upon 744 video observations, the researchers found that, in contrast to the results found by Chazan-Cohen, Raikes, and Vogel (2013), EHS parents showed higher levels of supportiveness during a parent-child semi-structure play interaction than parents in the control group.

An additional study that examined positive parenting practices using videotaped observations was conducted by Dishion and colleagues (2008). The researchers examined the Family Check-Up (FCU) home visiting program and randomly assigned families who were enrolled in Women, Infants and Children Nutrition Program (WIC) to either the WIC as usual group or the WIC with FCU group. The researchers measured parent involvement based on items from the Home Observation for Measurement of the Environment Inventory (HOME; Bradley, Corwyn, McAdoo, & Garcia-Coll, 2001). The items assessed included 'Parent keeps child in visual range, looks at child often,' 'Parent talks to child while doing household work,' and 'Parent structures play periods.' Dishion and colleagues (2008) coded engagement between the parents and their 3-year old child and found favorable outcomes for the WIC with FCU group in the area of parents' positive behavior support. In sum, although Chazan-Cohen, Raikes, and Vogel (2013) only found a positive effect in parent teaching activities, Love et al. (2002) and Dishion et al. (2008) found that families who were enrolled in home visiting programs yielded more favorable outcomes than control groups in parent supportiveness and responsiveness to their child's needs.

In addition to the mixed support of parenting practices, a major limitation indicated by HomVEE is the dearth of research examining the effectiveness of home visiting services for immigrant families who represent diverse cultural and linguistic backgrounds (Sama-Miller et al., 2017). Due to the variable findings in outcomes of U.S.-born families enrolled in home

visiting programs, it is important to continue examining the beliefs and involvement of U.S.-born families, but we must also begin to determine how the beliefs and involvement of immigrant families may be similar or different to U.S.-born families. Consistent with the growing immigrant population in the U.S., the number of immigrant families enrolled in home visiting programs is also on the rise (Park & McHugh, 2014). Consequently, the families being served by programs are becoming increasingly more culturally diverse. Immigrant families are facing challenges and, as evidenced by the limitations of immigrant related research conducted by HomVEE, there is a lack of literature to inform programs on the specific needs of immigrant families. Determination of the needs of immigrant families of young children is essential so that programs may be able to adapt evidence-based intervention strategies and meet their needs. This would ensure that home visiting programs are reaching goals in preparing this unique population for the demands of school in America.

Parent-Child Home Program (PCHP). Since PCHP's development, the number of PCHP immigrant family enrollees has mirrored the increase in immigrant families within the U.S. population (Parent-Child Home Program, 2017). In addition, 40% of the families served by PCHP are of non-English speaking households and in total, the program is conducted with families representing over fifty different languages and dialects. PCHP is a two-year home visiting program for low-income parents and their 2- and 3-year old children that was established over 50 years ago (Levenstein, Levenstein, & Oliver, 2002). The mission of PCHP is to provide low-income families with the skills and supports necessary to help young children reach their highest potential. As compared to home visiting programs that focus on multiple developmental domains, PCHP has a specific focus on strengthening child language and literacy skills by supporting parent-child verbal interactions through reading and play activities in the home.

Therefore, PCHP is an ideal home visiting program to advance serving low-income families, both U.S.-born and immigrant. PCHP maintains a concentrated focus on child development outcomes and has embedded play as a cornerstone to home visitor training and sessions with families.

Research on PCHP enrollees indicated that the program increases toddler expressive language, and enhances overall school readiness (Levenstein et al., 2002; Manz et al., 2015). PCHP has also been found to have a long-term impact on its enrollees. For example, Levenstein and colleagues (1998) investigated the drop out and graduation rates of five yearly cohorts of PCHP participants as compared to non-PCHP participants. Unfortunately, the immigrant status and ethnicity of participants were not identified. The results of the study showed that students who had completed PCHP as toddlers were significantly less likely than controls to graduate high school. The dropout rate of PCHP enrollees was lower than the average for all students. In addition, children who completed PCHP matched the national graduation rates for middle-income students. More recently, research conducted by Allen, Sethi, and Astuto (2007) examined kindergarten children who had completed PCHP as toddlers. Participants of the study included 135 kindergarten students in school districts whose school readiness was assessed in the areas of social-emotional and early literacy skills. Although immigrant status of the participants was not included in the study, the researchers did report that participants were from suburbs east of New York City, and were ethnically and racially diverse (i.e., Caucasian, African American, Latino and other). Results of the study revealed that PCHP graduates were more likely to have multiple socioeconomic risk factors such as low parental education, immigration status, and poverty than their kindergarten counterparts who did not receive PCHP services. Demonstrating that PCHP

can offset the impacts of socioeconomic disadvantage, the study showed that PCHP children performed at grade level like their same-aged peers.

Although research indicates PCHP's effectiveness, past research is limited by two omissions. First, immigrant families have not been the focal point of PCHP research, similar to the field of home visiting at large (Sama-Miller et al., 2017). Second, evaluation of fundamentals for parenting practices, such as parent play beliefs and involvement with children's learning, has not been conducted. In sum, to address the needs of immigrant families and to increase the cultural competence of home visiting programs like PCHP, assessment of parent beliefs and involvement in this understudied population is required.

Theory of Change. Theory of change has historically been used and developed across disciplines to explain how and why a program operates in the way that it does (De Silva et al., 2014). The theory of change for child development home visiting programs is foremost built upon ecological systems theory, advanced by Urie Bronfenbrenner as the Person-Process-Context-Time model (Bronfenbrenner, 2001). In this model the proximal processes of parenting are the driving mechanisms for children's development. Home visiting programs are designed accordingly, achieving positive child outcomes by enhancing critical parenting processes (Raikes et al., 2014; Roggman, Boyce, Cook, & Jump, 2001; Sweet & Appelbaum, 2004). Furthermore, research suggests that as parents' beliefs change, their actions will change, and lead to later positive child development and educational outcomes. Raikes and colleagues (2014) conducted research to explore this idea and found that programs with a theory of change focused on parenting as the vehicle to influence children's development were successful. Positive changes in parents emerged prior to growth in children's developmental outcomes. This suggests that the

program's theory of change did guide the program outcomes as intended and that parenting outcomes led to positive change in child development.

The underlying theory of change in home visiting has focused on the importance of play to early childhood development. Research affirms that play aids in the cognitive, social, emotional, and physical development of young children (Milteer & Ginsburg, 2012). In addition, the positive outcomes of play apply to for children of various linguistic, cultural, and socioeconomic backgrounds (Zigler, Singer, & Bishop-Josep, 2006). Play is expressed in various forms, all benefiting children's cognitive, language, social and physical development. Forms of play include exploration, sensorimotor, self-directed, pretend, and free play. When presented with a new toy, young children's exploratory play exposes them to fundamental knowledge, like shapes and patterns (Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008). Sensorimotor play allows a child to manipulate objects and learn their function as they explore (i.e., the toy truck rolls) (Piaget, 1962). As children take part in symbolic play they may use recognized objects in novel ways. Symbolic play may consist of a child pretending a pencil is a microphone or a ball is an apple. In addition to later academic skill promotion, there are various forms of play that help young children develop their socioemotional skills. This includes self-directed free play. Self-directed free play is oftentimes physical play. Children who are active and exercise may have less stress and anxiety than young children who are less active and under-exercised (Nicolopoulou, 2010). In addition, pretend play promotes a child's ability to empathize, learn other's perspectives, and socially negotiate (Cote & Bornstein, 2009). Therefore, skills learned through play are necessary for young children to make sense of the world around them, as well as to foster later learning and development. (Fisher et al., 2008).

Research revealing the benefits of play has led child development focused home visiting programs (e.g., PCHP) to encourage parent-child play interactions as a means for promoting children's learning and development. Home visiting programs facilitate parent's knowledge about the benefits of play to increase interactions in various forms of play activities. Home visitors recognize that, although there are skills a child may learn from playing independently, there are higher levels skills that require encouragement and guidance from a parent (Vygotsky, 1967). When a parent and a child take part in play activities together, the parent is intentionally structuring a variety of play activities where language exchange and facets of developmental parenting may naturally take place (Raikes et al, 2014). During a home visiting play session parents may be shown effective ways to interact with their child when playing with different toys, books, and puzzles (Levenstein, Levenstein, & Oliver, 2002). Therefore, strategies to increase parent-child play interactions are often taught and facilitated within the context of home visits.

Parents' Play Beliefs

Home visiting's theory of change starts with enhancing parent practices; however, changing parent practices starts with aligning their beliefs about parenting and child development to the desired practice. Therefore, attaining parents' support of and engagement in their children's play is contingent upon establishing their beliefs about the developmental value of all forms of play. Play beliefs may be defined as parents' views about the salience of play to their children's development, as well as the importance of their role in fostering children's play (Faison & Manz, 2016). Emerging research has shown that Hispanic, African American, and Caucasian parents in the U.S. who hold beliefs about play as being salient to their child's learning and development have higher levels of parent involvement in learning activities and as a

result, yield higher child development and academic outcomes later (Manz, Gernhart, Bracaliello, Pressimore, & Eisenberg, 2015; Shonkoff & Phillips, 2000). This connection between parent beliefs and parent involvement is highlighted in the Hoover-Dempsey and Sandler Model, which associates parents' beliefs with role construction (i.e., the degree to which the parent believes that he or she should be involved in their child's learning) and self-efficacy (i.e., confidence as a parent in being able to help their child learn) (Hoover-Dempsey et al., 2005). Supporting this model, research demonstrated that parent role construction and self-efficacy influence the degree of parent involvement in learning activities (Anderson & Minke, 2007). Therefore, parenting beliefs are a powerful target area for improving parenting that fosters children's learning and development.

There is emerging evidence for the relationship between parent play beliefs and parent involvement in child activities related to early learning and development. Parent beliefs about play have a powerful influence on the amount of play and the type of play that they will engage in with their young child (Farver & Howes, 1993; Farver & Wimbarti, 1995; Fasoli, 2014; Fisher et al., 2008; Haight, Parke, & Black, 1997; Parmar, Harkness, & Super, 2004). Conjoint play between parent and child encourages exploration, as well as increases initiative, curiosity, and creativity (Roggman et al., 2008). Home visitors are well-positioned to facilitate parents' encouragement and engagement in all forms of children's play in a manner that is culturally sensitive and meaningful to individual families. In a developmentally-appropriate approach, home visiting programs commonly seek to promote parents' playful interactions with children as a mechanism for enhancing parents' involvement in their children's development and early learning. This is done by the training of home visitors who develop high quality, collaborative relationships with parents and provide them with information and strategies that will enrich

parenting and healthy child development (Roggman et al., 2008). This important mechanism can be stalled when parents do not hold beliefs that play is salient to children's development.

Differences in parents' play beliefs. Although home visiting programs (e.g., PCHP) have embedded parent play beliefs as a cornerstone of the services they offer, research is relatively limited in regard to the differences among parents' views of the salience of play on child learning and development (Farver & Howes, 1993; Fasoli, 2014; Fisher et al., 2008; Fogle & Mendez, 2006; Goodnow, 1988; Kockanska, Kim, Boldt, & Koenig-Nordling, 2013; Manz & Bracaliello, 2016). Differences in parent beliefs have been associated with children's outcomes. An exploratory study conducted by Fisher and colleagues (2008), examined parents' and child development professionals' beliefs about the nature and academic value of play with a sample of predominately White mothers (i.e., 86%) with higher than average education level (i.e., 15% high school graduate, 37% some college, 48% bachelor's degree or higher). Results of the study placed mothers into three separate categories. 'All play' mothers identified strong academic value for both structured (i.e., goal-oriented activities that consisted of a specific sequence of actions) and unstructured (i.e., various activities that involve creative thought and imagination) play, yet, they ascribed greatest value to structured play. The children of the 'all play' mothers were engaged in structured play slightly more than the other children in the study. 'Traditional' mothers saw both structured and unstructured play as equally important for their child's academic learning. Children of 'traditional' mothers were equally engaged in both types of play. 'Uncertain' mothers asserted weak association between play and academic value. Therefore, children of 'uncertain' mothers engaged in fewer play behaviors overall. However, these mothers did see structured play as academically enriching and self-reported that their children engaged in structured play. This research finding not only suggests that parents' beliefs about the learning

value of play varies, but also that the beliefs parents hold about play influences the type and amount of play in which their children will engage.

Additional research conducted by Manz and Bracaliello (2016) assessed the relationship of parent-reported play beliefs and involvement in early learning for low-income toddlers. Pearson product-moment correlational analyses revealed that a positive significant correlation existed between play beliefs and parents' broad involvement in early learning activities. The positive correlation was found for both English- and Spanish-speaking parents; however, the association was stronger for the Spanish-speaking parents. This may suggest the possibility of cultural differences in the relationship between parents' play beliefs and involvement.

Influences on parent beliefs. Furthermore, national as well as international research has revealed interesting associations between family demographic characteristics and parents' beliefs about their children's development (Curtner-Smith, Bennett, & O'Rear, 1995; Kohn and Slomczynski, 1990; Tudge, Hogan, Snezhkova, Kulakova & Etz, 2000). Among parents from the U.S. and Western Europe similar associations between their education, occupation, and income and their beliefs about pertinent child behaviors have been shown. In regard to income in both the U.S. and Poland, middle class parents valued self-directed, independent behaviors in their young children, whereas parents with lower incomes held the belief that conformity and obedience were important (Kohn and Slomczynski, 1990). Within the U.S., a positive relationship has also been indicated between parent education level, occupational esteem, and valuing self-direction. Further, parents who valued self-direction were more likely than those who valued conformity to encourage exploration of the environment, and emphasize talking, reading and being responsive to their child. In contrast, parents who valued conformity and obedience emphasized discipline and placed constraints of children's behavior (Luster, Rhoades,

& Hass, 1989). Additionally, Goodwin and Emelyanova (1995) assert that in Russia, parents with more education were more likely than parents with less education to believe that involvement in academic activities is part of a parents' role and important for child academic success, indicating a relationship between the demographic variable of education level and parents' beliefs regarding their child's development. In addition, maternal education level has specifically been indicated as a key predictor of child cognitive development. Connections between maternal education and family financial security, maternal depression, and family structure suggest that mothers with low education levels may raise children in unstable conditions, and may suffer from mental health challenges that could potentially prevent them from caring for their children (Jackson, Kieman, & McLanahan, 2017).

The connection between demographic variables and parent beliefs is important to highlight, because within the U.S., demographic characteristics greatly vary. For instance, when compared to U.S.-born parents, fewer immigrant parents have obtained a high school diploma, GED, or college degree (Migration Policy Institute, n.d.). Additionally, children of immigrant parents are more likely to live in a two-parent household than children of U.S.-born parents (Landale et al., 2011; Oropesa & Landale, 1997). This may be due to the tendency of immigrant parents to be dedicated to preserving family life and, therefore, having high rates of two-parent families. An example of family preservation is the critical value of "familism," a reference to Latino family's beliefs in the necessity to preserve strong family connections and solidarity within a large family (Ortiz, 2009). Family structure is viewed as a point of resilience for children of immigrants, as research supports that two-parent households have lower child poverty rates than single-parent households (Landale et al., 2011). In sum, it is important to consider demographic differences between immigrant and U.S.-born families who are enrolled in

child development home visiting programs, as well as explore if, similar to Western European countries and Russia, there is a connection to parent beliefs.

Unfortunately, limited research specifically examining parent play beliefs for families from specific cultural groups is available. Given the rapid increase in immigrant families with young children in the U.S., research is necessary for aiding in the understanding of the beliefs of diverse families so that programs can effectively meet their needs. The research that has been conducted on specific cultural groups has typically taken place outside of the U.S. Therefore, beliefs of families across cultures may not be representative of what is believed by immigrants currently living in America. Nevertheless, the following studies offer insight into the importance of understanding beliefs held by parents across cultures, and reinforce the idea that parent beliefs vary based on cultural background.

