

An Analysis of Ethnicity in Treatment Response of Parents in the National Classroom
Literacy Interventions and Outcomes in Even Start Study

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Abstract

BETH ANNE FELDMAN: An Analysis of Ethnicity in Treatment Response of Parents in the National Classroom Literacy Interventions and Outcomes in Even Start Study
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This study investigates the treatment effects of a family literacy parent education program, Partners for Literacy (PfL), and whether treatment effects of PfL vary by ethnicity. Results from hierarchical linear modeling revealed that parents in PfL significantly outperformed their counterparts in a control group on a measure of interactive book reading skills with their child but treatment effects were not found to be a function of ethnicity. This study shows the promise of PfL to train a diverse group of parents to promote their child's language and literacy through interactive book reading. Additionally, baseline ethnic differences on parent outcomes underscore the importance of carefully considering ethnic differences in the development of parent education interventions.

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CHAPTER ONE:

INTRODUCTION

A rich tradition of research has documented parenting practices and aspects of the home environment considered to be optimal for children's development. Some researchers across disciplines have demonstrated; however, that ethnic background influences parenting and the home context. Based on this, some argue that many existing parent education programs may not be a good fit for all ethnic groups and that it is essential to address and incorporate ethnic differences in parenting when designing and implementing parenting programs. This perspective has prompted recent interest and attention to parent education programming that is targeted at and tailored for specific ethnic groups.

However, some researchers caution against the movement towards designing parent education for parents based on their ethnic background due to the limited research in this area. There is still an evolving body of research investigating whether treatment effects of parenting interventions are moderated by ethnicity. Additionally, there is inconclusive evidence available on the effectiveness of culturally sensitive parent education programming and its advantage over traditional parent education programming for parents from diverse ethnic backgrounds.

The purpose of this study is to first determine whether participants receiving the parent education family literacy program, Partners for Literacy (PfL), perform

significantly different on a measure of parent responsiveness and a measure of interactive book reading compared to participants not receiving Pfl and enrolled in a control group. Additionally, the study will also assess whether there are differences in how White, Black, and Hispanic families, regardless of treatment group, perform on a measure of parent responsiveness and a measure of interactive book reading. Thirdly, study findings will investigate whether ethnicity moderates the treatment effects of Pfl.

CHAPTER TWO:

REVIEW OF THE LITERATURE

A great deal of research has demonstrated that the quality of the parent-child relationship and parenting style are related to children's socio-emotional and early literacy development (e.g., Brooks-Gunn & Markman, 2005; Taylor, Clayton, & Rowley, 2004). The home environment has also been well studied and identified as a primary context for children's socio-emotional development and early learning (Bradley, Caldwell, & Rock, 1988; Morrison & Cooney, 2001). The following section will review the literature on optimal parenting style and practices and discuss important dimensions of the home environment that influence preschooler's socio-emotional outcomes and their acquisition of early literacy skills.

Parenting Style

Much of contemporary research on parental influence on child development has been largely guided by Baumrind's (1971) tripartite classification of parenting style. Based on her research with one hundred, White preschool children, Baumrind found that parents differed on two dimensions: parental demandingness (control, supervision, maturity demands) and responsiveness (warmth, acceptance, involvement). Based on these two dimensions, Baumrind developed three major types of parenting styles that include authoritarian, authoritative, and permissive. Authoritative parenting style is distinguished by emotional support, responsiveness, setting firm limits and boundaries,

and clear communication between parent and child. The authoritarian style is characterized by discipline that is punitive and directive whereas the permissive style is marked by a high degree of warmth, lax boundaries and fewer restrictions placed on the child.

Maccoby and Martin (1983) later extended Baumrind's typology by categorizing parents according to both parental demandingness and responsiveness. Redefining the parenting styles in terms of the interplay between these two underlying dimensions, expanded Baumrind's ideas into a fourfold typology creating a fourth parenting style called indifferent/uninvolved. Low levels of nurturance (warmth), acceptance, communication, and control characterize this type of parenting.

Considerable correlational research has linked authoritative parenting with positive outcomes for the child, such as self-control, self-reliance, friendly relationships, as well as achievement orientation and academic success. In contrast, authoritarian and permissive style has been linked to a host of poor outcomes in children such as anxiety, frustration, externalizing behaviors, immaturity, poor emotional self-regulation and poor school achievement (Jewell, Krohn, Scott, Carlton & Meinz, 2008). Inconsistent discipline has also shown to be associated with acting out behaviors and some studies suggest that inconsistent discipline is more detrimental to children's social and emotional health than authoritarian discipline (Jewell et al., 2008).

In addition to parenting style, strong research suggests that aspects of the parent-child relationship are strong predictors of children's academic competence and social competence. Specifically, parent warmth and parental responsiveness both consistently show a strong association with positive child outcomes, even after accounting for factors

such as maternal education (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002, NICHD Early Child Care Study, 2002). Parental warmth is defined as the degree to which parents adapt to children's needs and abilities and parental responsiveness refers to sensitive and supportive behavior and appropriate parental behaviors in response to a child's actions (Bornstein, Tamis-LeMonda, Hahn, Haynes, 2008).

Extensive research also demonstrates the effects of early mother-child interactions on children's early academic competence (Gregory & Rimm-Kaufman, 2008). In particular, it is well established that maternal sensitivity to the child's signals has been found to predict positive cognitive and social outcomes during early childhood (NICHD Early Child Care Study, 2002). In a study of 500 mothers and their children, responsive and sensitive care giving from birth to age three was associated with children's cognitive and language development. A follow up study that examined outcomes at 4.5 years demonstrated that maternal sensitivity and responsiveness were the strongest correlates of children's language and emerging academic skills at kindergarten entry (NICHD Early Child Care Study, 2002). Another longitudinal study of 282 children investigated the role of maternal responsiveness on cognitive development. Maternal behaviors and children's cognitive and language skills were assessed at 6, 12, 24 months and 3.5 and 4.5 years of age. The results indicated that warm and responsive maternal behaviors were equally important for infants, toddlers, and preschoolers. Decreases in responsive parenting were related to slower rates of cognitive development. Specific parenting behaviors such as the use of positive affect and the expression of warmth through physical closeness and sensitive voice tones were related to improved cognitive outcomes (Landry, Smith, Swanck, Assel & Vellet, 2001).

A third study with Early Head Start parent-child dyads also demonstrated that the affective quality of the parent-child dyad is influential on a child's early literary skills. In this longitudinal study, observations of parent child interactions at 14, 24, and 36 months were better predictors of early literacy skills for 4.5 year olds than parent reports of home literacy experiences (Dodici, Draper, & Peterson, 2003). Other studies have shown that the affective quality of mother child interactions, such as supportive presence, respecting child's autonomy, structuring and limiting setting, each independently predict children's language and reading skills during elementary school (Bus, Leseman & Keultjes, 2000; de Jong & Leseman, 2001). Furthermore, research is also accumulating to suggest that high quality early maternal child interactions are linked with later school achievement in high school, despite children's experiences in elementary and middle school. A longitudinal study followed 142 children to determine whether the mother child interactions in kindergarten predict high school achievement and attainment. Findings revealed positive mother child interactions were linked with higher grade point average in the 12th grade (Gregory & Rimm-Kaufman, 2008).

Home Literacy Environment

Over the past fifty years, numerous studies have substantiated an association between the home literacy environment and children's early literacy skills (Bradley, Corwyn, Burchinal, McAdoo & Garcia Coll, 2001; NICHD Early Child Care Study, 2002). Scholars have employed the term "home literacy environment" to refer to a subset of environmental factors most relevant for literacy growth (Burgess, Hecht, & Lonigan, 2002; Foy & Mann, 2003; Leseman & de Jong, 1998). The home literacy environment is exclusively those facets of the home environment directly under parental control

including: access to reading materials (e.g., number of books child owns, frequency with which child looks at books by him or herself, the number of household newspaper, magazine, and child magazine subscriptions), parent child activities (e.g., frequency with which a parent reads to child, age when reading with child began, number of minutes spent reading to child yesterday, frequency of trips to library with child, direct teaching of literacy skills) and parent literacy habits and beliefs (e.g., frequency which a parent reads to him or herself, amount parent enjoys reading to self) (Bennett, Weigel, & Martin, 2002; Bus van Ijzendoorn, & Pelligrini, 1995; Griffin & Morrison, 1997; Lonigan & Whitehurst, 1998; Phillips, Norris, & Anderson, 2008; Senechal, LeFevre, Smith-Chant, & Colton, 2001; Weigel et al., 2005).