Strengthening this idea, parent beliefs was identified as one of three important cultural principles by Gaskins (2000). Gaskins (2000) observed Mayan children and their families over a 20-year period and developed a culturally informed descriptive framework to better understand the dynamics of specific activities cross-culturally. The researcher found that cultures vary in understanding the nature of children and how they develop. This understanding influences the parent-child interactions and the activities parents provide for their children. For example, Gaskins (2000) shares that Mayan parents hold the belief that child development is preprogrammed and will naturally occur over time. Therefore, Mayan parents do not seek to monitor child development to enhance development or adjust the activities in which their child engages. Unless they are giving specific directions or providing important information needed to complete a task, Mayan adults will rarely engage in conversations with their young children. In regard to play, Mayan children spend a majority of their time in manipulative play with objects

and there is very little time spent in imaginary play. When young children engage in imaginary play, Gaskins (2000) states that their activities are not acknowledged or supported by their Mayan parents. This is because of their beliefs about play. Mayan parents believe that play is in direct competition with adult work and the developmental value of play in young children is not acknowledged. Mayan parents believe the primary benefit of play is to occupy children and allow adult work to be done.

Gaskins (2000) determined parent play beliefs specifically of Mayan parents, however, Gaskins, Haight, and Lancy (2006) argue that play varies greatly across cultures due to differences in beliefs, values and practices. For instance, the researchers found that parents from urban, middle class families in Taiwan and the U.S. are heavily involved in their children's play activities, whereas parents from Kpelle families in Liberia accept play as a natural child activity, but do not intentionally create play opportunities for their children. Research conducted by Farver and Howes (1993) take this a step further by examining the differences in pretend-play between mothers and their children in White-American and Spanish-speaking Mexican-Mestizo families. The researchers explored whether the way parents engage in pretend-play with their children is related to the beliefs held by parents. Sixty mother-child dyads participated in the study. Half of the participants were Mexican-Mestizo and half were White, Anglo-American. The researchers describe the White, Anglo-American population as working-class and from an economically depressed county. Maternal interviews and videotaped observations were utilized to measure the variables of pretend play. Overall, results of the study revealed that White, Anglo-American mothers reported play as being important and that play provided educational benefits to their children, whereas Mexican-Mestizo parents reported perceiving play as less related to their children's learning, and viewed play as a source of fun or amusement. These findings

suggest that for the White, Anglo-American mothers, the play activity was used for its educational benefits. Additionally, White, Anglo-American mothers spent more time overall than Mexican-Mestizo mothers directly organizing the play activities (e.g., providing ideas for play, directly engaging in the play activity). Mexican-Mestizo mothers did not seem to hold the belief that pretend play required the mothers to be directly engaged in the play activity with their child. However, when Mexican-Mestizo mothers were asked to participate they complied in the form of teaching their children specific tasks.

The results of the Farver and Howes (1993) study highlight cultural variations with differences in how and why mothers and children play. A more recent study conducted by Fasoli (2014) has shown similar results. Fasoli (2014) examined the views of play and its influence on parental involvement in their child's play. The sample of the study consisted of 31 Euro-American parents and 25 Latino American parents who were observed in a children's museum located in Chicago. Results of the study suggest that parents were more likely to be involved in their children's play when they considered it to be an important aspect of their children's learning. Despite this emerging evidence of differences in parent play beliefs and parent involvement in learning activities across cultures, there is a lack of literature that explores these differences among immigrant and U.S.-born groups in America.

Home visitor responsiveness to parent beliefs. The diversity in play beliefs among parents is meaningful for home visiting practice. Across disciplines, research has established that practitioner understanding of the beliefs held by the clients they serve may influence the effectiveness of intervention implementation (Falender & Shafranske, 2012; Lieberman & Van Horn, 2008; Robinson, Tyler, Jones, Silburn, & Zubrick, 2012). However, research on how home visitors' understanding of beliefs of families from various cultural backgrounds is translated to

adjustments in intervention is negligible. The importance of cultural specificity in intervention components is reflected in recent research known as 'precision' home visiting (Home Visiting Applied Research Collaborative [HARC], 2018). Precision home visiting emphasizes the "active ingredients" that enhance the effectiveness of interventions for individual families. Assessment of community-level and demographic traits is needed to determine the "active ingredients" that may be important for a given family. Further, research focused on evidence-based interventions (EBIs) suggests that adaptation of practices based on individual family beliefs may be beneficial for child outcomes. Adaptations are defined as interventionists' planned or unplanned changes to any part of an intervention and its support structures (Berkel, 2011). Ferrer-Wreder, Sundell, and Mansoory (2012) reviewed nine models related to culturally-adapted, evidence-based interventions (EBIs), specifically for families who lived outside of their home country. These models are intended to provide guidance on adapting and monitoring the effects of culturally adapted EBIs. For example, Strengthening Families Program Adaptation (SFP_Ad) is a model that begins with assessment of the most urgent needs of the family (e.g., behavior or risk conditions). This first step of the SFP_Ad model supports the use of baseline data to gather core information regarding families that may lead to cultural adaptations. A baseline assessment of newly enrolled families is beneficial to home visiting practitioners, as it offers data that reveal parenting beliefs and practices to inform home visitors. This way, home visitors can make decisions regarding omissions or additions to interventions that ensure their cultural appropriateness and effectiveness. The second step of the SFP_Ad model is to identify EBIs that meet the needs of the family. The final selection of EBIs should be informed by community members who are familiar with the culture of those being served. Once the intervention is selected, surface structure changes should first be considered (i.e. language translation, inclusion

of cultural symbols and customs) and evaluated prior to making additional changes to EBIs (Kumpfer, Pinyuchon, Teixeriade de Melow, & Whiteside, 2008). EBIs need to be developed in a way that allows for cultural variance without losing the beneficial outcomes of the EBI. Adaptations of EBIs that meet the cultural needs of families are associated with improved intervention outcomes (Ferrer-Wreder et al., 2012; McGraw et al., 1996).

Research suggests that the quality of the home visitor-parent relationship may be bolstered when the home visitor has an understanding of parents' beliefs and adapts visit contents and approaches according to these beliefs. Faison and Manz (2016) conducted an exploratory study to examine the extent to which home visitors are knowledgeable about the play beliefs of the families they serve. The researchers collected data from an EHS program located in the Northeastern United States. The findings of the study revealed that there was wide variation in the home visitors' awareness of family beliefs. However, home visitors who at the time of the study were participating in an evidence-based intervention study were more knowledgeable than home visitors who were in the comparison group of their family's beliefs about the importance of play in their child's learning and development. The authors suggest that future research is needed to investigate cultural differences in parent play beliefs and the implications for home visiting practices. The current study is important in acknowledging this existing gap in the home visiting literature and may advance an understanding of practical implications for effective service implementation for families of diverse backgrounds.

Purposes for Study

There is little research available to discern the cultural nuances of parent beliefs and their impact on parent involvement in toddlers' learning activities for families of culturally diverse backgrounds, specifically those from immigrant families. Further, empirical knowledge about the

association of play beliefs and involvement in learning is lacking for parents who are receiving home visiting services. Addressing these gaps, the present study investigated demographic trends, parents' play beliefs and parent involvement in children's learning with the aim to generate knowledge that may enhance home visit practice for U.S.-born and immigrant families.

Research questions. The following four research questions were addressed in this study:

1) Do immigrant and U.S.-born families differ in demographic variables? The researcher hypothesized that the study would replicate demographic trends shown in past research. Family size, structure (i.e., married or one-parent household), and educational differences were expected to emerge. Immigrant families were expected to be larger in size, more likely to reside in a married household, and have lower education levels than U.S.-born families (Landale et al., 2011; Migration Policy Institute, n.d.; Oropesa & Landale, 1997; Ortiz, 2009).

2) Do immigrant and U.S.-born families differ in parent play beliefs? Although empirical study of parent play beliefs is in its infancy, hypothesized results for research question two were that there would be differences in parent play beliefs between immigrant and U.S.-born families. Results were expected to show that U.S.-born parents would score higher on the Toddler & Play scale than immigrant parents. This is supported by literature that indicates that U.S.-born families believe play is important and provides developmental benefits to their children, whereas immigrant parents have been found to perceive play as less related to their children's growth, and more so as a source of amusement (Farver & Howes, 1993). Therefore, variation in parents' beliefs about play and their child's development is evident across cultures (Curtner-Smith et al., 1995; Farver & Howes, 1993; Fasoli, 2014; Fisher et al., 2008; Gaskins, 2000; Kohn and Slomczynski, 1990; Tudge et al., 2000).

3) The third research question directs investigation of the predictive relationship between demographic variables and play beliefs for the total sample, as well as for US-born and immigrant families independently. Are parent play beliefs predicted by marital status, parental education, and family size for parents enrolled in child development focused home visiting program (i.e., the full sample of participants)? 3a) Are parent play beliefs predicted by marital status, parental education, and family size for immigrant families? 3b) Are parent play beliefs predicted by marital status, parental education, and family size for U.S.-born families? For research question 3 and its sub questions, it was expected that the predictive relationship between demographic variables and parent play beliefs would be significant for the total sample and for both groups. More specifically, it was predicted that higher levels of education, smaller family sizes, and residing in a household with married parents would be related to higher levels of parent beliefs that play is important for their child's development (Curtner-Smith et al., 1995; Kohn and Slomczynski, 1990; Tudge et al., 2000).

4a) What is the relationship between play beliefs and parent involvement? 4b) Does immigrant status moderate the concurrent relationship between parents' play beliefs and parent involvement in early learning? Manz and Bracaliello (2016) conducted research to support that there was a positive correlation between parent play beliefs and parent involvement in early learning for both English speaking and Spanish speaking families. However, there is no prior research that examines how immigrant status may moderate this relationship between parents' play beliefs and parent involvement. Therefore, examination of the moderation of immigrant status on the relationship of play beliefs to parent involvement was exploratory.

Chapter II: Method

Participants and Setting

The number of participants analyzed in the study included 92 parents of 0 to 5-year-old children who were enrolled in a PCHP located in a large, northeastern city and have consented to participate in the evaluation project. Participants included caregivers from two demographic populations: U.S.-born parents (n = 63), and foreign-born immigrant parents (n = 29) who speak Spanish. Parent was defined as the adult with primary responsibility for the care of the child and participated in PCHP home visits. The evaluation also included families who speak French and Swahili, however, psychometrically-supported translations of the measures for these languages were not available. Therefore, only families who spoke English and/or Spanish were included in the study. The participants of the study had been intentionally recruited to obtain participants who were U.S.-born or immigrants. Eligibility criteria to be part of the study included families whose incomes were compatible for human services such as free or reduced lunch, families with a child whose age is between 16 and 36 months of age,[1] and residence in the communities served by PCHP.

Measures

Parent play beliefs. The Toddler & Play Scale (Manz & Bracaliello, 2016; Appendix A) was used to assess caregiver beliefs about the salience of play in their children's early learning (i.e., school readiness) and development (i.e. social and linguistic). The Toddler & Play Scale is a 19-item measure in which participants respond using a 4-point Likert scale (strongly disagree=1, disagree=2, agree=3, and strongly agree=4). This measure conceptualizes play through items that use the terms 'pretend play', 'play' 'toys', 'books', and 'language.' the

content reflects various beliefs that parents may hold about the role of play in their child's development, as well as their role as parents in facilitating play activities.

The Toddler & Play Scale was initially constructed in English and Spanish in partnership with PCHP home visitors and families (Manz & Bracaliello, 2016). The Spanish version resulted from a back-translation process involving a professional translator, as well as PCHP staff members. Psychometric analyses were conducted separately for the two language versions. Through a classical test theory (CTT) and item response theory (IRT) approach, the researchers found that the measure consists of a single dimension reflecting parents' play beliefs. The final English version retained nine reliable items, and the final Spanish version retained 11 reliable items. Reliability indicates the degree that differences in participant scores on the English and Spanish versions reflect differences that truly exist (Furr & Bacharach, 2014). The reliability of the English and Spanish versions was demonstrated in both CTT (internal consistency) and IRT analyses (item and person reliabilities). The English language version resulted in item reliability of 0.93, person reliability of 0.69, and internal consistency of $\alpha = 0.77$. Item and person reliability "reflect the stability of the hierarchies of item difficulty or person ability" (Manz & Bracaliello, 2016; p.164). The Spanish language version resulted in item reliability of 0.94, person reliability of 0.74, and internal consistency of $\alpha = 0.76$. In order to have consistent measurement for both English- and Spanish-speaking subsamples in this study, the subset of seven items common to both language versions were used. For the current study, responses to the seven common items were summed to produce a common indicator for both language groups. However, because no pre-determined psychometric data exist for this indicator, the internal consistency was tested. The seven common items include items 2, 6, 8, 14, 15, 17, and 18.

Parent involvement in early learning. The Parent Involvement in Early Learning questionnaire (PIEL; Manz et al., 2015; Appendix B) was administered to assess parental levels of involvement in child learning activities. This measure was developed to reflect the level of engagement and involvement a caregiver has with their young child. The PIEL consists of 25, 4-point Likert scale items (0=rarely, 1=sometimes, 2=often, 3=always). The measure assesses the type and amount of caregiver involvement in the child's early educational experience.

The measure was created in both English and Spanish. Both language versions of the PIEL were analyzed separately. A blended CTT and IRT approach was used to determine latent structure as well as item fit and functioning. PIEL developers found that a single dimension best reflected parent involvement in young children's early learning (English: α = .84; Spanish: α = .83). Results on the English version showed strong item reliability (.99) and person reliability (.85). The Spanish version also resulted in strong item reliability (.97) and person reliability (.82). Similar to the Toddler & Play Scale, to have consistent measurement across the two languages the 15 items that were common in both Spanish and English were used. In this study, a common indicator for both language groups was formulated by summing responses to the 15 common items on the PIEL (items 3, 5, 8, 9, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, and 25). No pre-existing psychometric information exists for this indicator, therefore, the internal consistency was tested prior to analyses.

Demographic variables. Demographic variables were extracted from the Family Information Form (Appendix C). All families enrolled in PCHP completed this 9-page demographic survey as part of the intake routine. The demographic information obtained includes 'Child Information' (e.g., Has the child been diagnosed with special needs that impact his/her participation in the Program?), 'Referral Information' (e.g., How did the family learn

about the Program?), and 'Adult information,' (e.g., Adults native written language skills). Items related to the demographic variables of interest were used. Information on marital status was taken from item 22 in the Adult Information section. Information on education was taken from items 17-18 in the Adult Information section. The Adult Information was taken from the Adult who was listed as Adult #1 and who was considered to be the primary caregiver. Therefore, the age of the parents varied, as the parent may be considered mother, father, grandparent or foster parent of the enrolled child. Finally, information on family size was taken from item 9 in the Child Information section.

Recruitment and Data Collection Procedures

The present study is embedded in an evaluation of a newly-formed PCHP for U.S.-born and immigrant children who experience socioeconomic disadvantage in a large metropolitan area in the northeast. This evaluation was collaboratively conducted by the National Center for PCHP, Public Health Management Corporation (PHMC), and Dr. Patricia Manz, Professor of School Psychology at Lehigh University. Therefore, the procedures of this study were integrated within the larger evaluation. The evaluation began in the fall of 2016 and the data analyzed were collected in the first two years. The procedures of the current study are described as they took place as part of the larger PCHP evaluation. Families were recruited at community resource fairs, at community-based institutions (e.g., Women, Infants, and Children) while families waited for their appointments, and by referrals made by enrolled parents. Recruitment efforts were completed by PCHP site coordinators and early learning specialists. Subsequent to families' enrollment in PCHP, they were invited to participate in the evaluation component by the PCHP site coordinator. During the intake home visit, the PCHP staff obtained consent from families by asking if they would like participate in the research project. The PCHP staff followed a script

when asking for participation. Additionally, at the intake home visit, primary caregivers completed the Family Information Form.

For families consenting to the evaluation, data were collected by interviewers who were hired and trained by PHMC. The interviewers were fluent in the families' native languages (e.g., Spanish). The interviewers coordinated with the home visitors to schedule the assessments in the homes of the enrolled families and administered each survey through an interview to alleviate literacy concerns. The surveys were completed at three separate time points: a) baseline, b) end of PCHP cycle 1 (i.e., 24 weeks), and c) end of PCHP cycle 2 (i.e., total program of 48 visits). The PCHP program is designed to include a three-month break in service delivery between cycles 1 and 2. In order to answer the research questions for this study only the baseline assessment was used in the analysis. However, it is possible that families participated in introductory home visits prior to completing baseline questionnaires. Parents' responses to the Toddler & Play Scale (Manz & Bracaliello, 2016) and PIEL (Manz et al., 2015) were recorded on tablets or by paper and pencil by the interviewers. The data collected from the Family Information Form, the Toddler & Play Scale and the PIEL were uploaded by PHMC evaluation staff to an *IBM SPSS Version 24.0* (IBM Corp., 2016) database and shared with the researcher for analysis.

Research Design and Analysis

A cross-sectional, comparative and correlational research design was conducted to address the research questions. Research questions were designed to examine the samples (i.e., RQs 1 &2), test relationships per subsample (i.e., RQ 3), and assess the interaction between variables (i.e., RQ 4). Statistical power for the various analyses was determined using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) and was adequate. For research questions one and two,

which used independent *t*-test and chi square analyses, the power was moderate ($n = 92$, $\alpha = .05$, power = .71). For research question three, which used simultaneous multiple linear regression analysis, the power was lessened because the sample size was divided according to immigrant status ($n = 29$, $\alpha = .05$, power = .34; $n = 63$; $\alpha = .05$, power = .70). For research question four, which used linear regression ($\alpha = .05$, power = .91) and a moderated regression analysis ($\alpha = .05$, power = .88), the power was strong.

Preliminary data analysis. Descriptive analyses were conducted for the Toddler & Play Scale, the PIEL, and the Family Information Form. For interval data, the mean, standard deviation, and range were determined, according to the two groups, by using *IBM SPSS Statistics Version 24* (IBM Corp., 2016). For categorical data, the frequencies to indicate percentiles were calculated. The reliability of the Toddler and Play Scale as well as the PIEL was affirmed by determining its internal consistency for the total sample, and separately for the two subgroups. Additionally, to assess the presence and direction of relationships between demographic variables, parent play beliefs (i.e., Toddler & Play Scale) and parent involvement in early learning (i.e., PIEL) Pearson correlations were performed. Correlational analyses were conducted for the full sample, as well as the individual subsamples (i.e., immigrant and U.S.-born). When a variable is dichotomous, a point biserial correlation should be used (Field, 2009). *IBM SPSS Version 24* (IBM Corp., 2016) automatically runs point biserial correlational analyses for variables that are dichotomous. Therefore, for the categorical, dichotomous demographic variables (i.e., marital status and different education levels) point biserial correlation analyses were conducted.

Research question 1. Research question 1 asked, do immigrant and U.S.-born families differ in demographic variables? For this question the independent variable was immigrant status

(i.e., immigrant or U.S.-born) and the dependent variables were the demographic variables. The three demographic variables that were analyzed were marital status, parental education, and family size. Family size (number of siblings in the families) was an interval variable. Therefore, independent samples *t*-tests were conducted to examine family size. The mean scores were compared to test the statistical significance of difference between the means. A significance level of $p \leq .05$ signified a significant difference between the means. Parental education and marital status are categorical variables (e.g., single parent or married) and a chi-square test was conducted to examine parental education and marital status.

The assumptions for both the *t*-test and the chi-square were tested. Assumptions for the chi-square test include independent study groups, categorical variables, and the cell frequencies are of adequate size (McHugh, 2013). For the *t*-test, the assumptions of normality, homogeneity of variance, and independence were tested. To determine normality, skewness and kurtosis values were assessed based on the recommended range of -2 to 2 (Lomax, 2001). Homogeneity of variance was verified using Levene's test of Equality of Error Variances. To determine that this assumption was met, significance level was assessed and a non-significant value above .05 confirmed homogeneity of variance.

Research question 2. Research question 2 asked, do immigrant and U.S.-born families differ in parent play beliefs? The independent variable is immigrant status and the dependent variable is parent play beliefs. A *t*-test was used to test this research question. Similar to research question 1, the assumptions of normality, homogeneity of variance, and independence were tested. Subsequent to the testing of assumptions, the *t*-test was conducted and the mean scores were compared to test statistical significance of difference between the means. A significance level of $p \leq .05$ was evidence of a significant difference between the means.

Research question 3. Research question 3 asked, are parent play beliefs predicted by marital status, parental education, and family size for parents enrolled in child development focused home visiting program (i.e., the full sample of participants)? The independent variables for research question 3 are the demographic variables and the dependent variable is parent play beliefs. To test this research question, a simultaneous multiple linear regression analysis was conducted. Therefore, the demographic variables were entered simultaneously. To assess the predictability of each independent variable, the standardized coefficients were examined. The *p*-values were also examined to determine statistical significance. A significance level of $p \leq .05$ indicated a statistically significant result. Prior to analysis, the assumptions of multiple linear regression were checked. The assumptions tested were normality, linearity, homoscedasticity and multicollinearity. Skewness and kurtosis values were assessed to determine normality. Acceptable skewness and kurtosis values are between -2 and +2 (Lomax, 2001). An X-Y scatterplot was evaluated to assess the assumption of linearity. A linear pattern on the scatterplot demonstrates that this assumption is met. Next, homoscedasticity of the residuals was checked by examining the X-Y residuals scatterplot. Homoscedasticity is evident when there is a random pattern in the residuals scatterplot. Multicollinearity was assessed by examining the variation inflation factors (VIF). Multicollinearity exists when two or more of the variables are highly correlated. Multicollinearity was determined by examination of the VIF, with values of 1 indicating no correlation, values between 1 and 5 indicating moderate correlation, and a VIF value greater than 5 indicating highly correlated. VIF values less than 5 were evidence of meeting the assumption of multicollinearity (Studenmund, 2014).

Research questions 3a and 3b. Research question 3a asked, are parent play beliefs predicted by marital status, parental education, and family size for immigrant families? The

independent variables for research question 3a are the demographic variables. The dependent variable is parent play beliefs. Research question 3b asked, are parent play beliefs predicted by marital status, parental education, and family size for U.S.-born families? The demographic variables serve as the independent variables, and parent play beliefs serve as the dependent variable. The analysis plan for research question 3 was replicated, but used data for the specific subsample only.

Research question 4. Research question 4 consisted of two parts 4a) What is the relationship between play beliefs and parent involvement? 4b) Does immigrant status moderate the concurrent relationship between parents' play beliefs and parent involvement in early learning? The independent variables for this research question were immigrant status, parent play beliefs, and the interaction of parent play beliefs and immigrant status. The dependent variable is parent involvement in early learning. Therefore, immigrant status (i.e., immigrant or U.S.-born) was considered as a moderator variable in the regression model. An interaction term was used for this analysis. The following steps were taken to create the interaction variable and ensure that interpretation of the effect between the predictor and outcome were accurate. The predictor variable, parent play beliefs, was centered on the mean of 23.09 due to it being a continuous predictor variable. Immigrant status was not centered because it is a dichotomous, categorical variable (i.e., immigrant or U.S-born), however, immigrant status was dummy coded as immigrant status =1, and U.S.-born = 0. Finally, the interaction variable was the product of the interaction between parent play beliefs, the centered variable, and immigrant status. Similar to research questions 3a and 3b, the assumptions of normality, linearity, homoscedasticity and multicollinearity were tested. After assumptions had been affirmed the moderated regression analysis was conducted. The percent of variance explained by the model was analyzed.

Additionally, the main effect of parent play beliefs, the main effect of immigrant status and the interaction effect of parent play beliefs and immigrant status were examined for statistical significance. A significance level of $p < 05$ indicated a statistically significant result.

Chapter III: Results

Preliminary Data Analyses

Demographic variables. To learn about the sample, descriptive statistics were determined for parent age, parent ethnicity, number of years' immigrant parents have been in the U.S, employment, educational level, family size and child age (see Table 1). Parents consisted of mothers, fathers, grandparents, and foster parents. Therefore, the ages for total sample ranged widely from age 21 to 73 years, with an average of 35.3 years (*SD* = 11). Parent ethnicity varied and included Mexican (23.9%) Central American (3.3%), and Black: Non-Hispanic (65.2%) particpants.

Education level was determined by the amount of education completed by the parent. Of the total sample, education ranged from less than high school (28.9%) to some college, trade or degree completion, (34.9%) and the education level that was completed most often was high school or equivalent (36.1%). Employment for the total sample included 20.7% of participants who worked full-time, 21.7% who worked part-time, and 50.0% who were unemployed.

The marital status variable was a dichotomous variable with the possible responses of single parent or not a single parent. Of the total sample, 48 were single parents (i.e., 52.2%), and 37 were not single parents (i.e., 40.2%). The family size at the time of this study, as indicated by the number of children in addition to the enrolled child in the family, ranged from 0 to 7 children, with a mean, median and standard deviation of 1 child. It should be noted that the study captures families at a single point in time. Therefore, younger families may expand in the future and that growth is not analyzed in the present study. Finally, the age of enrolled children was explored. The age of children for the total sample ranged from 0 to 5 years old, with a mean of 3.3 years and a standard deviation of 1.10 years. When demographic data were missing for U.S.-

born subsample, pairwise deletion took place using *IBM SPSS Version 24.0* (IBM Corp., 2016). Therefore, due to a smaller sample of U.S.-born participants power decreased when analyzing differences between subsamples. The specific sample size and power for each analysis are described per research question within the results section.

Parent play beliefs. The Toddler & Play Scale was used to assess parent play beliefs. For this measure, a single score based on the sum of the seven common items across both the English and Spanish language forms were used for analysis. A higher score on the Toddler & Play Scale indicates parents with stronger beliefs regarding the importance of play in their child's early learning and development, with the highest possible score being a 28. The Toddler & Play Scale scores for the total sample ranged from 13 to 28, with a mean score of 23.09 and a standard deviation of 2.99. The Toddler & Play Scale scores for the immigrant subsample ranged from 20 to 28, with a mean score of 22.76 and a standard deviation of 2.28. For the U.S.-born subsample the scores ranged from 13 to 28, with a mean score of 23.24 and a standard deviation of 3.27. In addition to descriptive analyses, internal consistency of the Toddler and Play Scale was determined. Cronbach's Alpha was used to reflect internal consistency, as there was only one form used and on one occasion (Crocker & Algina, 1986). Consistent with Nunnally (1978), adequate levels of internal consistency ($\alpha \geq .70$) were found for the total sample, as well as for the two subgroups (Total Sample: $\alpha = .83$; Immigrant: $\alpha = .70$; U.S.-Born: $\alpha = .87$).

Parent involvement in early learning. The PIEL was used to assess parent involvement in children's early learning. Similar to the Toddler & Play Scale, descriptive analyses for the PIEL were conducted using a single summed score of the 15 common items across the English and Spanish language forms. For the total sample PIEL scores ranged from 26 to 60, with a mean of 44.84 and a standard deviation of 7.50. For the immigrant subsample, the PIEL scores ranged

from 26 to 56, with a mean score of 42.76 and a standard deviation of 7.12. Finally, PIEL scores for the U.S.-born subsample ranged from 30 to 60, with a mean score of 45.79 and a standard deviation of 7.54. Reliability was also determined for the PIEL using Cronbach's Alpha. Adequate levels of internal consistency (Nunnally, 1978) were found for the total sample, as well as for the two subgroups (Total Sample: $\alpha = .80$; Immigrant: $\alpha = .77$; U.S.-Born: $\alpha = .87$).

Association of demographics, T&P, and PIEL. Pearson correlations for specific demographic variables, parent play beliefs (i.e., Toddler & Play Scale), and parent involvement in early learning (i.e., PIEL) were analyzed for the full sample (see Table 4), and for the immigrant (see Table 5) and U.S.-born (see Table 6) subsamples. Of the full sample as well as the immigrant subsample, a positive significant correlation was found between parents with an education level high school or equivalent plus college or trade and parent play beliefs. Within the immigrant subsample only, a negative significant correlation emerged between parents who earned less than a high school degree or equivalent and parent play beliefs.

Immigrant Status and Demographic Variables

The first research question asked, do immigrant and U.S.-born families differ in demographic variables? This question was answered using an independent *t*-test to assess the interval variables (i.e., family size) and chi-square tests to assess the categorical variables (i.e., education and marital status). Due to missing data in the U.S.-born subsample, power decreased when analyzing differences between subsamples in family size ($n = 86$, $\alpha = .05$, power = .70), marital status ($n = 85$, $\alpha = .05$, power = .69) and education level ($n = 83$, $\alpha = .05$, power = .62). The statistical assumptions of an independent *t*-test were tested and found to be within normal limits. To assess normality, skewness (1) kurtosis (2) values were evaluated and within the recommended range of -2 to 2 (Lomax, 2001). Additionally, to determine homogeneity of

variance, a non-significant value above .05 for Levene's Test of Equality of Error Variance (F (1,84) = 2.1, p = .147) was found. Finally, independence was confirmed because there were separate participants in each subsample (Field, 2009). The independent t-test revealed that the mean family sizes for U.S.-born (M = 1.82, SD = 1.69) and immigrant families (M = 1.24, SD = 1.22) were not significantly different, t (84) = -1.66, p = .10l.

Next, chi square analysis was applied to determine if immigrant and U.S.-born families differed in marital status. The statistical assumptions for the chi-square test were examined and met. Assumptions for the chi-square test were confirmed. This consisted of confirmation that the two study groups, immigrant parents and U.S.-born parents, were independent. The immigrant and U.S.-born groups were independent of one another, as there was no overlap in participants between the two groups. Additionally, the marital status variable was categorical, because particpants indicated being in either one of two categories (i.e., single or not single). Lastly, as indicated by *IBM SPSS Version 24.0* (IBM Corp., 2016) Chi-Square Tests output table, the cell frequencies contained zero cells that had an expected count of less than 5 and, therefore, were of adequate size (McHugh, 2013). The statistical assumptions for chi-square were also examined for education, and all were met except for the expected cell frequencies. For the education variable, more than 20% of the cells had a count less than 5. This was likely due to the small number of participants who completed certain levels of education in each immigrant status group. In response, the existing categories were combined and three total categories were created. The parental education categories were logically combined based on the way in which a person progresses through the education system. The original categories of less than third grade, less than ninth grade and some high school were combined to create the category less than high school graduate. Additionally, the original categories of high school plus some college or trade,

two-year degree, four-year degree and college plus were combined to create high school degree plus trade or college. Therefore, the final three categories included less than high school graduate, high school degree or equivalent (e.g., GED), and obtained a high school degree plus trade or college. The chi-square tests showed a significant difference in education level, χ^2 (2, N = 83) = 13.76, p = .001, and marital status, χ^2 (1, N = 85) = 44.01, p < .001. U.S.-born participants were found to have a higher number of single parent families and a higher education level than immigrant participants. The effect size using Cramer's V, a commonly used strength test when a significant chi-square statistic is found, was found to be .41 for education, and .72 for marital status. Given that Cramer's V values closer to 1 are considered a strong relationship (Cohen, 1988; Field, 2009; McHugh, 2013), the effect size may be considered moderate for education and strong for marital status. Table 1 shows that 6.9% of immigrant families indicated being a single parent, whereas 73% of U.S.-born families indicate being a single parent. Similarly, Table 1 shows that approximately half of the immigrant subsample (i.e., 51.7%) reported the highest education completed as less than high school, 34.5% completed high school or equivalent, and 13.8% completed high school plus college or trade, whereas nearly half of the U.S.-born subsample completed some college, trade or have earned a college degree (i.e., 46.3%), 37% graduated high school or equivalent, and 16.7% obtained less than a high school education.