The relationship between a child's early literacy skills and access to reading materials in the home has been well studied. In particular, numerous studies have reported a positive relationship between the number of reading materials in the home and children's language and literacy skills (de Jong & Leseman, 2001, Senechal & LeFevre, 2002). Experts contend that providing access to reading materials and the provision of reading materials within the home (e.g., books, newspapers and magazines) provide opportunities for the child to be exposed to print. For example, Griffin and Morrison (1997) found that a broad measure of the home literacy environment defined by the number of magazine and newspaper subscriptions, library use, television viewing, and book reading was positively related to kindergartener's receptive vocabulary skills, word recognition, and math skills.

Parent-child literacy home activities are a second important dimension of the home literacy environment. Burgess et al. (2002) refers to parent child activities as an

“active home literacy environment” where parents are directly engaged in activities with their children that are designed to foster literacy and language development. A majority of research on parent child literacy activities has focused on shared book reading between parent and child. This line of research suggests that joint book reading is positively associated with young children’s language and literacy skills (e.g. Burgess, 1997; Lonigan & Whitehurst, 1998; Senechal, LeFevre, Thomas & Daley, 1998) in both low and middle-income families (Bennett, Weigel & Martin, 2002). Bus van Ijzendoorn and Pellegrini (1995) found that the frequency of shared book reading during the preschool years accounted for about 8% of the variance in children’s later academic skills. Shared storybook reading has also been linked to better vocabulary and listening comprehension (Senechal & LeFevre, 2002).

More recent research has suggested; however, that the specific type of interactions that occur between parent and child during shared book reading is likely more important than just the frequency of book reading (Bennett et al., 2002). For example, intervention studies and correlation research have shown that direct teaching and other parental behaviors such as asking open ended questions, adding information, and focusing on print concepts add significant value to book reading (Roberts, Jurgens & Burchinal, 2005). Lonigan and Whitehurst (1998) found children’s language skills improved by enhancing mother child interactions during shared book reading. Another study that trained parents to use print referencing during shared book reading revealed that children’s print awareness and knowledge of book conventions improved significantly when parents engaged in more active and deliberate methods of print referencing (Justice & Ezell, 2002).

In addition to storybook reading, other opportunities, such as direct parental teaching of literacy skills, contribute to children's emerging literacy and language (Senechal & LeFevre, 2002). For example, parental reports of teaching have shown to be related to vocabulary, beginning reading skills, and concepts of print (Haney & Hill, 2004) as well as alphabet knowledge, phonological sensitivity, word reading and spelling (Hood et al., 2008). Based on this research, some have argued that explicitly teaching children literacy skills is a more effective mechanism to foster early literacy development than story book reading (Hood et al. 2008; Senechal & LeFevre, 2002). Further, other activities that foster verbal interaction between parents and child including singing songs, reciting rhymes, telling stories, drawing pictures, and playing games all help children develop oral language and emergent literacy skills (Snow, Burns, & Griffin, 1998).

Research also suggests that children from homes that support child learning consistently demonstrate more readiness for school and higher overall cognitive and language competencies than children whose parents spend less time creating stimulating learning environments (Parker et al., 1999). Parent's understanding of play, their ability to facilitate child learning, and the amount of time parents spend helping their children learn academic skills at home improves children's cognitive competencies. Furthermore, there is well-established evidence that the complexity of language used in verbal exchanges with a child has a strong link with their IQ and language abilities. Moreover, children's academic success in elementary school is attributable to the amount of talk they hear from birth to age three (Hart & Risley, 1995).

The third component of the home literacy environment includes parent's own personal reading and writing habits, as well as the types of beliefs and attitudes they hold about their child's language and literacy development. For instance, parents' reading behaviors, such as their personal enjoyment of reading and time spent reading are associated with children's literacy and reading outcomes (Weigel, Martin & Bennett, 2005). Specifically, parents' literacy behaviors are correlated with children's oral language and phonological sensitivity (Burgess et al., 2002). In addition, parental beliefs about their role in the development of their children's literacy and language development are associated with children's literacy and language outcomes. Parental beliefs are positively correlated with the extent to which parents expose their children to shared book reading and the quality of parent-child interactions during book reading (DeBaryshe, 1995). Parental beliefs about literacy and their role in supporting their children's development influences the opportunities they provide for their children (Sonnenschein, Baker, Serpell, Scher, Goddard-Truitt, & Munsterman, 1997).

Ethnic Differences in Parenting Style and Home Literacy Environments

In some research, when the parenting style and home literacy environment are compared across ethnic groups differences emerge between groups. For example, research has suggested that African American mothers tend to be less sensitive and warm in their interactions with their children than White mothers (Brooks-Gunn, Klebanov, & Liaw, 1995; Brooks-Gunn & Markman, 2005). Other research has shown that Black mothers provide less physical affection (Berlin, Brady-Smith, & Brooks-Gunn, 2002). Research on Hispanic parenting, however, has produced mixed results (Brooks-Gunn & Markman, 2005). Some findings suggest that Hispanic mothers are more intrusive and

controlling than White mothers while other research fails to document a difference (Bradley, Corwyn, Pipes McAdoo, & García Coll, 2001).

In addition to parenting style, there are also differences reported in the home literacy environments between ethnic groups. Throughout childhood, Black families and Hispanic families tend to be less likely to report reading to their children than White parents (Bradley, et al., 2002; Brooks-Gunn & Markman, 2005). In addition, research suggests that Hispanic children may receive less assistance with the alphabet and Black and Hispanic children may receive less help with shapes and sizes at home (Bradley et al., 2001). Furthermore, there appears to be differences in children's access to learning materials with Black and Hispanic families tending to report fewer reading materials and other educational materials in their home than White parents (Bradley et al., 2001).

Parent book reading styles also seem to differ in some studies. Black and Puerto Rican mothers tend to ask fewer and less challenging questions and fewer inferential questions during shared book reading than White parents (Anderson-Yockel & Haynes, 2004). Hammer et al. (2005) found that Hispanic mothers tend to use a more "child centered style" approach in which Hispanic mothers allow and encourage their child to act as the primary storyteller. Hispanic mothers tended to produce lower proportion of utterances than their children and made more comments and labels than other communicative acts. In contrast, Black mothers in the study more often employed "text reading style" during book reading and their child assumed a more passive role. As such, Black mothers often produced a larger proportion of utterances and fewer questions and labels than their children (Hammer et al., 2005).

Some scholars argue that this line of research, which compares parenting style and home environments across ethnic groups, portrays ethnic minority parents as deficient compared to White parents. Baumrind's research and a great deal of subsequent studies on parenting style are based on conceptual frameworks developed for middle class, White families and therefore might not be appropriate to apply to other groups. A recent search of the preschool parenting literature between 1995 and 2005 by McWayne, found that the Baumrind typology with low-income Black families did not consistently demonstrate positive patterns relating parenting to preschool children's social and emotional skills. Further, several studies suggest that authoritarian parenting that relies on a high level of parental control yields beneficial effects for Black youth (Brody & Flor, 1998; Spieker, Larson, Lewis, Keller & Gilchrist, 1999); however, this effect is greatest when exhibited in the context of high warmth (Isapa, et al., 2004; McLoyd & Smith, 2002).

Research with Hispanic families also suggests that parental practices may have different effects for children. For instance, one study found that maternal control and intrusive behavior may predict secure attachment for some Puerto Rican toddlers (Fracasso, Busch-Rossnagel & Fisher, 1994). Lindahl and Malik (1999) also showed no difference in the behavior of Hispanic school age boys whether their parents used a more hierarchical parenting style or a democratic style. Additionally, among Mexican American families, no relationship was found between maternal physical control (e.g., control to help the child complete a task or physically restraining behaviors indicating maternal disapproval) and 5-year olds defiance, imitation of mothers, or back talk to their mothers (Lindahl & Malik, 1999).

Thus, research on relations between parenting practices and adaptive functioning in ethnic minority groups is sometimes inconsistent. Research has clearly identified salient characteristics of parenting and the home environment; however, some findings in these areas with ethnic minority groups are not significant. It may be that dimensions of parenting, such as warmth and responsiveness, are expressed differently and have different meanings among different groups.

In addition, there is also a line of research that suggests that differences that emerge between groups is better explained by socio-demographic factors that confound the study of ethnic differences (e.g., Hart & Risley, 1995). For instance, across all ethnic groups, families below the poverty line are less likely to spend time helping their children learn and poverty seems to have a strong impact on access to learning materials, on the variety of enriching places and events that children experience. Non-poor children are far more likely to have three or more children's books and to go to the museum or theater throughout their childhood and adolescence than their lower income counterparts (Bradley et al., 2001).

There are a few studies; however, which attempt to detangle ethnicity from social context and socio-economic status. In one study, parenting practices and developmental expectations were compared between parents from Mexico and the United States who were matched on educational levels. There were no differences found between groups on the use of corporal or verbal punishment as a form of discipline, nurturing, or developmental expectations (Solís-Cámara & Fox 1995). Solís-Cámara and Fox (1996) also studied parenting practices among a sample of Mexican mothers and determined that socio-demographic factors influence discipline among the mothers. Younger, unmarried,

low income, less educated were less nurturing and used stricter forms of discipline than older, married, higher income, and more educated mothers. In a third study, differences in Mexican and U.S. fathers from lower and higher socio-economic levels were investigated. No differences were revealed in developmental expectations or parenting practices between the fathers from the two countries. In both groups; however, fathers from lower income levels were less nurturing and used more frequent discipline than fathers from higher income groups (Solís-Cámara & Fox, 1996).

Culture Frameworks of Parenting Style

Levi (1977) proposed three goals common to all parents: (a) the physical health and safety of children, (b) providing an environment for the successful progression of a child's development, and (c) teaching and modeling cultural norms and practices. Most researchers agree with Levi that these three goals are consistent across groups; however, they argue that cultural background shapes one's childrearing beliefs and behaviors (Harwood, Miller, & Irizarry, 1995). By recognizing how parents' beliefs and practices reflect their cultural norms and expectations, variations from mainstream and/or White, middle class, are not seen as deficient but instead justifiable adaptations of parenting and child development to differing contexts (Garcia Coll, 1996; Keller, 2003). The following section will review several theories help to explain how and why parenting functions differently between ethnic groups.

Individualism and Collectivism

Within the last fifteen years, one of the most prominent frameworks in understanding cultural differences in parenting is the distinction that has been made between 'collectivism' and 'individualism' (Triandis, 1988). This research originates

from the field of social psychology and anthropology. Cultural models of individualism reflect a preference for independence, autonomy, and self-reliance while collectivism tends to promote goals of independence, conformity to group norms, and relatedness (Greenfield, 1994). The terms collectivism and individualism have been used to refer to value systems existing within and across large cultural groups as defined by nationality, race, or ethnicity and small communities (e.g., Anglo, middle class, and American). Social scientists have portrayed western societies and specifically Americans and White individuals as individualistic. Various ethnic minority groups in American are considered to be more collectivistic, including Hispanic, African/African-American, and East Asian communities (e.g., Fuligni et al., 1999; Keller, 2003; Triandis, 1995).

According to this theory, parents from individualistic cultures rear their children in a way that promotes them to be independent and autonomous with less reliance on the larger group. Personal choices, intrinsic motivation, self-esteem, and a sense of responsibility are valued. In contrast, parents from collectivist cultures value relatedness and interdependence. Connection to the family and other close relationships, orientation to the larger group, and respect and obedience underpin childrearing beliefs.

More recently, however, the individualist-collectivist framework has been critiqued for being overly simplistic, especially in light of the increased globalization and more complex conceptualizations of child development (Greenfield, Keller, Fuligni, & Maynard, 2003). Observational studies suggest that in most cultures there is evidence of both individualistic and collectivistic values that emerge in different contexts. Thus, individualism and collectivism are no longer conceived as bipolar dimensions or

incompatible values but instead conceptualized as orthogonal dimensions on which all individuals and cultures can be described (Keller et al., 2006).

Ecological Systems Theory

Ecological and eco cultural theories also help understand the influence of culture on childrearing. Both of these frameworks assume that children develop by adapting to the multiple, interacting environments in which they live and both frameworks specify families and parents as the most proximate influence on a child (Suizzo, 2007).

Specifically, Bronfenbrenner's (1979, 1986) ecological systems theory describes the child developing within a multilevel system of environments, which include the microsystem, mesosystem, exosystem, and macrosystem. The microsystem is the innermost level and refers to the immediate environment (e.g., family, school, neighborhood). The mesosystem refers to the interaction between two or more settings (e.g., parent and school). The exosystem refers to settings in which that child is not an active participant but that are still influential (e.g., mass media, parent's workplace). The macrosystem is the last level and includes culture, along with other endogenous influences such as societal attitudes and the political climate. While Bronfenbrenner's model is comprehensive in describing how the various levels interact to influence a child's development, some argue that culture is experienced indirectly through the interaction of other contextual levels and does not sufficiently portray the influence that culture has on development (Greenfield et al., 2003).

Garcia Coll and colleagues (1996) proposed a model that extends ecological models of development in order to capture the unique socializing influences in ethnic minority groups. The integrative model by Garcia Coll and colleagues (1996) includes

variables that are universal for children as well as variables that are uniquely salient to minority children. They argue that because of differences in culture, class, opportunity, and context, it cannot be assumed that the processes that lead to certain developmental outcomes in majority children have the same effects in minority children. Culturally normative practices and values, socioeconomic conditions, and family and household structure influence parenting practices and the emphasis on cognitive stimulation in the home.

Ecocultural Theory

Ecocultural theory integrates ecological and culture perspectives. It is based on the assumption that all families make legitimate accommodations to their ecological niches through routines of daily living. Different ecologies may differentially impact the expression, perception, and interpretation of similar behaviors across cultures.

Super and Harkness (1986) developed the concept of the developmental niche to explain the mutual interaction between a child and cultural factors. Unlike Bronfenbrenner's model, the developmental niche theoretical framework includes the cultural regulation of the microenvironment of the child. The developmental niche model contends that culture permeates a child's life through three subsystems which include the physical and social environment of the child, customs and practices of childrearing, and the psychology of parents (Super & Harkness, 1986). The physical and social settings of children provide the context upon which daily life is constructed, including where, with whom, and in what activities the child is engaged. Therefore, a pattern of activities in one culture that might be seen as pathological in one cultural context might be normal and a natural routine in another. The second component of their model includes the

culturally regulated customs and practices of childcare. These practices are so integrated and ingrained into the larger culture they are often unconscious behaviors. The third part of the developmental niche, the psychology of the caretakers, includes parents' cultural belief systems that pertain to parenting, childrearing, and child development which Super and Harkness termed “parent ethno theories.”

The anthropologist John Ogbu (e.g., 1981) also developed a cultural-ecological alternative to universal models of childrearing. Ogbu’s model explains how the immediate environment and the broader cultural context influence parenting behavior. According to Ogbu, there are different competencies that are essential and necessary for survival and success in cultures. Thus, instead of defining competence in universal terms he argued that competence must be understood within cultural and historical contexts and that childrearing practices evolve over time to adapt to specific cultural and economic ecologies (Ogbu, 1981).

Cultural Understandings of the Home Literacy Environment

Improving the literacy outcomes for children has captured national attention. As part of this effort to understand literacy development, researchers have focused on the home literacy environment and learning stimulating activities. Two perspectives on the home literacy environment have been offered. The knowledge-based view assumes that specific characteristics of the home environment, which are discussed in the above section, are universal predictors of future academic achievement. Critics of this perspective argue; however, that this knowledge-based model of early literary development is an etic approach and derived from research on middle class, White families.

Thus, some scholars contend it is inappropriate to “superimpose” (Vernon-Feagans, Head-Reeves, & Kainz, 2004, p. 442) this model on families with varying race and ethnicity, class, and family structures. Instead of continuing to rely on this model, researchers such as Vernon-Feagans and colleagues (2004) argue for an eco cultural or socio cultural model of early literacy in order to identify the various ways the home environment supports and enhances the literary development of children from diverse backgrounds. Underlying these models is the assumption that children gain knowledge from literacy activities in their home and that home literacy and book reading practices are culturally defined. Variations in parental literacy practices and ways of teaching their children exist because of different goals of development, beliefs and views about literacy, and life circumstances in which the child is being raised (Hammer et al., 2005).

Parenting Style and Home Literacy Environments

The following section presents correlational and descriptive research on the traditional child reading attitudes, values, and practices that have been identified as characterizing Black and Hispanic families. These descriptions are broad generalizations that are based on psychological and sociological studies of cultural groups.

Parenting Style and Practices among Blacks

Extensive research has shown that several cultural patterns define Black families. These include extended family structure, reliance of extended family, supportive social networks, and flexible family relationships (Webb, 2001). Studies of Black parents suggest that family and kinship is highly valued and there is a strong family orientation (Hill & Sprague, 1999; McAdoo, 2002). Blacks value their relationships and tend to be well connected to a large network of family and non-blood related members. Blacks feel

a sense of responsibility to their family and provide emotional and social support to kin and provide tangible help, such as care taking of others' children and taking in family members (Yasui & Dishion, 2007). As such, children are also expected to fulfill their familial obligations through mutual helping behaviors (McWright, 2002).

A substantial amount of research suggests that a majority of Black parents may rely on an authoritarian parenting style and tend to be more restrictive in their parenting (Yasui & Dishion, 2007). Additional research suggests that this kind of parenting style is associated with positive outcomes for Black children. For instance, unilateral parental decision making is associated with less conduct problems for Black youth but lower self esteem and self reliance among White children (Lamborn, Dornbusch, & Steinberg, 1996). Children from Black families with unilateral decision-making show fewer outward expressions of anger and decreased their avoidant coping strategies. Similar effects of parental control have been established for academic outcomes and Black children perform better academically with parental restriction (e.g., Deater-Deckard et al., 1996).