Immigrant Status and Parent Play Beliefs

The second research question asked, do immigrant and U.S.-born families differ in parent play beliefs? Similar to the first research question, *t*-tests were used to analyze the data. Power for this analysis was slightly underpowered (n = 92, α = .05, power = .71). The assumptions of normality, homogeneity of variance and independence were tested. The assumption of normality

was evidenced by a skewness value of 0.05 and a kurtosis value of 0.01, both of which were within the recommended range of -2 to 2 (Lomax, 2001). Similar to the first research question, independence was confirmed based on the absence of overlap in participants in the immigrant and U.S.-born subsamples (Field, 2009). However, based on Levene's Test, the assumption of homogeneity of variance was violated, F (1,90) = 6.12, p = .015. Levene's Test of Equality of Error Variance yielded a statistically significant value and when there is variance within a small sample size, the probability of Type I error increases. An increase in Type 1 error may increase the likelihood of a false positive result. In response to the unmet assumption, the Welch-Satterthwaite method was applied (Zimmerman, 2004). Statistics presented for equal variance not assumed were interpreted for this variable.

T-test analysis using the single summative score of the Toddler & Play Scale yielded non-significant differences in parent play beliefs between immigrant (M = 22.76, SD = 2.28) and U.S.-born participants (M = 23.24, SD = 3.27), t (75.61) = -.81, p = .419. In response to this finding, an item-level analysis was conducted to explore patterns in parents' endorsements of play beliefs (See Table 2). Independent sample t-tests were conducted for each item to compare parents' play beliefs in the immigrant and U.S.-born subsamples. To correct for Type I error, a post hoc Bonferroni correction was conducted. The researcher divided a significant p-value of .05 by the number of items on the scale, (e.g., .05/7) and this yielded a value of .007. This means that only a p-value that was equal to or less than .007 would be considered a significant result. Results showed statistically significant differences in play beliefs between U.S.-born (M = 3.31, SD = .62) and immigrant (M = 2.86, SD = .74) families on one of the seven Toddler & Play Scale items. The statistically significant item was: "I like to pretend play with my child," t (89) = -2.99, p = .004. The U.S.-born parents rated this item higher than immigrant parents.

Parent Play Beliefs and Demographic Variables

The third research question first asked, are parent play beliefs predicted by marital status, parental education, and family size for parents enrolled in child development focused home visiting program (i.e., the full sample of participants)? Once missing data were removed the total sample decreased from 92 to 84 participants, and, although still in an acceptable range, power was impacted (n = 84; α = .05, power = .84). To remain consistent, the three categories for parental education previously created were used in these analyses. A simultaneous multiple linear regression was used to answer this research question, as well as for parts A and B of this question. The assumptions of multiple regression (i.e., normality**,** linearity, homoscedasticity, and multicollinearity) were checked and found to be within normal limits. This included assessment of a skewness value of .05 and a kurtosis value .11. Both the skewness and kurtosis values were within the suggested range of -2 to 2 (Lomax, 2001). Also, a visual examination of the X-Y scatterplot revealed a football shaped distribution of data, shown by randomly and evenly dispersed data points throughout the plot (Field, 2009). Multicollinearity was indicated by a mean VIF value of less than 5 (VIF = 1.20) (Field, 2009; Studenmund, 2014). In addition, because marital status and education were categorical variables, dummy variables were created prior to analysis (Field, 2009). For marital status a participant who was single was assigned a 1, and a participant who was not single was assigned a 0. For education level, each educational category was dummy coded as 1 if it was the education obtained or 0 if any other education level had been obtained. For instance, the education level of less than high school was dummy coded as 1 if the participant had less than a high school diploma or equivalent and a 0 if the participant obtained any other level of education. For education level, only two of the three education categories were dummy coded and entered, and one was chosen to serve as a control group (i.e.,

less than high school graduate and obtaining a high school degree plus trade or college were entered, and high school graduate or equivalent/GED was not entered). The high school graduate or equivalent/GED was chosen as the control group because it had the largest number of participants (Field, 2009). The regression equation for the overall sample was non-significant, R^2 = .09, F (4, 79) = 1.86, p = .125. Yet, when examining the Pearson Correlation Matrix (Table 4), a positive, and statistically significant relationship was found between parent scores on the Toddler & Play Scale and obtaining a high school degree or greater (r_{pb} =.26, p = .014).

Immigrant Families. Part A of the third research question asked, are parent play beliefs predicted by marital status, parental education, and family size for immigrant families? The assumptions of multiple regression (i.e., normality, linearity, homoscedasticity, and multicollinearity) were checked for the subsample of immigrant families and were found to be acceptable. Similar to the full sample, a skewness value of .55 and a kurtosis value -.71 were both within the suggested range to verify normality (Lomax, 2001). Additionally, visual analysis of the X-Y scatterplot showed evenly dispersed data points, as well as a mean VIF value of less than 5 (VIF = 1.15) (Field, 2009; Studenmund, 2014). However, it should be noted that because this analysis was conducted with the immigrant subsample only, the power decreased (n= 29, α = .05, power = .34). The regression equation for the overall immigrant subsample was non-significant, R^2 = .27, F (4, 24) = 2.21; p = .098. An R^2 value of .27 suggests that the demographic variables explain 27% of the variability in parent play beliefs. The Pearson Correlation Matrix (Table 5) showed significant correlations between parent play beliefs and education level in that a negative and statistically significant relationship exists between immigrant parent scores on the Toddler & Play Scale and those who obtained less than a high school diploma (r_{pb} =-.44, p = .016). In addition, there was a positive, and statistically significant correlation between

immigrant parent scores on the Toddler & Play Scale and those who obtained an education beyond high school (r_{pb} =.40, p = .031).

U.S.-Born Families. Part B of the third research question asked, are parent play beliefs predicted by marital status, parental education, and family size for U.S.-born families? It should be noted that the power for this analysis was lower due to missing data (n = 55; α = .05, power = .63). To answer this research question, the analysis for the previous research question was replicated. Analysis of skewness (-.09) and kurtosis (-.09) determined normal distribution of data for the U.S.-born subsample (Lomax, 2001). In addition, visual inspection of the X-Y scatterplot showed evenly distributed data points to validate the assumptions of linearity and homoscedasticity. Finally, a mean VIF value of less than 5 (VIF = 1.12) was indicated to meet the assumption of multicollinearity (Field, 2009; Studenmund, 2014). Similar to the immigrant subsample, the regression equation for the overall U.S.-born subsample was non-significant, R^2 =.05, F (4, 50) = .61, p = .655. Unlike the full sample and immigrant subsample, the Pearson Correlation Matrix did not show significant correlations among demographic variables and parent play beliefs (Table 6).

Parent Play Beliefs, Parent Involvement and Immigrant Status

The fourth question asks, 4a) What is the relationship between play beliefs and parent involvement? And, 4b) does immigrant status moderate the concurrent relationship between parents' play beliefs and parent involvement in early learning? A moderator regression model was used (Champoux & Peters; 1987). The regression assumptions of normality, linearity, homoscedasticity and multicollinearity were met. This was determined by analysis of skewness (-.16) and kurtosis (-.68) values within the suggested range of -2 and +2 (Lomax, 2001), a visual inspection of the X-Y scatterplot that showed the data were both randomly and evenly distributed

(Field, 2009), and a mean VIF value that was less than 5 (VIF = 1.16) (Field, 2009; Studenmund, 2014). The results showed that the regression model explained 7% of the variance in parent involvement in early learning, F (3, 88) = 2.204, p = .093. In addition, neither parent play beliefs (B = .400; β = .159; p = .165) nor immigrant status (B = -2.747; β = -.171; p = .102) significantly predicted parent involvement. Finally, because the interaction term for parent play beliefs and immigrant status was not significant (B = .291, β = .049, p = .667), immigrant status did not moderate the relationship between parent play beliefs and parent involvement in early learning.

Chapter IV: Discussion

Parents serve as primary facilitators of play, a crucial aspect of early child development, by providing enriching play opportunities for their young children. Child development home visiting program's underlying theory of change has led researchers to focus on parents' beliefs about the developmental significance of play and its connection with parent involvement in learning experiences. With intent to potentially guide future home visiting practice and program development, the study explored how immigrant status and specific demographic variables play a role in parent play beliefs, as well as parent involvement in early learning. Existing gaps in the home visiting literature on parent play beliefs and early involvement suggested that examination of immigrant populations was needed. This way, culturally responsive early learning practices may be adopted. These gaps are especially pertinent to home visiting programs that are serving families who are becoming increasingly culturally diverse.

To explore the relationship of immigrant status to play beliefs and parents' involvement in children's early learning, this project was conducted in a PCHP program that was intentionally formulated to serve immigrant families as well as US-born families of toddlers. To explore if demographic trends reported in the research literature were present in the sample for this study, the current project assessed specific demographic differences between immigrant and U.S.-born families. Next, the researcher investigated differences in parent play beliefs between immigrant and U.S.-born families**.** Third, the predictive relationship between parent play beliefs and demographic variables for the full sample, as well as for each subsample was explored. Finally, the relationship between parent play beliefs and parent involvement in early learning was tested, including the potential moderating effect of immigration status.

Immigrant Status and Demographic Variables

A better understanding of how demographic variables operate for U.S.-born and immigrant families may inform programs of specific family and parent variables to focus on when building relationships with newly enrolled families and when determining ways to individualize intervention strategies. This information may facilitate conversations on how to improve delivery of services to diverse families. Past literature links elements of family structure and parent education level to key psychological and economic resources that are related to children's later academic outcomes (Palacios et al., 2008). Therefore, to reveal if there were unique demographic distinctions between immigrant and U.S.-born families, three key demographic variables were assessed in the current study: family size, marital status, and education level. The hypotheses for this study asserted that immigrant families would be larger in size, have a higher number of married parents, and have lower education levels than U.S.-born families. Results of the study confirmed the hypothesis concerning marital status and educational level. Results showed a significant difference between immigrant and U.S.-born families in education level and marital status, and a non-significant difference in family size. A significantly greater number of U.S.-born participants had obtained a higher level of education and reported being single than immigrant participants. Although family sizes for both U.S.-born and immigrant families was found to be similar, this information aids in understanding what the structure of enrolled families looked like at the start of their PCHP enrollment. Families are in flux and the current study represents family size at a snapshot in time. A key concept in "familism," which encompasses different structural, behavioral and attitudinal aspects of Latino families, is the idea that Latino families are typically large in size (Ortiz, 2009), however, "familism" may refer to family members other than the number of children in the home (e.g.,

aunts, uncles, grandparents, cousins). Additionally, it is possible that variables related to "familism" shift as the number of years' families reside in the U.S. increases.

It was also important to look at education level of parents, because parent education is associated with educational attainment of the child (National Center for Education, 2016). Results of the present study found that U.S.-born and immigrant families did significantly differ in parent education level. Specifically, U.S.-born parents achieved higher levels of education than immigrant parents. Nearly half of U.S.-born parents completed some college, trade or earned a college degree and only 16.7% achieved less than high school. In contrast, 51.7% of immigrant parents completed less than high school and 13.8% achieved high school plus some college, trade or earned a college degree. Education level of parents in this study are consistent with education levels of parents nationally. For example, according to the National Center for Education (2016), Hispanic immigrant college students (52%) had a higher percentage of parents who had no college education either in or outside of the U.S. when compared with all undergraduates (33%). Additionally, the Migration Policy Institute indicates that a lower percentage of immigrants have a high school diploma, GED, associate's degree or bachelor's degree than U.S.-born citizens (Migration Policy Institute, n.d.). In regard to parents who may not have received education in their country of origin, this difference in educational attainment may be attributed to immigrant families not speaking English, inhibiting them from being successful in an American educational system that is dominated by the English language (Ortiz, 2009). More recently immigrants may also have parents who are working full time in labor intensive jobs or be dealing with challenges related to being undocumented. For instance, a large number of Mexican and Central American parents in the U.S. have not completed high school, and typically work at unstable, low-paying jobs. This lack of education and unstable income sets

parents up to be less effective in advocating for their child's education, as well as the ability to provide high-quality learning experiences in the home (Roche et al., 2017).

The hypothesis in regard to marital status (i.e., more immigrant families were expected to be in a married household than U.S.-born families) of immigrant and U.S.-born families was also confirmed, as 93.1% of immigrant parents were married and only 15.9% of U.S.-born parents were married. A child living in a household with two parents is a contextual factor that is related to strong child development (Palacios et al., 2008); therefore, marital status is an important area of study, and may have implications for program development. As a home visitor develops a full picture of a family, knowledge that there are two parents in an immigrant household may expand the resources available for promoting the child's development. For example, program models may need to offer flexibility to home visitors to work with various family constellations. This may also have implications for training home visitors to understand the family dynamics and adjust their practices (e.g., involving both parents during the home visit or providing information that can be shared between the parents in the home).

The high number of immigrant families with intact marriages may reflect the values of family loyalty and solidarity represented by "familism" within Latino families (Landale et al., 2011). This finding is consistent with the national sample of immigrant families, specifically those who are of Mexican or Central American origin (Palacios et al., 2008; Roche et al., 2017). Similar to the demographics of the current study, research conducted by Karberg, Cabrera, Fagan, Scott and Guzman (2017) analyzed data of families from birth through adolescence. The researchers found that a majority of Hispanic immigrant mothers were stable in their relationship status for at least the first five years of their child's life, whereas over half of U.S.-born mothers experienced relationship instability during these critical years. They found marital status to be

the least stable in the first five years of the child's life for U.S.-born White, Hispanic and African American mothers, with the highest rates of instability for U.S.-born African American mothers at 71%.

Immigrant Status and Parent Play Beliefs

Differences between immigrant and U.S.-born families in parent play beliefs were also assessed with the expectation that U.S.-born parents would score higher on the Toddler & Play scale than immigrant parents. Overall, U.S.-born parents did not score significantly higher than immigrant parents on the Toddler & Play scale. To better understand the results, an item-level analysis was conducted. This exploratory analysis found that immigrant and U.S.-born parents scored similarly on items that asked about the relationship between play and learning. For example, the items "Children language skills improve by playing," and "Play helps prepare young children for school" were rated as being important by both subgroups. This suggests that, in general, both subgroups perceived play as being valuable for their child's learning and development.

Significantly different responses between US-born and immigrant families occurred for an item asking about parent beliefs regarding their own enjoyment in engaging in pretend play with their child. The item stated, "I like to pretend play with my child" and responses were significantly lower for immigrant parents than U.S.-born parents. Consistent with the results of the present study, Farver and Howes (1993) found that American mothers engaged significantly more in cooperative pretend play behaviors (e.g., suggesting fantasy, supporting child's effort) than Mexican-Mestizo mothers. Additionally, Gaskins (2000) found that Mayan children spent very little time engaging in pretend play and when they did, imaginary activities were not supported by their Mayan parents. These behaviors likely stem from Mayan parents believing

that the purpose of play is to occupy a child's time, but takes away from time to complete chores and work.

Pretend play in early childhood is beneficial for a number of reasons. Past research asserts that pretend play is a critical component for both cognitive and social development, specifically for language development and a child's ability to form successful interpersonal relationships (Cote & Bornstein, 2009; Piaget, 1962; Vygotsky, 1967). This is because pretend play is a time for a child to practice perspective taking and to foster understanding of the thoughts and feelings of others. Language development is especially salient for children of immigrant parents, who may speak a language other than English and are expected to master two languages at the time that they enter kindergarten (Cote & Bornstein, 2009). Therefore, awareness of this may involve home visitors who work with immigrant families purposefully spending additional time on education about the importance of pretend play or facilitating strategies to encourage pretend play with their child. Manz and Bracaliello (2016) discuss the "ah-ha" moment of parents that has been recognized by home visitors in the field. This moment is described by Manz and Bracaliello (2016) as the instance when parents become aware of the importance of play in their child's development and in response, leads parents to become an active participant in their child's play activities. Nevertheless, because there is only one item on the Toddler & Play scale that relates to pretend play, the Toddler & Play scale may not include sufficient content to fully assess the play beliefs of immigrant Latino parents. Although the measure has a Spanish version, information about the amount of time of U.S. residency was not collected or considered when the measure was developed.