In addition to a controlling parenting style at the same time high levels of parental warmth seem to also characterize Black families. This style of parenting has been termed “no nonsense parenting” and refers to mother child interactions that are characterized by high levels of parental control in conjunction with high positive parental affect (Yasui & Dishion, 2006). Experts contend that prominence of both parental control and parental warmth reflects the value of family connectedness, parent involvement, child compliance and respect of adults in the Black culture (Yasui & Dishion, 2006).

Parenting Style and Practices among Hispanic Families

Several constructs have been described in the literature that defines Hispanic families including: *familismo*, *simpatia*, *personalismo*, and *respeto*.

The term familismo represents a large constellation of attitudes, beliefs, and values that are instrumental in the formation of a worldview, personal and family decision-making, and parenting practices among Mexican American, Cuban American, Central/South American, and Puerto Rican families (Whiteside-Mansell, Bradley, & McKelvey, 2008). Familismo specifically describes the collective loyalty to family that supersedes individual needs. Hispanics place greater importance on family values and well being than on individual opportunities and family members rely on each for emotional and momentary support and share resources. For instance, it is common for extended relatives to live in the same home together and families often live in the same neighborhood as their relatives and see each other on a daily basis (Hammer & Miccio, 2004). In addition to the emphasis on family, Hispanics also value simpatia, which refers to politeness, agreeableness, and harmony, as well as personalismo, which refers to personal friendliness and warm and personal relationships.

Respeto is the fourth value and connotes the importance of respect and adherence to authority within the Hispanic culture. For example, Mexican and Puerto Rican parents tend to place more value on conforming behaviors, respect and responsibility to elders than White families (Arcia, Reyes-Blanes & Vazquez-Montilla, 2000; Okagaki & Sternberg, 1993). Mexican mothers, especially those of low socioeconomic status and recent immigrants, may use more punishment and less reinforcement than higher income

or White parents. Further, they seem to be less likely to engage in collaborative decision making with their children.

Further, Hispanic parents tend to be increasingly more concerned with discipline and obedience as their children grow up (Florsheim, Tolan, & Gorman-Smith, 1996). Hispanic parents may be more lenient and set less disciplinary standards with their toddlers. When their children enter preschool; however, Hispanic parents appear to be more authoritarian and control oriented (Halgunseth, Ispa, & Rudy, 2006). Some research suggests there is less warmth, affection, and responsiveness expressed and less give and take in interactions with older children (Guilamo-Ramos, Dittus, Jaccard, Johansson, Bouris & Acosta, 2007; Ispa et al., 2004). Similarly, some findings suggest that Hispanic parents use physical punishment less often with younger children than with their older children (Calzada & Eyberg, 2002).

It is likely that Hispanic parents' shift in parenting style stems from a cultural understanding of children's needs and value that Hispanic culture places on raising a compliant and respectful child (Berlin et al., 2009). Hispanic parents tend to assume a more controlling style and more frequently scold and reprimand their children in order to make certain that their message and expectations are imprinted in their children's minds (Arcia & Johnson, 1998). However, research is mixed with some studies suggesting that regardless of a child's age, Hispanic parents demonstrate warmth and freedom towards their children (Calzada & Eyberg, 2002; Guilamo-Ramos et al., 1997).

Cultural beliefs also impact the home literacy environment. Hispanic American families adhere to a view that preschool and early education should focus on social competence more than academic goals (Valenzuela, 1999). This view likely not only

influences the quality of the environment but the more subtle messages regarding the use of and value of learning materials. Among Hispanic families, less emphasis is placed on teaching and engaging in academic learning activities at home for preschool children and more attention is focused on teaching obedience and proper behavior. In addition, it has been suggested that Hispanic families believe that parents are not the primary teachers for young children and do not have an active role in their children's education (Rodriguez & Olswang, 2003). There is a notion that school is responsible for the education of children and reading is something that is learned after a child begins formal schooling. For instance, Hispanic families tend to rely on reading stories in order to teach moral lessons rather than with the intention to foster reading development and interest (Reese & Gallimore, 2000).

Although research suggests that cultural values may influence parenting practices, individual differences within ethnic groups exist and not all parents adhere to their traditional cultural values. Instead, adherence to traditional cultural practices likely depends on acculturation, with those families reporting lower levels of acculturation adhering more closely to cultural values than families reporting higher levels of acculturation (Gutierrez, Sameroff, & Karrer, 1988; Laosa, 1999; Rodriguez & Olswang, 2002). Acculturation refers to the process of adopting the language, attitudes, culture, and behaviors of the new host country (Zane & Mak, 2003). Therefore, level of acculturation may be a potential source of within-group differences, especially for Hispanic families.

Several studies have examined the effect of language acculturation on Hispanic parenting. A recent study examined the responsiveness of Latino mothers' from different

countries of origin during a teaching task. While Mexican American mothers often obtained lower responsiveness scores than other Latino mothers, this difference was significantly reduced when the English proficiency of mothers were included in the analyses. The authors hypothesized that less acculturated mothers hold different childrearing beliefs than mothers who are proficient in English. As such, it is possible that less acculturated mothers might perceive that being responsive during a teaching task with their 9-month-old infants is a less important activity or that teaching is not appropriate for their young child (Cabrera, Shannon, West, & Brooks-Gunn, 2006). Similarly, in another study on the role of acculturation, Mexican American parents with the lowest levels of acculturation were more likely to hold traditional, authoritarian educational beliefs. The authors of the study concluded that the extent to which a family incorporates aspects of mainstream culture results in differences in their child rearing and educational beliefs (Rodriguez & Olswang, 2003).

A study investigating the teaching strategies used by Dominican and Puerto Rican parents also showed a significantly positive relationship between acculturation and parents' use of inquiry and a significantly negative relationship between acculturation and parent's use of modeling behaviors. For Puerto Rican mothers, acculturation was negatively related to visual cue, negative verbal feedback, and positively related to modeling behaviors. In contrast, among Dominican mothers, there was no significant relationship found between teaching behaviors and acculturation (Planos, Zayas, & Busch-Rossnagel, 1995).

Another study suggested that there is a gradual movement toward the parenting styles of the mainstream culture as acculturation increases (Ispa et. al., 2006). For

instance, acculturated Mexican American mothers and toddlers showed relationship patterns that seemed intermediate between those of White dyads and those of less acculturated Mexican American mothers and toddlers. Similarly, the mean ratings of warmth for more acculturated group fell in between European American and less acculturated Mexican American mothers. Likewise, among White mother child dyads and in more acculturated Mexican American mother child dyads, maternal intrusiveness predicted increases in toddler negativity and less synchrony, comfort, and enjoyment in their parent child interactions. These relations were not significant for less acculturated families.

History and Present Status of Parenting Education Programs

Society has long been concerned with how to raise children. Suggestions on child rearing date back to Plato and Rousseau. The earliest notions on childrearing in the United States were guided by religious beliefs and the church acted as the major source of guidance on parenting. Throughout history, parent education has reflected the current political and economic climate, the ideas of the era's leading scholars, and the prevailing assumptions made by society about women and family (Smith, Perou, & Lesesne, 2002).

The Maternal Associations of the early 1800s, where mothers met in small groups to discuss the religious and moral improvement of their children, were precursors to more formal parent education. By 1897, formal parent education groups emerged with the establishment of groups such as the National Congress of Mothers, the forerunner to the National Parent Teacher Association. In 1920, the Child Study Association of America formed with the goal of promoting understanding of child development, child rearing, and family life through small parent education groups across the country. Within the

popular press, childrearing also became a popular topic. Women's magazines, such as Ladies Home Magazine and Women's Home Journal, published articles on raising children (Smith et al., 2002).

By the early twentieth century, child development began to be formally studied at universities across the country. Nurses, teachers, and social workers visited poor parents in their homes and settlement houses for immigrants were established and included programs to educate parents. By 1932, a three volume series on parent education was published by the National Council of Parent Education. However, this national interest in educating parents declined with the beginning of World War II (Smith et al., 2002).

In the 1960s, national attention to parenting renewed once again and parent education became a top domestic priority. This change resulted from new research that pointed to the critical force that parents play in a child's development and the importance of children's first five years of life for intellectual development. These findings, along with changes in the structures of the American family and society, created ardent interest in supporting parents and bettering the lives of children. Since this time, the number of parent education programs has grown exponentially and today parent education is an umbrella term used to refer to a myriad of programs and approaches. Yet, all parent education programs share a common objective: to teach parents a repertoire of behaviors and skills that foster children's development and promote attitudes and beliefs that assist them in childrearing (Fine, 1980; Shimon & Ferguson, 1990).

Research on the effectiveness of parent education has indicated positive effects on both adult's and children lives. A majority of this research has been summarized in reviews, which confirm that parenting programs can (a) improve aspects of family life

(e.g., Barlow, Coren, & Stewart Brown, 2002; Barlow & Stewart Brown, 2000; Serketich & Dumas, 1996); (b) enhance children's academic achievement (Downey, 2002; Lopez, Scribner, & Mahitivanichcha, 2001); (c) increase parental knowledge toward childrearing and child development (Gomby, Larson, Lewit & Behrman, 1993); (c) change parental attitudes (Downey, 2002; Norris & Williams, 1997); and (d) improve parental confidence (Henderson & Berla, 1994).

Today researchers contend; however, that many of these evaluations have been carried out with predominately middle class, White parents. Thus, it is not clear whether these positive findings due to parent education programs are generalizable to minority ethnic parents (e.g., Barlow et al., 2002). In addition, based on these differences in parenting style and home literacy practices among ethnic groups, traditional parent education programs have been called inappropriate because their content reflects middle class, White assumptions about child rearing and not the values, beliefs, and attitudes of ethnic minority parents.

Forehand and Kotchick (1996) called attention to the need for researchers and clinicians to place more emphasis on understanding the relationship between cultural factors and parent training programs targeting child behavior. They asserted that the most pressing concern for parent training programs is to understand how culture and ethnicity influence parenting behaviors and incorporating culturally sensitive strategies into parent education programming. According to Forehand and Kotchick (1996), by ignoring cultural factors and neglecting the cultural context of parenting, ethnic minority parents may not fare well in traditional parent education programs especially those programs that were originally validated with White samples. Therefore, awareness and

sensitivity to parents' ethnic background is crucial because cultural forces could assist or impede the success of parent education.

This line of reasoning has fueled an interest in culturally sensitive parent education programming. Cultural sensitive programming implies not only an understanding of a group's unique values, beliefs, and customs but also appreciation of differences (Gorman & Balter, 1997). Cultural sensitivity falls along on a continuum and it is demonstrated to a greater or lesser extent in the program's goals, content, and implementation and parent educators' attitudes and beliefs (Gorman & Balter, 1997). The three main types of culturally sensitive parent education programs include: *translated, adapted, and culturally specific*.

Translated programs refer to "surface structure or first cut changes" (Kumpfer, Alvarado, Smith, & Bellamy, 2002, p. 242). Translated program might involve hiring ethnically matched staff, changing the pictorial content to depict ethnically similar families and translating traditional programs into a target population's language. Thus, the program's content is essentially unchanged from the original program. The second type of program, a culturally adapted program, has deeper structural cultural adaptations than translated programs. A culturally adapted program incorporates some of the values and traditions of a group into the content of the program. Yet, culturally adapted programs still remain an offshoot from traditional programs because they are rooted in the philosophical assumptions of the traditional program. The third type, culturally specific programs, are developed entirely for a specific ethnic group and designed to incorporate the values of the target population. Some argue; however, that even culturally specific programs are based more on professionals' perceptions of ethnic

community values and culture rather than empirically validated theories (Gorman & Balter, 1997).

Research on Parent Education Programs

Despite well-documented ethnic differences in parenting practices, beliefs, and values and interest in cultural sensitive programming, it remains unclear whether parenting programs have different treatment effects for diverse groups. While given the findings of differences in ethnic differences in parenting, it seems that the effects of parent education programs would vary as a function of ethnicity. However, research in this area is still evolving.

One reason that research in this area is rather limited is because after research proves the efficacy of a parent education intervention with a sample comprised of majority participants, few studies then evaluate the efficacy of the intervention with ethnic minority participants (Barrera, Biglan, Taylor, Gunn, Smolkowski, & Black et al., 2002). As a result, not all interventions are validated with a diverse sample and ethnicity should be evaluated to determine the external validity of a program developed with middle-class, White samples (Sue, 1999). Furthermore, most research on parent education programs is typically conducted in a homogeneous community and relatively few studies drawn upon a heterogeneous sample of parents from diverse ethnic backgrounds. Without investigation of relevant subgroups with particularly good (or poor) treatment response, parent education outcome research remains at a relatively descriptive level and claims of parent education program effectiveness are untenable. Therefore, an important focus for the next generation of parent education studies will be

to identify which participants benefit from a particular parent education program and which groups are less affected (Kellam & Van Horn, 1997, p. 183).

The following section will examine the existing research that is available which investigates whether parenting programs are effective with parents from different minority ethnic groups. The second section will examine the relative effectiveness of traditional programs compared with culturally specific parenting programs that are designed to incorporate specialized content or methods that are relevant to a particular group. Finally, research that investigates whether the effects of parenting programs vary across ethnic groups will be summarized.

The Effectiveness of Parenting Education Programs

Barlow, Shaw, and Stewart-Brown's (2004) review of 39 quantitative studies found that collectively behavioral parenting programs were the most effective type of program for ethnic minority parents on a range of outcomes including parenting attitudes and behavior, parenting competence, parental mental health, and problem solving. However, Barlow et al. (2004) caution effects were not uniformly positive because all of the studies reviewed included outcomes for which no effects were found. Additionally, traditional, translated, and cultural specific programs each demonstrated evidence of improvements in Black's parenting attitudes and behavior (including the use of harsh and inconsistent discipline), parental stress, and parent-child interaction. For Hispanic parents, findings were not uniformly positive. Five of the most robust studies reviewed of Hispanic parents indicated modest improvement in parental attitudes. Hispanic parents demonstrated more positive and competent parenting, less use of critical parenting, and increased involvement in children's education (Barlow et al., 2004).

The Effectiveness of Culturally Specific Parenting Programs (Non Comparative Studies and Comparative Studies)

The bulk of research on culturally specific parenting programs is non-comparative and researchers are more likely to study individual programs, either traditional or culturally specific, within one single study. Barlow, Coren, and Stewart-Brown (2002) examined (1) six studies that examined the effectiveness of culturally specific parenting programs, (2) another four studies that evaluated the effectiveness of culturally adapted programs, and (3) sixteen remaining studies that investigated the effectiveness of traditional parenting programs. Barlow et al. (2002) concluded that, collectively, the studies provided support for the effectiveness of parent education programs for minority ethnic parents across a range of parent and child outcomes. The findings from the first two groups of studies reviewed (six culturally specific and four culturally adapted programs), however, showed more mixed and inconsistent findings compared to findings on traditional programs (Barlow et al., 2002).

Gorman and Balter (1997) also reviewed the literature devoted to culturally specific parenting programs. They reviewed two studies that investigated a culturally adapted program for Black families and three studies on the Houston Parent-Child Development Center (Houston PCDC) designed for Mexican American families. Based on their review, Gorman and Balter (1997) found overall weak evidence for the effectiveness of culturally sensitive programs though presented some modest effects for overall change in mothers' parenting attitudes and behaviors. Gorman and Balter (1997) calculated a mean effect size of 0.31(SD=0.20) for parent outcomes, which the authors concluded, is much smaller than effect sizes typically reported for traditional parent

education programs. Thus, the authors concluded that culturally specific programs produce some positive changes for parents; however, these effects are overall not as strong as the effects for traditional programs.

Studies that directly compare the effectiveness of traditional parenting programs to culturally specific programming among minority ethnic parents in a single investigation are also scarce. These studies are important because they provide the evidence on the comparative effectiveness of traditional and culturally sensitive parent programs. Barlow et al. (2002) reviewed four comparative studies that investigated the relative effectiveness of different types of parenting programs for minority ethnic parents. However, Barlow et al. (2002) concluded that the comparative studies “do not provide sufficiently reliable or rigorous evidence to reach any firm conclusions regarding the comparative effectiveness of different parenting programs.” (p. 92).

Kumpfer et al. (2002) investigated data from five studies that compared the effects of the culturally adapted Strengthening Families Programs (SFP) to the traditional SFP version for rural and urban Blacks, Asian/Pacific Islander, Hispanic, and American Indian families. Across all studies, the traditional SFP was implemented first followed by culturally adapted SFP. The SFP is a multi-component behaviorally oriented intervention that includes parent, child, and family training. Overall, the findings indicated that the traditional version had better outcomes but that recruitment and retention of participating families improved 40% better with the culturally adapted version. Kumpfer et al. (2002), however, caution their findings due to the quasi-experimental, time lagged design.