Parent Play Beliefs and Demographic Variables

Immigrant families. Given the small sample size and power, the third research question was exploratory. This question asked if parent play beliefs were predicted by marital status, parental education, and family size for immigrant families. It was hypothesized that being single, in a larger family and having a lower education level would predict a lower score on the Toddler & Play scale. Within the immigrant subsample, significant differences in parent play beliefs were not found based on marital status or family size. Restricted variance in marital status and family size could account for the lack of significant difference in parent play beliefs. More than half of the immigrant families had only one or two children in addition to the enrolled child, and 93% of immigrant parents reported they were married. Restricted variance not only influences the generalizability of findings, but may also influence the reliability of findings. This adverse impact on research findings may occur, as there may be an increase in the likelihood of Type II error because the observed relationship between variables may be smaller and non-significant. (Lakes, 2013). Although it is widely known that children flourish in the presence of stable, and high-quality marriages, future research is needed to determine how this relates to marriages in the Hispanic immigrant population within the United States (Ramos-Olazagasti & Guzman, 2018). Marital status is likely a complex area and assessing the presence or absence of marriage may not be enough to create a full picture of how this variable influences parent beliefs. There are many additional characteristics that, although may be associated with marital status, have a stronger relationship with parent play beliefs (e.g., education level). It is recommended that variables like education level are more heavily focused on in future research.

Research specific to parent beliefs about play of immigrant parents has not been conducted, yet, research on parent beliefs in other countries does support that education plays a role in beliefs about child development and academic success. For example, research by Kohn

and Slomczynski (1990) found that education level was strongly associated with beliefs of parents from the U.S. and Western European countries. Additionally, Goodwin and Emelyanova (1995) suggested that parents in Russia with more education were more likely than parents with less education to believe that involvement in academic activities is part of a parents' role and important for child academic success.

U.S.-born families. No demographic variable significantly predicted parent play beliefs in the US-born sample. Fogle and Mendez (2006) conducted research with participants who are similar to participants in the current study's U.S.-born sample. The researchers suggest that within a group of low-income, African American mothers, parent beliefs may be linked to experiences that are unique to each parent. Fogle and Mendez (2006) assessed the parent play beliefs of low-income, African American mothers whose children were enrolled in Head Start centers in the Southeastern United States. The findings demonstrated a significant, positive relationship between parent play beliefs and parent education level, but no significant findings for the other demographic variables that were assessed (i.e., marital status, employment, child gender). This population is similar to the U.S.-born population assessed in the current study. Findings of the current study and past research indicate the possibility that education is a more salient predictor of parent play beliefs than other demographics related to family size and structure. In addition, similar to the results for marital status and family size in the immigrant subsample, restricted variance may be a valid explanation for the lack of statistically significant findings for this research question. Future researchers may replicate research analyses with a larger and more heterogeneous sample of families.

Parent Play Beliefs, Parent Involvement and Immigrant Status

Although the fourth research question was also exploratory, it was surprising to find that neither parent play beliefs nor immigrant status predicted parent involvement in early learning, as past literature as well as home visiting's theory of change would support the idea that beliefs drive the actions that parents take part in with their child. Home visiting's theory of change asserts that parents' beliefs regarding the developmental value of child's play would be predictive of parents' true involvement in developmentally-appropriate learning experiences (Manz & Bracaliello, 2016; Roggman, Boyce, & Innocenti, 2008). This suggests that beliefs of the parents typically influence the context of the home learning environment (Farver, Xu, Lonigan, & Eppe, 2013; Luster and Rhoades, 1989). Additionally, past research conducted by Manz and Bracaliello (2016) contradict the results of the current study, as they found that there was a positive correlation between parent play beliefs and parent involvement in early learning for both English- and Spanish-speaking families. Additional past research has found relationships between parent play beliefs and parent practices. For example, Haight and colleagues (1997) offer important insights into the relationship between parent play beliefs and parent involvement, however, the study does not consider variables based on immigrant status. The researchers found that mothers who rated pretend play as more important for their child's development spent more time in pretend play, and parents who enjoyed pretend play were overall better than those who did not enjoy pretend play at facilitating pretend play interactions. Manz and Bracaliello (2016) present a similar complexity, because, although a majority of the immigrant parent participants in the current study were Spanish-speaking, the immigration status of the participants in Manz and Bracaliello (2016) was unknown. Therefore, direct comparisons may not be assumed and the non-significant interaction effect of parent play beliefs and

immigrant status in the current study may be a first step toward better understanding the relationships that exist between these novel variables.

Although research has compared parent-child interactions across cultures (Farver and Howes, 1993), research has not cross culturally examined the relationship between parent play beliefs and parent involvement. As previously mentioned, Manz and Bracaliello (2016) discuss the "aha" moment when parents recognize the importance of play in their child's learning and begin to adjust their practices to become more involved in their child's play. However, the current study analyzed baseline data at the start of enrollment in PCHP. Therefore, it is likely that this "aha" moment emerges after the family has received program services for some time and has gained education on the value of play. Regardless, the non-significant results reveal that parent play beliefs and parent involvement in early learning activities may be similar in both immigrant and U.S.-born families who are recently enrolled in home visiting services. Future research should strive to longitudinally assess the relationship between parent play beliefs and parent involvement in early learning, as well as with a larger sample size of immigrant families.

Limitations

Limitations of the study stemmed from characteristics of the sample. First, the sample size was small, specifically for the immigrant subsample. There was also a large difference in sample size between the immigrant and the U.S.-born subsamples. Due to missing data within the U.S.-born subsample, sample sizes varied per analysis, resulting in low power when analyzing differences between the subsamples in family size ($n = 86$, $\alpha = .05$, power = .70, marital status ($n = 85$, $\alpha = .05$, power = .69) and education level ($n = 83$, $\alpha = .05$, power = .62), as well as in the third research question when determining whether or not demographic variables predicted parent play beliefs for the U.S.-born subsample only ($n = 55$; $\alpha = .05$, power = .63).

Regardless of missing data, power remained adequate for the third research question when assessing the full sample (n = 84; α = .05, power = .84). A limited sample size affects the power and sensitivity of the analyses, which increases the chance of Type II error (Kazdin, 2003). This means that it may be more difficult to detect a significant finding when there truly is one (i.e., a false negative finding). Second, there was restricted variance in regard to marital status and family size, which as previously mentioned, limits the reliability of the study and the likelihood of Type II error (Lakes, 2013). A larger sample size and longitudinal assessment that examines multiple time points are suggested for future research. Baseline only assessment did not allow for consideration of the variable of time. Time may be especially important when examining immigrant families who have spent a diverse number of years as U.S. residents. Within the current study the number of years' participants spent in the U.S. ranged greatly (i.e., 0 to 18 years). Therefore, amount of time a family spends in the U.S. may have implications for the immigrant paradox and the acculturation processes of families that occur over time. For example, immigrant families may have additional children over time and the older children in the family may help younger children with English language learning, acting as cultural brokers for the family and buffering negative outcomes for younger siblings (Ortiz, 2009). Additionally, stable marriage is a protective factor for children, but third generation immigrants and beyond are less likely to have an intact two-parent household. These concepts are related to "familism," which encompasses different structural, behavioral and attitudinal aspects of Latino families (Ortiz, 2009).

There were also limitations in regard to measurement. First, the extent to which social desirability affected parents' responses on the Toddler and Play scale as well as the PIEL are unknown. Social desirability response bias is "the tendency for a person to respond in a way that

seems social appealing, regardless of his or her true characteristics" (Furr & Bacharach, 2014, p. 281). Due to the Toddler & Play Scale and the PIEL being completed at baseline, a comfortable bond may not have existed between the home visitor and the parent yet (Roggman et al, 2001). The lack of relationship could have resulted in a social desirability response bias, and may explain why the total responses across both subsamples were relatively high. Repeated assessment over time or anonymous survey completion in future research may protect against this bias. An additional improvement to minimize social desirability and increase internal reliability may be inclusion of measures from multiple sources. For example, including both an observation of parent involvement and a parent-self report measure (Furr & Bacharach, 2014).

The versions of the Toddler & Play Scale and the PIEL used in this study were created to include the subset of common items that prior research deemed appropriate for the English and Spanish versions (Manz & Bracaliello, 2016; Manz et al., 2015). However, there is no previously published psychometric support for these adapted versions. The only available support was provided in the adequate internal consistency values found in this study. Therefore, construct bias may exist in the adapted versions used for the current study. Detection of construct bias is important to determine whether or not participant scores may be compared across the two subsamples. Future evaluation of individual items would assess if immigrant and U.S-born participants respond differently on measure items, and whether or not differences in responses that do exist may be attributed to being a part of their specific subgroup (Furr & Bacharach, 2014). Further research may be conducted to confirm the construct validity of the English- and Spanish language versions (Furr & Bacharach, 2014).

Although this study aimed to discern the influence of immigrant status on parents' play beliefs and their relationship to parent involvement and demographics, immigrant status was

confounded with the language version of the measures. The majority of the immigrant subsample completed the Spanish language version, and all of the U.S.-born subsample completed the English language version. Therefore, the impact of the confounding variable constrains discernment of findings according to immigrant status.

Mexican and Central American children in immigrant families are the fastest growing populations in American schools and are at risk for poor academic outcomes, therefore it is relevant to focus on Spanish-speaking immigrants (Roche et al., 2017). However, only using participants who were Spanish or English speaking limits the generalizability of the study to immigrants from other origins. There are likely differences between immigrant groups depending on their country of origin and language(s) spoken. For example, differences between Asian and Hispanic immigrants have been studied and, according to National Center for Education Statistics (2016), among immigrant students' college enrollment differences exist depending on ethnicity, with Asian students attending college at higher rates than Hispanic Students. This difference has been attributed to Asian parents having a higher level of educational attainment than Hispanic parents. It is possible that there are additional between group differences that exist and therefore it is important to recognize this limitation and use it to guide future directions in research.

Implications for Future Research and Practice

Immigrant children make up the fastest growing portion of the American school population and are at elevated risk of poor academic outcomes into adulthood (National Center for Education, 2016). Thus, as home visiting programs continue to serve more immigrant families it is pivotal to determine whether processes are culturally specific or universal (Cote & Bornstein, 2009). This way, home visitors can be culturally responsive to parent play beliefs

about their child's development and families and their children will be set up for success. There is a need for home visitors to have a full snapshot of the family with whom they will be working. This draws from ecological systems theory, which asserts that there are multiple systems a family operates within, and the systems that are the most proximal to a family, influence parent beliefs and, in turn, these processes impact child learning and development (Bronfenbrenner, 2001). Consequently, baseline knowledge of demographic variables and parent play beliefs place a family into context and allows practitioners to interact with a family, as well as adjust evidence based intervention content in a way that is individualized and culturally responsive. Adjustments to home visiting content in response to parent beliefs has been shown to increase the quality of the home visitor parent relationship (Roggman et al, 2001). This has directed research toward 'precision' home visiting. Precision home visiting operates from the assumption that home visitors understand the importance of individualization intervention, (EBI), in that what works for one family, may or may not work for another family (Home Visiting Applied Research Collaborative [HARC], 2018). Precision home visiting shapes components of a home visit to be specific to a given family. In other words, the "active ingredients" that stimulate change are identified to ensure effectiveness of practice for each family. This may be accomplished through investigation of both community-level and geographic traits that allow for a comprehensive view of a family. Findings from research such as the current study, can help identify the components of home visiting that are important to improve outcomes of children and families. Also, as evidenced by Ferrer- Wreder and colleagues (2012), adapting evidence based interventions begins with the assessment of the family's needs so that the home visitors have enough information to make decisions regarding additions or omissions of material.

The present study helped to identify a meaningful subgroup, immigrant families, with the hope of being able to better understand immigrant parents' demographics and beliefs that may assist home visitors and program directors to make visits and content more 'precise.' From the current study, results revealed important information about demographic variables and beliefs parents hold about pretend play, which sheds light on both risk and protective factors of immigrant families in home visiting. According to the results of the study, immigrant families may have attained less education than U.S.-born families. Home visitors may utilize this information when providing resources for the family, in this case possibly discussing options for continuing education or trade schools. The results of the study also showed that there were a high number of immigrant families with married parents. This protective factor suggests a point of resiliency in that the family structure is in-tact and can be built upon on during home visits. For instance, practitioners may want to construct sessions that are suitable for both parents, involve both parents when possible, or develop materials that are easy to share with a parent at a later time. Resources for parents typically focus solely on mothers, in spite of research asserting that fathers typically wish to be better integrated into services (Bartlett, Guzman, & Ramos-Olazagasti, 2018). There is a lack of research that examines perspectives of fathers from diverse ethnic backgrounds, therefore, home visitors may inquire about the perspectives of both parents to assess their desired amount of involvement in services. Additionally, future research may assess father perspectives of immigrant families. It is important for to establish the elements that may be more universal to all parents. In addition, it is important to determine whether there are specific elements, like marital status or education level, that are more 'active' in specific subgroups, such as immigrant families. This area is complex and future research is needed to identify when or if there are times when 'multiple active ingredients' are needed to produce

effective outcomes (HARC, 2018). The current study provides us with exploratory findings to help guide researchers on important elements within immigrant families we may focus on.

The current study also revealed information on parent play beliefs, specially related to pretend play. Immigrant participants were significantly less likely than U.S.-born participants to report that they liked to pretend play with their child. In addition, within the immigrant subsample, immigrant parents who did not graduate high school, believed play to be less important than those who had graduated high school, suggesting that immigrant parents who have lower educational attainment may be a focal point for future research. These findings may also play a practical role in culturally adapting interventions fit family needs. For example, the disconnect between beliefs held by immigrant parents about pretend play and the known benefits of pretend play for young children may push home visitors to provide culturally appropriate strategies to encourage immigrant parents to engage in pretend play with their children. Research has found that parents with knowledge on child development engage in higher-quality interactions with their children (Bartlett et al., 2018), and therefore, home visitors may also incorporate additional educational materials on the developmental benefits of pretend play into sessions.

In addition, immigrant and U.S.-born participants responded similarly on the Toddler & Play scale items that connected play with child learning and development, and results showed a non-significant difference in overall PIEL scores. The lack of a significant finding for the PIEL suggests that both immigrant and U.S.-born participants similarly engaged in early learning activities with their children. Although these were non-significant findings, the findings may suggest that parent play beliefs and involvement may be universal for both Hispanic immigrant and U.S.-born families who are enrolled in home visiting programs. Knowledge of universal

beliefs may be beneficial to home visitors, as this non-significant difference may suggest that adaptation in home visitor practice for subgroups may not be necessary in relation to play beliefs and parent involvement in early learning. Home visitors may focus and expand on the individual needs of families, but simply being a Hispanic immigrant family or a U.S.-born family may not trigger a need for discernment within their practice. However, a possible explanation for the similar parent play belief results between the two subgroups may be that reading the items on the Toddler & Play Scale put play into context and evidently associated play with learning. Examples of items on the Toddler & Play Scale include "Play helps prepare young children for school," "Playing with other adults or children teaches m child how to get along with others," and "Children's language skills improve by playing." Home visiting programs may consider creating a novel term for play when talking with parents about the developmental benefits of playing with a child. For example, using the term 'playful educational activities' may quickly place play into context. The term may clarify the importance of engaging in purposeful play, and the capacity high quality play interactions may have on their child's learning and development. 2

Another crucial point of recent research is the immigrant paradox hypothesis. The immigrant paradox hypothesis is the idea that "first generation immigrants have better health and educational outcomes than individuals born in the United States, despite similarly disadvantaged circumstances" (Palacios et al., 2008, p. 1381). Research has shown that immigrant families who successfully immigrate to the U.S. come with many strengths (e.g., social support and networks), but being in the U.S. over time exacerbates risk factors including lack of enrollment in early education programs, little familiarity with recommend parenting practices within the U.S., low-income status, and low levels of education, that may outweigh the strengths immigrant families come to the U.S. with (Palacios et al., 2008). Additionally, time in the U.S. may impact Hispanic

immigrant parent beliefs on the importance of family solidarity, which can impact the views of later generations on family structure and relationship stability (Karberg et al., 2017). The present study assesses families at one point in time, but it is important to question what the immigrant paradox means to immigrant parents and how we should be adapting home visiting programs over time for certain families. How may home visiting programs better offset the immigrant paradox by programming to meet immigrant families' evolving needs as they acculturate in the U.S.? This may impact how home visiting services are evaluated or the types of future services that are recommended to families. Over time and generations, children are going to change, so we must direct future research to guide the creation of home visiting program models that will address this need.