Adaptations have also been made to Parent Child Interaction Therapy (PCIT) for use with Hispanic families. McCabe and colleagues (2005) adapted PCIT for families of Mexican-origin in southern California. Their version called, *Guiando a Niños Activos (GANA)*, retained core PCIT treatment components and also incorporated cultural concepts throughout treatment. In a randomized clinical trial, GANA was compared to standard PCIT and a treatment as usual (TAU) condition. Compared to the treatment as usual group, the GANA program produced significant effects in reducing child behavior problems and the GANA treatment proved to be as effective as the standard PCIT condition. PCIT has also been adapted for use with Puerto Rican families living in Puerto Rico. Initial findings suggest that parents in the PCIT group report decreases in children problem behavior and parent related stress and improvement in parenting practice (Matos et al., 2009). Therefore, these data suggest that behavioral parent training programs can be used and are effective with Latino families.

The Effectiveness of Parenting Programs for Different Groups

There is also limited research that directly compares whether parent education programs are more effective for some parents than others. This gap in the research is in part explained by the tendency for parent education programs to be delivered to one community or neighborhood (Reid, Webster-Stratton, & Beauchaine, 2001).

A randomized controlled study of the Infant Health and Development Program (IHDP) examined the differential effects of the programs between Black and White families. The IHDP is designed for families of low birth weight children and includes a parenting focused home visiting and center based childcare program. At the end of the intervention, Black mothers benefited more from the program than White mothers. Black

mothers in the intervention group used less punitive discipline and less direct teaching of skills to their children. This difference was not evident for White mothers. In addition, the Black mothers in the treatment group had similar scores to White mothers in both the treatment and control group (Klebanov & Brooks-Gunn, 2004).

The Early Head Start Demonstration (EHS), a randomized evaluation of a home and center based early childhood intervention program for pregnant women and their young children showed similar results to the IHDP study. At the end of the intervention, Black mothers in the intervention group had more positive and fewer negative parenting behaviors compared to their counterpart in the control group. Hispanic parents also benefited from the program but not as much as Black parents. In addition, Black mothers scored comparable to White mothers (Love et al., 2002)

A third study tested the empirically validated Incredible Years Training program among different ethnic groups (Reid et al., 2001). The Incredible Years Training program is focused on strengthening parenting competencies (monitoring, positive discipline, confidence) and fostering parents' involvement in children's school experiences in order to promote children's academic and social competencies and reduce conduct problems. According to Reid et al. (2001) numerous previous studies based on homogeneous samples of ethnic minority participants' revealed positive effects for the Incredible Years Training program across groups. For example, Black mother of preschoolers who attend inner city day care center showed more positive and less harsh parenting those mothers in the control group. Reid et al. (2001) contended, however, that since most investigations only included participants from one ethnic group, direct comparisons were needed.

Therefore, Reid et al. (2001) examined ethnic differences in program outcomes among White, African American, Asian, and Hispanic parents. Archival data were used and Head Start centers were matched on community demographics (e.g., ethnic diversity, socioeconomic status), then randomly assigned to the experimental condition or control (i.e., regular Head Start program without parenting groups). Mothers in the experimental condition underwent 8 weeks of The Incredible Years parent training with the help of translators, bilingual therapists, and translated measures when appropriate. Post treatment, mothers assigned to the experimental condition were more positive, consistent, and competent. Findings revealed that no differences in treatment outcome across ethnic groups, and all groups rated the treatment acceptability of the program as high. Additionally, Hispanic, Black, and Asian American parents reported less problem behaviors with their children prior to beginning treatment compared to White families.

Finally, a fourth recent study observed White, Black, and Hispanic children and their caregivers from the Multimodal Treatment Study of ADHD (MTA). Findings revealed that baseline parenting practices differed by ethnic group in their utilization of parenting strategies. Parents of White children in the MTA group, on average, demonstrated higher levels positive reinforcement, and warmth compared to parents of children of other ethnicities. The parent training program focused on teaching parents the use of an authoritative parenting style (e.g., praise, direct commands, and strategic punishment). Ethnicity did not moderate the relationship between treatment and either parenting or child behavior. The authors concluded that children and parents of different ethnicities did not differentially benefit from one treatment over another on the observed measures (Jones, Epstein, Hinshaw, Owens, Chi, Arnold et al. (2009).

The Need for Cultural Specific Parent Education Programs

A compelling case can be made for the adaptation of parent education programs for different ethnic groups. As discussed previously, most of the research on the efficacy of programs has been conducted with middle class, White families and programs developed and based on mainstream samples may not account for the “language, values, customs, childrearing traditions, expectancies for child and parent behavior, and distinctive stressors and resources associate with cultural groups” (Weisz, Huey, & Weersing, 1998, p. 70). Thus, minority families’ investment and engagement in the program, in addition to program effects may be compromised.

Based on parent education program research reviewed above; however, it remains unclear whether program effects are different among ethnic minority parents and White parents traditional. At the same time, there is no clear evidence that culturally specific parent education programming is effective or more beneficial than traditional programming. Additionally, modifying evidenced based programs to be culturally sensitive may result in inappropriate program modifications that in turn undermine the fidelity and core components of the original program (Castro, Barrera, & Martinez, 2004). Moreover, some argue that the proliferation of modified evidenced based programs for various problems for various target populations may be unproductive especially in light of the lack of research indicating such a need. As Lau (2006) writes “if different manuals were needed for every difference between efficacy samples and representative clinical patients, then the task of manualizing treatment in clinical settings would be untenable (p. 305).”

Other arguments include how the cost of developing, implementing, and evaluating culturally specific programs to serve individual groups is tremendous, especially if the use of traditional programs is equally or perhaps more effective. The implication from previous studies suggest that it may be less expensive and time-consuming to use existing, culturally sensitive evidence-based programs rather than develop new ones specific for a particular culture (Scott, O'Connor, Futh, Matias, Price, & Doolan, 2010). Thus, some contend rather than focusing on developing culturally sensitive programming, researchers should first gain an understanding of which treatments work best for which particular kinds of parents (Hinshaw, 2002; Kazdin & Nock, 2003; Lau et al., 2006).

Purpose and Rationale

A number of inferences can be drawn from the research summarized previously. First, researchers have documented parenting practices and aspects of the home environment that are critical to young children's socio-emotional competence and early literacy skills. A number of researchers across disciplines suggest; however, that parenting style and home environments vary among ethnic groups and that the beliefs and practices of ethnic minority families differ from middle class families. Based on this research, traditional parent education programs that do not incorporate the values and beliefs of different ethnic groups are often criticized and may not be a good fit for ethnic minority parents. Therefore, professional experts have stressed the importance of addressing ethnic differences in parenting practices and values in the design and implementation of parent education programming (Scott, Brown, Jean-Baptiste, & Barbarin, 2011).

While it seems intuitive that parent education programming should be tailored to specific groups of parents, at the present time there is little empirical evidence to suggest that this is a necessary effort or that ethnic minority parents reap more benefit from culturally tailored programs. In particular, there is a limited body of research comparing the treatment effects of ethnic minority and White parents who participate in empirically validated programs, resulting in little data on whether ethnicity moderates the treatment effects of parent education programs.

Though some researchers have examined this question, there is a continuing need within the literature to determine whether parent education programs have different treatment effects across ethnic groups. Without knowledge of the particular subgroups that respond differently to any particular program, research on effective parent education programs is bound to remain at a relatively descriptive level. Therefore, the current study is designed to extend research on these issues. To address these research questions, this study drew upon extant data from the Classroom Literacy and Intervention Outcomes (CLIO) study, a national randomized experimental study of the federally funded Even Start Family Literacy program from 2003-2006. The CLIO study examined whether the combination of research based, literacy focused early childhood education and parenting education curriculum were more effective than existing or “regular” Even Start services and whether the research based parenting curriculum added value to the preschool curriculum.

The CLIO study is the first large scale randomized experimental study of Even Start. After the program began in 1989, the US Department of Education sponsored three national evaluations. Two of the three national evaluations included experimental studies

that randomly assigned families to either Even Start or a control group who delayed participation in Even Start for one year (St. Pierre et al., 2003; St. Pierre et al. 1995). The control condition in these studies was typically at-home care by parents or extended family members. The findings from these studies revealed that Even Start projects were no more effective at improving the outcomes of preschool-age children and their parents than control projects. In other words, the gains made by parents and children enrolled in Even Start were no different than their counterparts in the control group. However, some positive findings were revealed including that Even Start had a positive effect on the presence of reading materials in the home (St. Pierre et al., 2003).

In 2003, after the results from the third Even Start evaluation were published, the CLIO study was initiated. The focus of the CLIO study was on research based, literacy-focused curricula to improve Even Start services and outcomes. Through a competitive process, two research based early childhood and parent education curricula, (1) Partners for Literacy (PfL) Early Childhood Curriculum and Parent Education and (2) LET'S BEGIN with the Letter People/Play (early childhood curriculum) and Learning Strategies Parent Education, were selected for the study. Project sites were randomly assigned to implement one of four CLIO combinations or to be in a control group that provided regular pre-CLIO Even Start services. The four treatment conditions included: two that implemented research based preschool curricula in combination with existing parent education services and two conditions that implemented the research based preschool curricula and parenting curricula (CLIO combined curricula).

The findings from the CLIO study were analyzed by averaging the effects across the four interventions: (1) Partners for Literacy Early Childhood Curriculum (PfL), (2)

Partners for Literacy (PfL) Early Childhood Curriculum and Parent Education, (3) LET'S BEGIN with the Letter People/Play Early Childhood Curriculum, and (4) LET'S BEGIN with the Letter People/Play Early Childhood Curriculum and Learning strategies parent education component. The study revealed mixed findings for the CLIO combined curricula. Overall, there were statistically significant positive impacts on some child literacy outcomes and social competence and statistically significant positive effects on parent interactive reading skill. Additionally, the CLIO parenting curricula added value to the CLIO preschool curricula. Compared to control parenting curricula, the CLIO preschool curricula significantly increased the amount of parenting education time spent on child literacy, parenting skills not related to child literacy, and parent interactive reading skill. The CLIO parenting curricula, however, did not significantly add value to the CLIO preschool curricula in terms of parent responsiveness, child literacy outcomes, or child social competence (Judkins et al., 2008).

The CLIO study, however, did not examine whether parent treatment effects varied by ethnicity. Given that the Even Start program typically serves ethnic minority families it is important to determine whether these factors moderate treatment outcomes. Therefore, the current study focused only on the families at project centers who were randomly assigned to the study group that received the Partners for Literacy (PfL) parent education component and those families at project centers that were randomly assigned to the control group. Additionally, the current study also only included White, Black, and Hispanic participants in either PfL or the control group and did not include parents identified as “other” in the study.

Background on Partners for Literacy Parent Education Program

PfL (Wasik, 2009) is an integrated early childhood and parent education curriculum, so that the parent component mirrors the teaching strategies and materials ongoing in the preschool classroom. PfL ECE refers to the early childhood component and PfL PE refers to the parenting component. The main goals of the PfL parent curricula are to encourage the language, literacy, emotional/social, and cognitive development of children. To reach this goal, parents are helped to engage in positive parent child relationships and to encourage positive social and emotional support. Parents are taught to foster language and literacy development through the use of interactive book reading, learning games played by parents and children, and the use of everyday activities by parents to teach children (Wasik, 2009).

PfL is based on procedures developed mainly for low-income families and the parenting practices employed drew upon existing beliefs about the importance of parent-child interactions while reading and positive parent-child interactions (Wasik, 2009). The developers of the program cite positive impacts from three randomized controlled longitudinal research studies upon which the program is based. These include the Abecedarian Project (Ramey et al., 1976), project CARE (Wasik, Ramey, Bryan & Sparling, 1990), and the Infant Health and Development Program (Ramey et al., 1992).

The developers also note that PfL includes materials for parent education facilitators that address cultural responsiveness and that parent education materials are available in both English and Spanish (Wasik, 2009). Additionally, parent education facilitators received training in topics such as how to teach English language learners (Judkins et al., 2008). Therefore PfL is a translated program. The original program's curricula and content remain unchanged and only surface level modifications were made.

The Pfl parenting curriculum relies on many of the same materials and strategies that are used in the Pfl preschool classroom such as (1) LearningGames, (2) interactive book reading (3) specific instructional strategies (4) Enriched Caregiving and (5) problem solving strategies (Wasik, 2009).

LearningGames are brief game like activities, with specific instructional goals, that parents can use with their children ages three to five. They address early literacy skills such as concepts of print, letter knowledge, oral language, phonological awareness, writing, and creativity. The games are interactive and entail a back and forth fashion between the parent and their child. LearningGames complement the LiteracyGames that is implemented in the preschool classroom. Interactive book reading is the second component of Pfl. Parents are taught how to foster a conversation with their child during shared book reading. In addition, parents are taught specific instructional strategies to facilitate conversations, actively engage the child during book reading to increase a child's motivation, and promote comprehension. Parents also taught to use Enriched Caregiving strategies with their children to capitalize on everyday routines and activities by turning them into important learning opportunities. Enriched Caregiving aims to promote language, literacy, and cognitive and social development. Finally, parents are instructed in a problems solving strategy to address everyday parenting concerns and help their child develop social skills. Parents assist children in developing age appropriate problem solving skills for their children that help them recognize their emotions and identify wants and needs (Wasik, 2009).

Parent educators use a specific structure for each session: Read, Role Play, and Reflect. Parents read and discuss information that the lesson introduces and then they

role-play and practice with a partner. To conclude, parents return to the group to review and reflect on their role play. The parent-interactive sessions offer an opportunity for parents to play LearningGames and read a book with their child with the assistance of trained staff (Wasik, 2009).

As described by Judkins et al. (2008), developers of the program provided annual group training, on site mentoring, and ongoing support. In the summer of 2004, 4-day training occurred and during the summer of 2005, projects received additional training. In addition, Pfl developers made an average of two yearly on-site visits. A consultant visited each project site and conducted mentoring visits, and maintained regular contact with the project sites.

As part of the national study, independent observations of parenting classroom and observations conducted by the curriculum developers constituted yearly measures of the fidelity of implementation of the curricula. On a 5-point scale, the independent observer rated Pfl classrooms 3.28 in 2005 and 3.52 in 2006. The developer ratings average 3.20 for 2005 and 3.41 for 2006. Across the whole sample, over 80% of parents had 20 or fewer hours of combined parent instruction, which is consistent with data from the Third National Even Start Evaluation published in 2003 (Judkins et al., 2008).

Study Questions and Hypotheses

The study sought to assess the effects of treatment (Pfl vs. control), ethnicity (White, Black, and Hispanic) and the interaction between treatment and ethnicity on two main outcome measures: parent responsiveness and interactive book reading. Specifically, the study proposed two sets of questions and corresponding hypotheses, with one set of three questions addressing parent responsiveness with levels that

correspond to treatment main effect, ethnicity main effect, and treatment and ethnicity interaction. The second set of three questions addresses interactive book reading and has levels that correspond to test treatment main effect, ethnicity main effect, and treatment and ethnicity interaction. Additionally, effects were estimated by including the same set of covariates used in the original CLIO study (Judkins et al., 2008). Though potentially an important consideration for the study's questions, the number of years lived in the United States was not asked of all participants and thus not included as a covariate. The covariates in the HLM models included: maternal age in years; mother is college graduate; home language is not English; videotaped children were classified as having special needs; videotaped children are male; average age of videotaped child; and maximum times that any of the sample children in the family moved in the last year.

Research Question 1a. Are there significant differences on a measure parent responsiveness skill between participants receiving Pfl and parents in a control group not receiving the Pfl?

Hypothesis 1a. There will be significant differences on a measure of parent responsiveness skills between parents receiving Pfl and parents in a control group not receiving the Pfl.

Research Question 1b. Are there significant differences on a measure of parent responsiveness skill between White, Black, and Hispanic parents?