Table 1

Family Demographic Information

	Total Sample	Immigrant	U.S.-born
Parent Age in Years (X, SD)	35.3 (11.1)	33.8 (9.3)	36.2 (12.0)
Child Age in Years (X, SD)	3.3 (1.1)	3.5 (1.2)	3.1(1.1)
Parent Language (%)			
Spanish	27.2	86.2	-
English	72.8	13.8	100.0
Ethnicity (%)			
Black: Non-Hispanic	65.2	13.8	88.9
Mexican	23.9	75.9	0
Central American	3.3	10.3	0
Unknown	7.6	0	11.1
Education Completed (%)*			
Less than high school	28.9	51.7	16.7
High school graduate or equivalent/GED	36.1	34.5	37.0
Some college, trade or degree completion	34.9	13.8	46.3
Employment Status (%)			
Full Time	20.7	17.2	22.2
Part Time	21.7	24.1	20.6
Not employed	50.0	58.6	46.0
Marital Status (%)*			
Single Parent	52.2	6.9	73
Not Single Parent	40.2	93.1	15.9
Unknown	7.6	0	11.0
Family Size (median, range)	1 (0-7)	1 (0-5)	2 (0-7)
Number of Years in the U.S. (X, SD)	-	11.5 (12.1)	-

* *Indicates a significant difference between immigrant and U.S.-born subsamples*

Table 2

Toddler & Play Scale: Item Level Descriptive Information

	Total Sample				Immigrant Subsample				U.S.-born Subsample			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Children should be given time to play every day	3.50	.55	2	4	3.52	.51	3	4	3.49	.56	2	4
Play helps prepare young children for school	3.25	.59	2	4	3.28	.53	2	4	3.24	.62	2	4
I like to pretend play with my child	3.16	.69	1	4	2.86	.74	1	4	3.31	.62	2	4
I can show my child how to play nicely while playing with him or her	3.36	.51	2	4	3.21	.50	2	4	3.43	.50	3	4
Playing with other adults or children teaches my child how to get along with others	3.35	.52	2	4	3.24	.51	2	4	3.40	.53	2	4
Children's language skills improve by playing	3.27	.56	2	4	3.34	.48	3	4	3.24	.59	2	4

One of the most important things I can do for my child is play with her or him	3.26	.61	2	4	3.31	.54	2	4	3.24	.64	2	4

** The potential range of the Toddler & Play Scale on each item is from 1.00 to 4.00, ranging from strongly disagree (1), to strongly agree (4).*

Table 3

PIEL: Item Level Descriptive Information

	Total Sample				Immigrant Subsample				U.S.-born Subsample			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Join the child while he or she is playing	3.13	.93	1	4	2.96	1.07	1	4	3.21	.86	1	4
Read books together	3.33	.85	1	4	3.24	.99	1	4	3.37	.79	2	4
Teach the child new words	3.67	.63	1	4	3.57	.57	2	4	3.71	.66	1	4
Take the child to a family's or friend's house to play with other children	2.66	1.01	1	4	2.52	1.02	1	1	2.73	1.00	1	4
Tell stories together	2.89	1.05	1	4	2.83	1.07	1	4	2.92	1.05	1	4
Go to places in the community to learn special things	2.99	.96	1	4	3.10	.86	1	4	2.94	1.00	1	4
Name colors and shapes so the child can learn them	3.55	.69	2	4	3.66	.484	3	4	3.51	.76	2	4
Watch TV or movies together	2.88	1.05	1	4	2.68	1.09	1	4	2.97	1.03	1	4

Play educational games, like Leap Frog or Vtech	2.79	1.09	1	4	2.36	.91	1	4	2.98	1.11	1	4
Go to park of playground	3.03	.99	1	4	3.29	.85	1	4	2.92	1.04	1	4
Attend events at family support centers in my community	2.07	1.07	1	4	1.82	.72	1	3	2.17	1.19	1	4
Maintain rules at home	3.40	.86	1	4	3.43	.74	2	4	3.38	.91	1	4
Invite other children to my home to play with my child	2.31	1.07	1	4	2.25	1.11	1	4	2.33	1.06	1	4
Do creative activities, like drawing or shaping a play dough	3.03	.94	1	4	2.79	.90	1	4	3.14	.95	1	4
Count or do other number activities with the child	3.36	.79	2	4	3.03	.78	2	4	3.51	.76	2	4

* *The potential range of the PIEL on each item is from 1.00 to 4.00, ranging from rarely (1), to always (4).*

Table 4

Total Sample Pearson Correlation Matrix (n = 92)

Variables	1	2	3	4	5	6	7
1. Parent Play Beliefs	-						
2. Parent Involvement	.19	-					
3. Family Size	.07	-.13	-				
4. Marital Status	.06	.02	.11	-			
5. Less than HS Graduate	-.19	-.17	-.04	-.29**	-		
6. HS Graduate or Equivalent/GED	-.01	-.07	.07	-.01	-.41**	-	
7. HS + College or Trade	.26*	.20	.04	.24*	-.40*	-.47**	-

**. Correlation is significant at the 0.05 level*
***. Correlation is significant at the 0.01 level*

Table 5

Immigrant Subsample Pearson Correlation Matrix (n = 29)

Variables	1	2	3	4	5	6	7
1. Parent Play Beliefs	-						
2. Parent Involvement	.22	-					
3. Family Size	.20	-.00	-				
4. Marital Status	-.09	-.03	-.06	-			
5. Less than HS Graduate	-.44*	-.32	-.15	-.01	-		
6. HS Graduate or Equivalent/GED	.18	.22	.04	.09	-.75**	-	
7. HS + College or Trade	.40*	.16	.17	-.11	-.41*	-.29	-

**. Correlation is significant at the 0.05 level*
***. Correlation is significant at the 0.01 level*

Table 6

U.S.-born Subsample Pearson Correlation Matrix (n = 63)

Variables	1	2	3	4	5	6	7
1. Parent Play Beliefs	-						
2. Parent Involvement	.17	-					
3. Family Size	.02	-.23	-				
4. Marital Status	.00	-.24	-.02	-			
5. Less than HS Graduate	-.07	.02	.13	-.06	-		
6. HS Graduate or Equivalent/GED	-.07	-.19	.08	-.05	-.28*	-	
7. HS + College or Trade	.21	.16	-.06	.05	-.33**	-.55**	-

**. Correlation is significant at the 0.05 level*
***. Correlation is significant at the 0.01 level*

Table 7

Summary of Simultaneous Multiple Regression Analysis for Variables Predicting Parent Play Beliefs

	Full Sample (n = 92)			Immigrant Subsample (n = 29)			U.S.-born Subsample (n = 63)		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Family Size	.07	.20	.04	.20	.33	.11	-.01	.27	-.01
Marital Status	-2.16	.67	-.04	-.56	1.56	-.06	-.06	1.14	-.01
Less than HS graduate	-.83	.80	-.13	-1.48	.87	-.33	-.05	1.31	-.01
HS + College or Trade	1.33	.75	.22	1.55	1.26	.11	1.37	.96	.21
R^2			.09			.27			.05
F for change in R^2			1.86			2.21			.61

* $p < .05$

Table 8

Summary of Moderator Regression Analysis for Variables Predicting Parent Involvement in Early Learning (n = 92)

Variable	*B*	*SE B*	*β*
Parent Play Beliefs	.40	.29	.16
Immigrant Status	-2.74	1.66	-.17
Parent Play Beliefs X Immigrant Status	.29	.67	.05
R^2		.07	
F for change in R^2		2.20	

Note: Parent play beliefs was centered at the mean
*$p < .05$.

Footnotes

[1] There was an inconsistency between the age of enrolled children (i.e., 0 through 5 years) of parent participants assessed in the study and the typical age range of children served by the National PCHP program (i.e., 16 through 36 months).

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Appendix A

Toddler & Play Scale

Toddlers & Play

Circle how strongly you agree or disagree with the following statements.

1.	Young children learn a lot by playing alone or with others.	Strongly Disagree	Disagree	Agree	Strongly Agree
2.	Children should be given time to play every day.	Strongly Disagree	Disagree	Agree	Strongly Agree
3.	Watching TV or videos is a form of playing.	Strongly Disagree	Disagree	Agree	Strongly Agree
4.	Play time is different from the time children spend learning.	Strongly Disagree	Disagree	Agree	Strongly Agree
5.	Children should play with one toy at a time.	Strongly Disagree	Disagree	Agree	Strongly Agree
6.	Play helps prepare young children for school.	Strongly Disagree	Disagree	Agree	Strongly Agree
7.	When my child plays, I have time to get my work done.	Strongly Disagree	Disagree	Agree	Strongly Agree
8.	I like to pretend play with my child.	Strongly Disagree	Disagree	Agree	Strongly Agree
9.	Children would rather play with other children, not adults.	Strongly Disagree	Disagree	Agree	Strongly Agree
10.	At home, men are more likely to play with children than women.	Strongly Disagree	Disagree	Agree	Strongly Agree
11.	Children should be able to decide what games or activities they want to play with adults.	Strongly Disagree	Disagree	Agree	Strongly Agree
12.	I wish I had more time to play with my child.	Strongly Disagree	Disagree	Agree	Strongly Agree
13.	When my child becomes upset, offering a toy or book will calm him or her.	Strongly Disagree	Disagree	Agree	Strongly Agree
14.	I can show my child how to play nicely while playing with him or her.	Strongly Disagree	Disagree	Agree	Strongly Agree

15.	Playing with other adults or children teaches my child how to get along with others.	Strongly Disagree	Disagree	Agree	Strongly Agree
16.	Adults should join children when they are playing.	Strongly Disagree	Disagree	Agree	Strongly Agree
17.	Children's language skills improve by playing.	Strongly Disagree	Disagree	Agree	Strongly Agree
18.	One of the most important things I can do for my child is play with her or him.	Strongly Disagree	Disagree	Agree	Strongly Agree
19.	It is natural for toddlers to play all the time.	Strongly Disagree	Disagree	Agree	Strongly Agree

Appendix B

Parent Involvement in Early Learning (PIEL)

Child's Name: _____ Your Name: _____ Your Relationship to Child: _____ Date: _____ CDP: _____

Parent Involvement in Early Learning (PIEL)

Circle how frequently you or another member of your family does the following activities with your toddler:

1.	Play games like peek-a-boo	Rarely	Sometimes	Often	Always
2.	Bring the child on errands, like to the laundromat or grocery store.	Rarely	Sometimes	Often	Always
3.	Join the child while he or she is playing alone	Rarely	Sometimes	Often	Always
4.	Limit the child's TV and video watching.	Rarely	Sometimes	Often	Always
5.	Read books together	Rarely	Sometimes	Often	Always
6.	Go to the library	Rarely	Sometimes	Often	Always
7.	Visit health clinic or doctor for well-baby checks	Rarely	Sometimes	Often	Always
8.	Teach the child new words.	Rarely	Sometimes	Often	Always
9.	Take the child to a family's or friend's house to play with other children	Rarely	Sometimes	Often	Always
10.	Seek early intervention services for the child	Rarely	Sometimes	Often	Always
11.	Keep a regular bedtime schedule for the child	Rarely	Sometimes	Often	Always
12.	Say good things about the child in front of friends and family	Rarely	Sometimes	Often	Always
13.	Tell stories together	Rarely	Sometimes	Often	Always

14.	Go to places in the community to learn special things (e.g., zoo, museum, parks, religious activities, sporting events, etc.)	Rarely	Sometimes	Often	Always
15.	Name colors and shapes so the child can learn them	Rarely	Sometimes	Often	Always
16.	Watch TV or movies together	Rarely	Sometimes	Often	Always
17.	Wrestle or play rough games together	Rarely	Sometimes	Often	Always
18.	Call a doctor if I have a concern about the child's health	Rarely	Sometimes	Often	Always
19.	Play educational games, like Leap Frog or Vtech.	Rarely	Sometimes	Often	Always
20.	Go to park or playground.	Rarely	Sometimes	Often	Always
21.	Attend events at family support centers in my community	Rarely	Sometimes	Often	Always
22.	Maintain rules at home	Rarely	Sometimes	Often	Always
23.	Invite other children to my home to play with my child	Rarely	Sometimes	Often	Always
24.	Do creative activities, like drawing or shaping play dough	Rarely	Sometimes	Often	Always
25.	Count or do other number activities with the child	Rarely	Sometimes	Often	Always

Appendix C

Family Information Form

PARENT-CHILD HOME PROGRAM

A PROVEN BEGINNING FOR SCHOOL SUCCESS SINCE 1965

Family Information Form

Initial Program	☐ Mini-Program ☐ Program 1
Program Date Range	**Starts** ____/____/____ **Ends** ____/____/____ mm dd yyyy mm dd yyyy
Home Visitor Assigned to Family	**Names:**
Program Status	☐ Enrolled ☐ Waitlisted
Intake Date ____/____/____ mm dd yyyy	**Date Family Received First VISM** ____/____/____ mm dd yyyy

Child Information

1. Child's Name	**First:**	**Last:**	**Middle:**
2. Child ID *(optional)*			
3. Gender ☐ Male ☐ Female	**4. Date of Birth** ____/____/____ mm dd yyyy	**5. Place of Birth** _____ _____	**6. Address** _____ _____ City _____ State _____ Zip____ County _____ (or Province) Other _____ ie: Ward/ District
7. Phone Number (___) ___ - _____	**8. Location of phone** ☐ Home ☐ Neighbor ☐ Cell Phone		
9. Does the child have siblings? ☐ Yes ☐ No (*Skip to Q10*)			
9a. If yes, how many siblings? _____		**9b. Sibling First Name**	____/____/____

9c. Are siblings eligible for free/ reduced lunch? ☐ Yes ☐ No	Last Name, & Birthdate	_____ mm dd yyyy _____ ____/ / _____ mm dd yyyy _____ ____/ / _____ mm dd yyyy ____/ / _____ mm dd yyyy

Office Use Only:

Date entered into MIS ____/____/_____ mm dd yyyy	Program 1 Date Rang ____/____/_____to ____/ /_____ mm dd yyyy mm dd yyyy Program 2 Date Rang ____/____/_____to ____/ /_____ mm dd yyyy mm dd yyyy	Did child graduate (complete two full program cycles)? ☐ Yes ☐ No

Child Information: Continued

9d. Do siblings receive special education services? ☐ Yes ☐ No
If yes, indicate name of sibling, age, and type of service received:

_____

_____

9e. Have other siblings participated in PCHP? ☐ Yes ☐ No

10. Child's Race/Ethnicity

□ Spanish/Hispanic/Latino of any race
□ Cuban □ Central American □ South American
□ Mexican □ Spanish
□ Other S/H/L_____

□ White, non-Hispanic
(Includes European, Middle Eastern, and North African origins)

□ Black/African American, non-Hispanic
□ African American □ Haitian
□ Kenyan □ Nigerian
□ ~~Other African~~

□ Native Hawaiian or Other Pacific Islander
□ Native Hawaiian □ Guamanian
□ Samoan □ Other Pacific Islander

_____

□ American Indian or Alaskan Native
□ American Indian □ Alaskan Native

□ Bi-Racial or Multi-Racial
Please ~~specify~~:

□ Asian, non-Hispanic
□ Japanese □ Southeast Asian □ Chinese □ Vietnamese □ Korean
□ Asian Indian □ Filipino □ Malaysian □ Thai □ Other Asian

10. Child's Native Language

□ English □ Spanish □ Arabic □ Haitian-Creole □ Polish
□ Cambodian □ Laotian □ Vietnamese □ Russian □ Tagalog
□ Portuguese □ Italian □ French □ Farsi □ Other:
□ African Dialect □ Indian Dialect □ Chinese _____

□ Amharic	□ Hindi	□Mandarin
□ Twi	□ Punjabi	□ Cantonese
□ Hausa	□ Gujurati	□ Taiwanese
□ Other	□ Other	□ Other

12. Child's Native Language Skills □ Age Normal □ Limited □ Non-existent

13. If native language is not English, child's English skills
□ Age Normal □ Limited □ Non-existent

Child Information: Continued

14. What is the primary language spoken at home?

☐ English ☐ Spanish ☐ Arabic ☐ Haitian-Creole ☐ Polish
☐ Cambodian ☐ Laotian ☐ Vietnamese ☐ Russian ☐ Tagalog
☐ Portuguese ☐ Italian ☐ French ☐ Farsi ☐ Other:
☐ African Dialect ☐ Indian Dialect ☐ Chinese ——
☐ Amharic ☐ Hindi ☐ Mandarin
☐ Twi ☐ Punjabi ☐ Cantonese
☐ Hausa ☐ Gujurati ☐ Taiwanese
☐ Other ☐ Other ☐ Other

15. What is the primary language being spoken in home visits?

☐ English ☐ Spanish ☐ Arabic ☐ Haitian-Creole ☐ Polish
☐ Cambodian ☐ Laotian ☐ Vietnamese ☐ Russian ☐ Tagalog
☐ Portuguese ☐ Italian ☐ French ☐ Farsi ☐ Other:
☐ African Dialect ☐ Indian Dialect ☐ Chinese ——
☐ Amharic ☐ Hindi ☐ Mandarin
☐ Twi ☐ Punjabi ☐ Cantonese
☐ Hausa ☐ Gujurati ☐ Taiwanese
☐ Other ☐ Other ☐ Other

16. Is the child <u>currently</u> receiving other early childhood and education services?
(Select all that apply)

☐ None ☐ Head Start ☐ Relative Care
☐ Center-based child care ☐ Even Start ☐ Other——
☐ Family day care ☐ Public Pre-school
☐ Early Head Start ☐ Private-Pre-school

17. Has the child previously received other early childhood and education services? *(Select all that apply)*

☐ None ☐ Head Start ☐ Relative Care
☐ Center-based child care ☐ Even Start ☐ Other
☐ Family day care ☐ Early Head Start

18. Is the child currently receiving additional home visiting services? *(Select all that apply)*

☐ None ☐ Parents As Teachers ☐ Early Intervention Service
☐ Nurse-Family Partnership ☐ Healthy Families ☐ Early Head Start
☐ Other

19. Has the child previously received additional home visiting services? *(Select all that apply)*

☐ None ☐ Parents As Teachers ☐ Early Intervention Service
☐ Nurse-Family Partnership ☐ Healthy Families ☐ Early Head Start
☐ Other

Child Information: Continued

20. Was the child low birth weight (below 2500g or 5 lbs 8 oz)? ☐ Yes ☐ No

21. Was the child born prematurely (before 37 gestational weeks)? ☐ Yes ☐ No

22. Has the child been diagnosed with special needs that impact his/her participation in the Program? *(Skip to Referral Information)* ☐ Yes ☐ No

22a. If yes, choose type(s):

☐ None ☐ Vision Impairment ☐ Hearing Impairment ☐ Chronic Health Condition
☐ Developmental/Cognitive/ ☐ Motor Delay ☐ Speech
☐ Other

22b. Is the child currently receiving services for any of these special needs?

☐ Yes ☐ No

If yes, what services? _____

_____

Referral Information

1. How did the family learn about the Program?

☐ Coordinator Outreach ☐ Home Visitor ☐ Word-of-Mouth
☐ Program Family ☐ School ☐ Referral from Early Intervention
☐ Referral from Agency or Program in the Community
☐ Referral from Another Home Visiting Program

2. Referral Agency Name:

Additional Family Information

1. Does the family or program child receive government aid? *(Select all that apply)*

☐ None ☐ Food Stamps ☐ Social Security (SSI, SSD) ☐ Medical

☐ TANF ☐ Child Care Subsidy ☐ Public Housing/Section 8 ☐ WIC

☐ Other ———

2. Is the family homeless? ☐ Yes ☐ No

3. Annual Family Income Range

☐ Under $10,000/year ☐ $10,001-15,000/year ☐ $15,001-20,000/year
☐ $20,001-25,000/year ☐ $25,001-30,000/year ☐ $30,001-35,000/year
☐ $35,001-40,000/year ☐ $40,001-45,000/year ☐ $45,001-50,000/year
☐ Over $50,001/year

Adult Information

Identifying Information	Adult #1	Adult #2
1. Name (First, Last)		
2. Relationship to Child	☐ Mother ☐ Father ☐ Grandmother ☐ Grandfather ☐ Foster Parent ☐ Other Relative	☐ Mother ☐ Father ☐ Grandmother ☐ Grandfather ☐ Foster Parent ☐ Other Relative
3. Is this adult the child's Primary Caregiver?	☐ Yes ☐ No *(Skip to Q4)*	☐ Yes ☐ No *(Skip to Q4)*
3a. If yes, then how many hours a day is the child in the care of the Primary Caregiver?	——— hrs/day in the care of the Primary Caregiver	——— hrs/day in the care of the Primary Caregiver
4. Is this adult participating in home visits?	☐ Yes ☐ No	☐ Yes ☐ No
5. Adult lives with child?	☐ Full-time ☐ Part-time ☐ Does not live w/child	☐ Full-time ☐ Part-time ☐ Does not live w/child
6. Address	_____ _____	_____ _____

	City State Zip	City State Zip
6a. County/Province		
6b. Other Geographical Designation (ie: District)		
7. Date of Birth	____/____/____ mm dd yyyy	____/____/____ mm dd yyyy
8. Adult was born in the U.S.?	□ Yes *(Skip to Q10)* □ No	□ Yes *(Skip to Q10)* □ No
8b. If no, what country?		
9. # of Years in the U.S.		

Adult Information: Continued

Identifying Information	Adult #1	Adult #2
10. Race/Ethnicity	□ Spanish/Hispanic/Latino of any race □ Cuban □ Central American □ Mexican □ Puerto Rican □ Spanish □ South American □ Other S/H/~~L~~—— □ White, non-Hispanic *(Includes European, Middle Eastern, and North African origins)* □ American Indian or Alaskan Native □ American Indian □Alaskan Native □ Black/African American, non-Hispanic □ African American □ Haitian	□ Spanish/Hispanic/Latino of any race □ Cuban □ Central American □ Mexican □ Puerto Rican □ Spanish □ South American □ Other S/H/~~L~~—— □ White, non-Hispanic *(Includes European, Middle Eastern, and North African origins)* □ American Indian or Alaskan Native □ American Indian □Alaskan Native □ Black/African American, non-Hispanic □ African American □ Haitian □ Kenyan □Nigerian

	□ Kenyan □Nigerian □ Other African_____ □ Asian, non-Hispanic □ Japanese □ Southeast Asian □ Chinese □ Vietnamese □ Korean □ Asian Indian □Filipino □ Malaysian □Thai □ Other Asian □ Native Hawaiian or Other Pacific Islander □ Native Hawaiian □ Guamanian □ Samoan □ Other Pacific Islander □ Bi-Racial or Multi-Racial Please specify:_____	□ Other African_____ □ Asian, non-Hispanic □ Japanese □ Southeast Asian □ Chinese □ Vietnamese □ Korean □ Asian Indian □Filipino □ Malaysian □Thai □ Other Asian □ Native Hawaiian or Other Pacific Islander □ Native Hawaiian □ Guamanian □ Samoan □ Other Pacific Islander □ Bi-Racial or Multi-Racial Please specify:

Adult Information: Continued

Identifying Information	Adult #1	Adult #2
11. Native Language	□ English □ Spanish □ Arabic □ Haitian-Creole □ Polish □ Cambodian □ Laotian □ Vietnamese □ Russian □ Tagalog □ Portuguese □ Italian □ French □ Farsi □ African Dialect □ Amharic □ Twi □ Hausa □ Other □ Indian Dialect	□ English □ Spanish □ Arabic □ Haitian-Creole □ Polish □ Cambodian □ Laotian □ Vietnamese □ Russian □ Tagalog □ Portuguese □ Italian □ French □ Farsi □ African Dialect □ Amharic □ Twi □ Hausa □ Other □ Indian Dialect

	□ Hindi □ Punjabi □ Gujurati □ Other □ Chinese □ Mandarin □ Cantonese □ Taiwanese □ Other	□ Hindi □ Punjabi □ Gujurati □ Other □ Chinese □ Mandarin □ Cantonese □ Taiwanese □ Other
12. Adult's Written Native Language Skills	□ Yes □ Some □ None	□ Yes □ Some □ None
13. Adult's Spoken English Skills	□ Yes □ Some □ None	□ Yes □ Some □ None
14. Adult's Written English Skills	□ Yes □ Some □ None	□ Yes □ Some □ None
15. Adult's Employment Status	□ Full-time □ Part-time □ Not currently employed	□ Full-time □ Part-time □ Not currently employed
16. Did adult graduate high school or receive their GED prior to entering the Program?	□ Yes □ No	□ Yes □ No

Adult Information: Continued

Identifying Information	Adult #1	Adult #2
17. # of years of schooling completed <u>outside</u> U.S.?	□ N/A □ Less than 3rd Grade □ Less than 9th Grade □ Some HS, didn't finish □ HS Graduate or equivalent □ HS + some college or trade school □ Two-year college degree □ Four-year college degree □ College +	□ N/A □ Less than 3rd Grade □ Less than 9th Grade □ Some HS, didn't finish □ HS Graduate or equivalent □ HS + some college or trade school □ Two-year college degree □ Four-year college degree □ College +

18. # of years of schooling completed <u>inside</u> U.S.?	☐ N/A ☐ Less than 3rd Grade ☐ Less than 9th Grade ☐ Some HS, didn't finish ☐ Received GED ☐ HS Graduate ☐ HS + some college or trade school ☐ Two-year college degree ☐ Four-year college degree ☐ College +	N/A ☐ Less than 3rd Grade ☐ Less than 9th Grade ☐ Some HS, didn't finish ☐ Received GED ☐ HS Graduate ☐ HS + some college or trade school ☐ Two-year college degree ☐ Four-year college degree ☐ College +
19. Is adult currently in school or educational program?	☐ Yes ☐ No *(Skip to Q20)*	☐ Yes ☐ No *(Skip to Q20)*
19a. If yes, what type?	☐ High School ☐ ESL ☐ College ☐ Other ☐ Trade School ☐ Job Training Program ☐ Literacy Program ☐ GED	☐ High School ☐ ESL ☐ College ☐ Other ☐ Trade School ☐ Job Training Program ☐ Literacy Program ☐ GED

Adult Information: Continued

Identifying Information	Adult #1	Adult #2
20. Was this adult 19 years old or younger when this child was born?	☐ Yes ☐ No	☐ Yes ☐ No
21. Is this adult a single parent?	☐ Yes ☐ No	☐ Yes ☐ No
22. Marital Status	☐ Married ☐ Never Married ☐ Separated/Divorced ☐ Widowed ☐ Common-law Marriage	☐ Married ☐ Never Married ☐ Separated/Divorced ☐ Widowed ☐ Common-law Marriage

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Pre-Doctoral Internship

Ossining Union Free School District — August 2018 - Present
Pre-Doctoral Intern: Ossining, NY
Supervisors: Richard C. Dale, PsyD, LP; Timothy Scholten, EdS

- Complete psychoeducational evaluations and curriculum based measurement, and write integrated psychoeducational reports for students' kindergarten through 8th grade with Specific Learning Disability, Emotional Disturbance, Intellectual Disability, Attention Deficit Hyperactivity Disorder, and Autism Spectrum Disorder
- Provide individual counseling using evidence-based strategies to students with a range of behavioral, emotional, and social needs (e.g., social skills, organizational skills, symptoms of depression and anxiety)
- Participate in multidisciplinary meetings, including Committee on Special Education (CSE) meetings, to discuss child and adolescent academic and behavioral needs, as well as determine evidence-based strategies to ensure student success
- Engage in behavioral consultation with teachers to provide support, as well as collaboratively develop class-wide strategies and/or individualized behavior plans
- Take part in Positive Behavioral Interventions and Supports (PBIS) committee meetings and help run PBIS trainings and activities throughout the school year

- Run statistical analyses using school and classroom level academic, behavioral, and demographic data to inform consultation sessions with teachers and intervention for students
- Conduct district-wide benchmark assessments in the Fall, Winter and Spring with kindergarten through 5th graders in early academic skills and oral reading fluency

Supervised Practicum Placements

Lincoln Leadership Academy Charter School September 2016
Psychology Trainee: Allentown, PA – May 2017
Supervisors: Lakisha Gonzalez, MSW; Christine Novak, PhD

- Implemented crisis counseling to students, parents, and staff members
- Provided one-on-one and group counseling to students ranging from kindergarten through 12th grade
- Addressed behavioral, social-emotional, and academic needs using evidence-based strategies (e.g., functional behavior assessment, cognitive behavioral therapy (CBT) and motivational interviewing)
- Developed feedback surveys to assess perceptions of family and student experience in the school
- Assisted in facilitating discussion psychology class for high school students
- Consulted with parents, teachers and school administrators to problem solve student academic and/or behavioral challenges

Broughal Middle School September 2015
Psychology Trainee: Bethlehem, PA – June 2016
Supervisors: Lidia Cordero, MSW, MEd, EdS; Christine Novak, PhD

- Conducted comprehensive evaluations of students of diverse linguistic and cultural backgrounds with academic, behavioral and mental health concerns
- Administered a range of cognitive, achievement, behavioral, adaptive and observational assessments as part of the special education evaluation process
- Participated in and presented information at team meetings with school staff, parents and middle school students
- Developed and led group counseling sessions alongside school resource officer for students who were referred for verbal and/or physical aggression
- Utilized a CBT approach to perform individual counseling with seventh grade student with a learning disability and oppositional defiant disorder
- Assisted in supporting students and school staff during crisis situations

Marvine Elementary School September 2015
Psychology Trainee: Bethlehem, PA – June 2016
Supervisor: Lidia Cordero, MSW, MEd, EdS; Christine Novak, PhD

- Consulted with school staff in monthly child study meetings to begin problem solving process for students who presented behavioral, academic or social-emotional concerns in the classroom or at home
- Completed psychoeducational, functional behavioral, and curriculum based assessments and wrote integrated psychoeducational reports for children and adolescents from kindergarten through fifth grade
- Co -planned alongside speech language pathologist community-outreach event for parents to learn about the development of executive function

Course-Based Practica

Assessment & Intervention in Educational Consultation January 2015 – May 2015
Psychology Trainee: Lehigh University
Instructor: Edward Shapiro, PhD

- Conducted interviews, observations and direct assessments as part of a comprehensive curriculum based assessment of third grade student's reading, writing, spelling, and math skills
- Designed, implemented and progress-monitored evidence-based math intervention
- Presented assessment results and intervention progress at team meeting with parents and school staff

Behavioral Assessment August 2014 – December2014
Psychology Trainee: Lehigh University
Instructor: Robin Hojnoski, PhD

- Conducted clinical assessment interviews with teachers, parents, and child to evaluate third grade student's behavior concerns
- Developed and used appropriate behavior rating scales and observation systems
- Designed intervention and collaborated with team to provide recommendations

Consultation Procedures August 2014 - December 2014
Psychology Trainee: Lehigh University
Instructor: Patricia H. Manz, PhD

- Implemented behavioral consultation and conjoint behavioral consultation
- Applied conjoint behavioral consultation procedures with family at Head Start to develop feasible and applicable interventions to address hyperactive and inattentive behaviors of four-year old child
- Created data collection methods and integrity checks to monitor behavior and intervention progress

Assessment of Intelligence August 2014 - December 2014
Psychology Trainee: Lehigh University
Instructor: Kevin Kelly, PhD
- Implemented wide range of intelligence and achievement assessments
- Evaluated ability and ability-achievement discrepancies and communicated findings in written and oral reports

Related Clinical Experiences

Behavior Change Success Corp. May 2018 - June 2018
ABA Therapist: Long Island, NY
- Engaged one-on-one with 12-year-old male diagnosed with ASD, ADHD, and Intermittent Explosive Disorder, family members and BCBA to create behavior plan
- Ran discrete trials to increase functional communication, social skills and daily compliance to academic needs, as well as collected data to analyze effectiveness

Columbus Avenue Elementary School May 2018 – June 2018
Early Childhood Center Teacher Assistant: Freeport, NY
- Assisted teacher in overall classroom management (behavior and academic) and one-on-one daily support of students with severe developmental and language delays
- Diagnoses present in students included Autism Spectrum Disorder, ADHD, and Pica
- Conducted discrete ABA trials as part of students individualized behavior plans
- Implemented de-escalation strategies for students in crises

SUPERVISION & UNIVERSITY TEACHING EXPERIENCES

Adelphi University Undergraduate Course: Writing in Psychology January 2018 - Present
Adjunct Professor: Garden City, NY
- Develop course syllabus and course material for undergraduate students majoring in psychology
- Engage and support students throughout the semester to ensure successful learning of course objectives
- Teach topics as part of course including analysis of empirical articles, critical and integrative thinking, clear communication of ideas, presentation of scientific knowledge, and writing in APA format

Project Little Talks September 2014 – August 2017
Home Visitor Supervisor: Allentown, PA
Supervisor: Patricia H. Manz, PhD
- Supervised Early Head Start (EHS) home visitors working with low-income, primarily Latino families with children ages 0 to 3 and pregnant mothers
- Utilized progress monitoring and performance feedback strategies to support home visitor use of early intervention program, increase

engagement between home visitors and caregivers and enhance the quality of home visits

Children in Context: Families, Schools, and Communities August 2016 - December 2016
Teaching Assistant: Bethlehem, PA
Instructor: Patricia H. Manz, PhD

- Created course material and instructed students on sibling relationships and teacher-student relationships within the school system
- Supported students in learning of class material throughout the semester
- Assisted in the facilitation of discussion to promote critical thinking about topics discussed throughout the course
- Topics included multicultural practice, cultural competence, ethnic identity, acculturation, parent-child relationships, education reform, experience and impact of discrimination, neighborhoods and development, and early childhood education

RESEARCH EXPERIENCE

Doctoral Dissertation September 2017 - Present
Doctoral Student Investigator: Bethlehem, PA
Dissertation Chair: Patricia H. Manz, PhD

- With intent to inform culturally responsive home visiting practices, explored characteristics of immigrant and U.S.-born families of low-income who are enrolled in home visiting programs for their birth to 5-year-old children
- Examined differences between and within subgroups in demographic variables, parent play beliefs, and parent involvement in early learning
- Collaborated with staff at Parent Child Home Program and Public Health Management Corp. in Philadelphia to discuss project procedures and data collection
- Ran statistical analyses (e.g., multiple regression, moderator regression models, chi square, etc.) and critically analyzed results

Project Little Talks August 2013 – August2017
Graduate Student Researcher: Bethlehem, PA
Advisor: Patricia H. Manz, PhD

- Participated in ongoing evaluation of Little Talks early intervention program designed to promote parent-child engagement, book sharing activities, and child language development in the home
- Developed Little Talks form using iForm application and provide ongoing iForm support to EHS home visitors
- Designed and delivered training of Little Talks early intervention program to EHS home visitors
- Created assessment tracking forms and track timing of assessment periods
- Directly supervised EHS home visitors implementing early intervention program
- Organized data sets and conducted statistical analyses to assess project outcomes

Qualifying Research Project Spring 2014 – Fall 2016
Doctoral Student Investigator: Bethlehem, PA
Advisor: Patricia H. Manz, PhD

- Examined differences in parent-child engagement outcomes of children whose parents have been previously enrolled in EHS and those who were enrolled in EHS services for the first time
- Collaborated with data analyst to obtain archived data from records maintained by Community Services for Children, Inc., the governing organization for EHS
- Conducted a descriptive analysis of the results to assess the mean, standard deviation and range of the data for the measure, according to the two groups.
- Conducted and analyzed results of a general linear model (GLM) repeated measures ANOVA to test the research question

Mountaintop Project: Preventative Healthcare in the Lehigh Valley May 2014 – September 2014
Independent Researcher: Allentown, PA
Advisors: Patricia H. Manz, PhD & Brook Sawyer, PhD

- Partnered with Children and Youth Services (CYS) in the development of surveys to measure family perceptions of involvement in CYS
- Developed interview questions regarding family experiences with CYS and their engagement with caseworkers
- Participated in focus groups and individual interviews of families
- Mentored Lehigh University undergraduate students in literature review

Helping Early Literacy with Practice Strategies (HELPS) August 2012 – May 2013
Advisor: John C. Begeny, PhD
Undergraduate Volunteer: Raleigh, NC

- Implemented HELPS program twice a week with students ranging from second to fifth grade at Washington Boys and Girls Club
- Spent time and formed relationships with students at Boys and Girls Club when not implementing HELPS
- Assisted in data entry of HELPS placement and AIMSweb assessments
- Helped to produce HELPS materials that were sent out to volunteers and teachers who were also using the program
- Observed new students who were being trained to implement HELPS

Project Supporting Parental Activities for Reading with Kids (SPARK) January 2013 – May 2013
Undergraduate Volunteer: Raleigh, NC
Advisor: John C. Begeny, PhD

- Assisted in developing feasible activities for parents to implement with their children at home
- Created instructional protocol for activities that were developed

School Consultation Research Project September 2010 – May 2012
Undergraduate Researcher: Raleigh, NC
Advisor: William P. Erchul, PhD, EDPP

- Research Assistant to Doctoral Student Julia Easton Mayer

Analyzed and coded videos involving teacher implementation of the Leveled Literacy Intervention (LLI); Measured how accurately teachers of different experience levels and backgrounds implemented the LLI program and how well these teachers adjusted their delivery based on performance feedback given by researchers in the Erchul Lab

- Research Assistant to Doctoral Student Bindiya Shajith
  Coded invitations written by middle school children and collected data at school events from parents in attendance; Research was conducted to determine which type of invitation (3 types were distributed) was most likely to influence parents
- Research Assistant to Doctoral Student Chelsea Bartel
  Coded transcripts from school consultation meetings using the Consultation Analysis Record (CAR); Evaluated which role (facilitator, psychologist, referring teacher, or special education teacher) had greater message control by coding elicitor and emitter statements, as well as evaluated the message content of each consultation meeting

PROFESSIONAL LEADERSHIP & COMMUNITY OUTREACH

Adelphi University Research Day April 2018
Psychology Faculty Reviewer: Garden City, NY

- Review and evaluate the content, presentation and quality of oral research presentations of undergraduate psychology students during university's annual research day

Lehigh University School Psychology Club August 2013 – August 2017
Community Involvement & Secretary: Bethlehem, PA

- Coordinated community partnership with local Boys and Girls Club and organized a 'Giving Tree' where members of the Lehigh community sponsored a child during the holiday season
- Collaborated with police officer at Broughal Middle School to raise money for leadership students to participate in field trip to the Franklin Institute in Philadelphia
- Performed secretarial duties in fall 2013 and spring 2014 semesters, including taking minutes of each club meeting

Lehigh University Theory to Practice News Article, Issue No. 6 October 2014
News Interviewee: Bethlehem, PA

- Interviewed by journalist for article titled "A 'Safe Start' for Children"
- Effectively communicated the purpose and outcomes of research project conducted with EHS Safe Start program as part of the Lehigh Valley Mountaintop Initiative

Cross University Collaborative Mentoring Conference August 2013 – June 2015
Graduate Student Representative: Bronx, NY & Philadelphia, PA

- Assisted graduate student planning committee in fundraising and organizing student led conference for graduate students engaged in child development research

Alpha Phi Omega (APO), National Service Fraternity August 2010 – May 2013
Iota Lambda Chapter: Raleigh, NC

- Membership Vice Present – Fall 2011 Semester
  In charge of delegating responsibilities to a group of 8 students who assisted the membership vice president; Planned APO retreat, which consists of booking a house, planning bonding activities, and buying and preparing meals; Planned end of semester formal meeting, in which I decorated, booked the venue, provided food and stayed within budget
- External Relations Vice President – Spring 2012 Semester
  Planned events with chapters in the triangle area; Kept in touch with alumni by creating and sending out alumni newsletters and inviting alumni to events; Led fundraising event for the Iota Lambda chapter

Brown Bag Ministries at St. Andrew the Apostle Catholic Church September 2010 – May 2012
Volunteer: Raleigh, NC

- Prepared and distributed brown bag lunches to the homeless on Saturday mornings at Moore Square located in downtown Raleigh

Salvation Army January 2011 – December 2011
Volunteer Tutor: Raleigh, NC

- Tutored and assisted students ranging from first to fifth grade on homework
- Assisted with a nutrition program hosted by the Salvation Army

Head Start Program September 2009 – May 2010
Volunteer Teacher Assistant: Roanoke, VA

- Interacted with underprivileged children by assisting with classroom duties such as helping Spanish speaking children with English reading material, creative activities, and playtime

PROFESSIONAL PUBLICATIONS

Manz, P.H., Ridgard, T., Faison, J., **Whitenack, J.,** Ventresco, N., Sole, M., Carr, D., & Cai, Y. (in press). Little Talks: A modular treatment approach for promoting infant and toddler language and acquisition through parents' preferences and competencies. In S. Sonnenschein & B. Sawyer (Eds.), Building on Black and Latino Families' Strengths to Support the Early Academic Development of Their Children. New York, NY: Springer International Publisher

Manz, P. H., Power, T. J., Roggman, L. A., Eisenberg, R. A., Gernhart, A., Faison, J., Ridgard, T., Wallace, L., & **Whitenack, J**. (2017). Integrating the Little Talks Intervention into Early Head Start: An experimental examination of implementation supports involving fidelity monitoring and performance feedback. *Children and Youth Services Review.*

PROFESSIONAL PRESENTATIONS

Manz, P. H., Eisenberg, R. A., Wallace, L., **Whitenack, J.,** Ventresco, N., Ridgard, T., & Faison, J. (2018, February). *Implementation science in early intervention: Collaborative development and evaluation.* Paper presentation at

the National Association of School Psychologists annual convention, Chicago, Il.

Whitenack, J., & Ridgard, T. (2017, February). *Implementation science in early intervention: Collaborative development and application.* Paper presented at National Association of School Psychologists Annual Convention, San Antonio, TX.

Manz, P. H., **Whitenack, J.,** Wallace, L., Ventresco, N. (2017). *Examining the relationships among video-based observation and self-reported home visiting fidelity with children's vocabulary.* Paper presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.

Ventresco, N., **Whitenack, J.,** & Manz, P.H. (2017, February). *An Exploratory Study of Home Visitors' Attitudes Towards Evidence-Based Practices.* Poster presented at National Association of School Psychologists Annual Convention, San Antonio, TX.

Manz, P.H., **Whitenack, J.,** & Ventresco, N. (2016, October). *Communication & language acquisition in birth-to-three: A critical time for fostering and intervening early to promote children's development.* Invited to workshop at Pennsylvania Association for Infant Mental Health in Allentown, PA.

Whitenack, J., & Manz, P.H. (2016, February). *Repeated Early Head Start enrollment: Language and parent engagement outcomes.* Poster presented at National Association of School Psychologists Annual Convention, New Orleans, LA.

Manz, P.H., Eisenberg, R., Manzo, J.C., Gernhart, A., Ridgard, T., **Whitenack, J.,** Wallace, L., & Faison, J. (2016, February). *Flexibility with fidelity: Adapting an intervention to meet family needs.* Poster presented at National Association of School Psychologists Annual Convention, New Orleans, LA.

Manz, P. H., Roggman, L., Power, T., Ridgard, T., Wallace, L., & **Whitenack, J.,** (2016). Little Talks: Bolstering Children's Vocabulary through Evidenced-Based Home Visiting. A poster presentation at the National Research Conference on Early Childhood, Washington, D.C.

Whitenack, J., & Manz, P. (2015, February). *Early Head Start outcomes: The influence of multiple sibling enrollment.* Poster presented at National Association of School Psychologists Annual Convention, Orlando, FL.

Manzo, J.C., Manz, P.H., Eisenberg, R.A., Gernhart, A.L., Faison, J., Ridgard, T., **Whitenack, J.,** Wallace, L.E., Roggman, L., Power, T.J. (2015, February). *Enhancing child language development through a home book sharing intervention.* Paper presented at the National Association of School Psychologists Annual Convention, Orlando, FL.

Eisenberg, R., Faison, J., **Whitenack, J.,** Manz, P., Gernhart, A., Manzo, J., Wallace, L.E., Ridgard, T. (2015, February). *Evidence-based decision-making*

in practice: Performance feedback in practitioner supervision. Paper presented at the annual convention of the National Association of School Psychologists, Orlando, FL.

Manzo, J., Manz, P., Eisenberg, R., Gernhart, A., Faison, J., Ridgard, T., **Whitenack, J.,** & Spearot, L.E. (2014 July) *Little Talks: A Partnership with Early Head Start Home Visitors to Enhance Parent-Child Book Sharing*. Poster presented at Head Start's 12th National Research Conference, Washington DC.

Whitenack, J., & Manz, P.H. (2014, June). *Facilitators and barriers to multiple sibling enrollment in Early Head Start.* Paper presented at Cross-University Collaborative Mentoring Conference, Bronx, NY.

Eisenberg, R. A., Cho, P., Manz, P. H., Manzo, J. C., Ridgard, T., Faison, J. D., Gernhart, A. L., & **Whitenack, J**. (2014, April). *Partnership processes in Early Head Start home visiting: Performance feedback for intervention implementation*. Poster presented at the Society for Research in Child Development Special Topic Meeting, Alexandria, VA.

Eisenberg, E., Manz, P., Manzo, J., Gernhart, A., Faison, J., Ridgard, T., & **Whitenack, J.** (2014, February). *Home visiting for school readiness: Parent growth in storybook talk.* Poster presented at National Association of School Psychologists Annual Convention, Washington, DC.

Bartel, C.M., Erchul, W.P., Young, H.L., & **Whitenack, J.** (2013, August). *Understanding problem-solving team consultation using the Consultation Analysis Record.* Poster presented at the Annual Meeting of the American Psychological Association, Honolulu, HI.

Bartel, C. M., Erchul, W. P., Young, H. L., & **Whitenack, J**. (2013, September). *Understanding problem- solving team consultation using the Consultation Analysis Record*. Poster presented at the fall conference of the North Carolina School Psychology Association, Cary, NC.

HONORS, AWARDS AND AFFILIATIONS

College of Education Dean's Endowed Student Travel Scholarship
Grant Recipient

College of Education Diversity Committee Travel Fund
Grant Recipient

Mountaintop Summer Research Project
Grant Recipient

National Association of School Psychologists (NASP)
Student Member

International Honor Society in Psychology (Psi Chi)
Member: Honor society that offers membership to students who are in the top 35% of their class and have maintained a psychology GPA of at least a 3.00

National Society of Collegiate Scholars
Member: Academic honor society that offers membership to students in the top 20% of their class

National Society of Collegiate Scholars Induction Recognition Award
Recipient: Selected as 1 of 30 members to receive funding towards my education

William T. Kretzer Family Scholarship
Recipient: Selected to receive funding towards my education