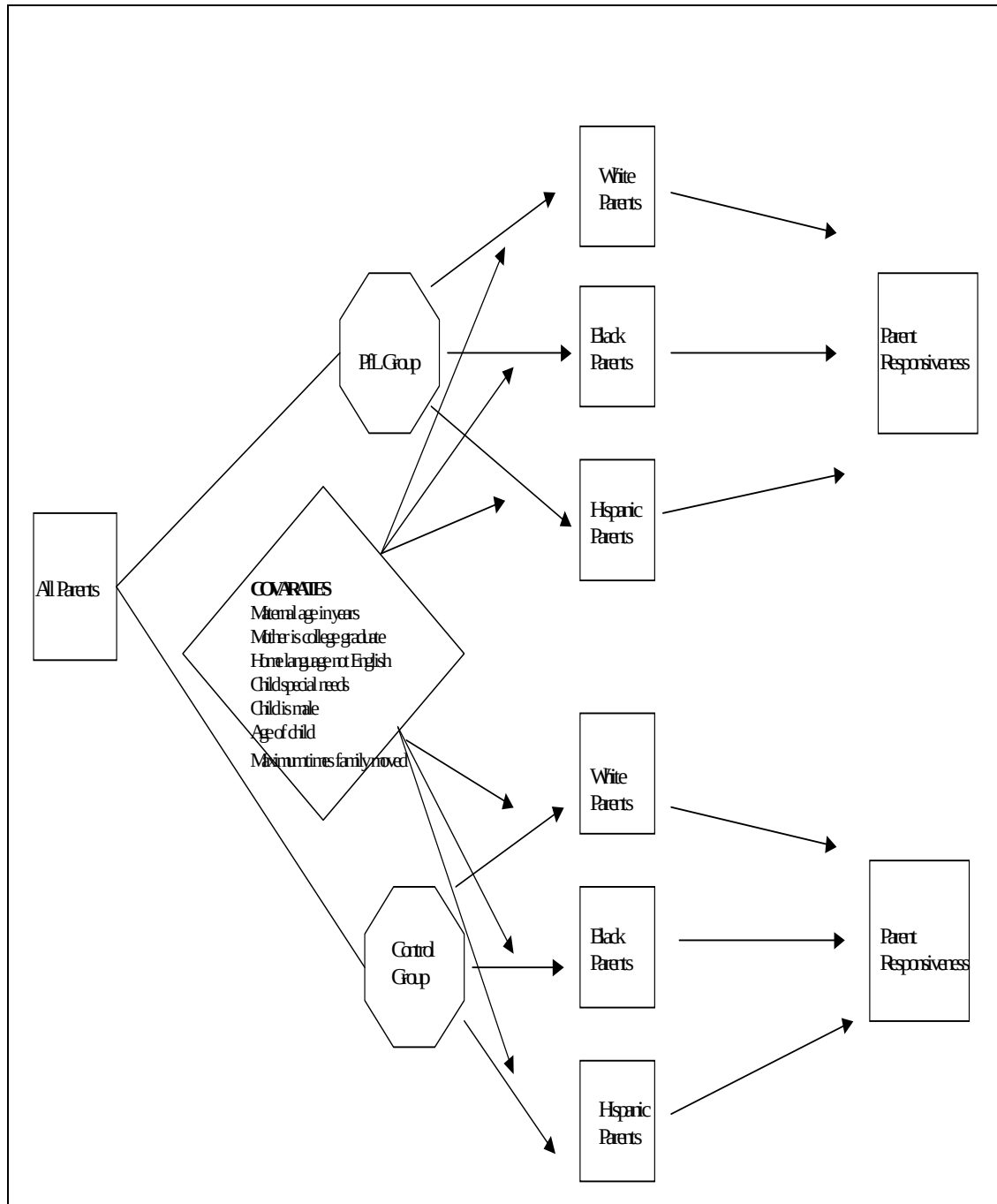
Hypothesis 1b. There will be significant differences on a measure of parent responsiveness skill between White, Black, and Hispanic parents.

Research Question 1c. Are there significant differences on a measure of parent responsiveness skill between White, Black, and Hispanic parents receiving Pfl and White, Black, and Hispanic parents in a control group not receiving Pfl?

Hypothesis 1c. There will be significant differences on a measure of parent responsiveness skill between White, Black, and Hispanic parents receiving Pfl and White, Black, and Hispanic parents not receiving Pfl.

The theoretical models depicting the research questions and hypothesis discussed above are in Figure 1.

Figure1. Differences in Parent Responsiveness Skill among White, Black, and Hispanic Parents Enrolled in PfL and White, Black, Hispanic Parents Enrolled in a Control Group.



Research Question 2a. Are there significant differences on a measure of interactive book reading skill between participants receiving Pfl and parents in a control group not receiving the Pfl?

Hypothesis 2a. There will be significant differences on a measure of interactive book reading skill between parents receiving Pfl and parents in a control group not receiving the Pfl.

Research Question 2b. Are there significant differences on a measure of interactive book reading skill between White, Black, and Hispanic parents?

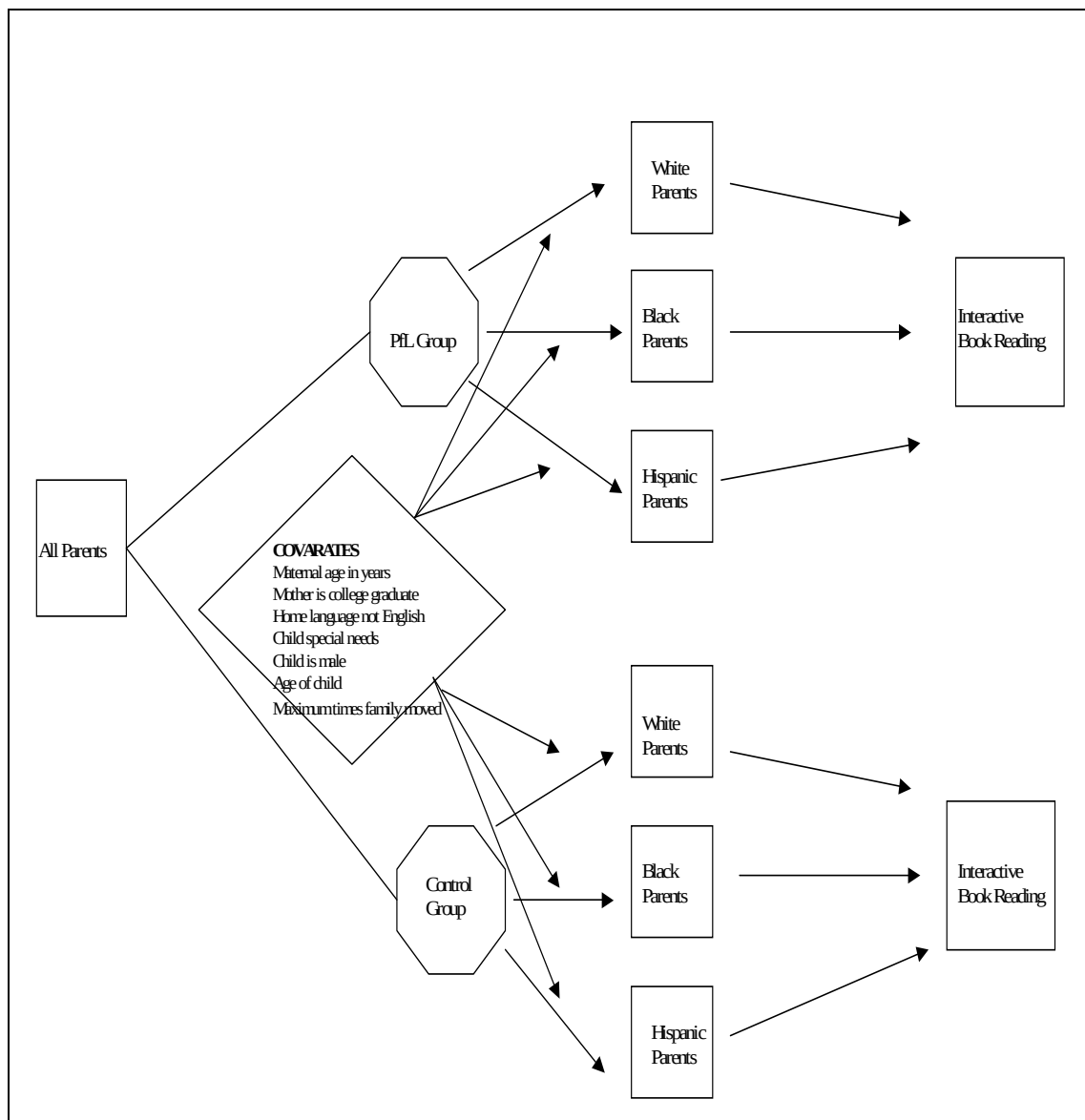
Hypothesis 2b. There will be significant differences on a measure of interactive book reading between White, Black, and Hispanic parents.

Research Question 2c. Are there significant differences on a measure of interactive book reading skill between White, Black, and Hispanic parents receiving Pfl and White, Black, and Hispanic parents in a control group not receiving Pfl?

Hypothesis 2c. There will be significant differences on a measure of interactive book reading between White, Black, and Hispanic parents receiving Pfl and White, Black, and Hispanic parents in a control group not receiving Pfl.

The theoretical models depicting the research questions and hypothesis discussed above are shown in Figure 2.

Figure 2. Differences in Interactive Book Reading among White, Black, and Hispanic Parents Enrolled in Pfl and White, Black, Hispanic Parents Enrolled in a Control Group.



The plan in the original proposal was to investigate differences in parent responsiveness and interactive book reading skills between Hispanic parents whose home language was English, Spanish, and a mix of Spanish and English. However, approximately 80% of Hispanics reported that their home language was Spanish and approximately 20% of Hispanic parents reported their home language was a mix of

Spanish and English. Given these unequal sample size numbers, it was statistically not feasible to examine skills by Hispanic home language subgroups.

CHAPTER THREE:

METHODOLOGY

Data Collection and Study Design

Data were collected in all Even Start projects participating in the CLIO study during the baseline year (fall 2003, spring 2004) and during the first year of implementation (fall 2004, spring 2005). In spring 2006, data were collected on 3- and 4-year olds and their parents in all Even Start projects participating in the CLIO study. However, the fall baseline data (fall 2003, spring 2004) and the fall 2004 data from the first year of implementation did not include all the measures needed for the current study's parent outcome measures. Therefore, this study used data from spring 2005 and spring 2006. Additionally, the original CLIO study made no effort to make the study longitudinal despite the fact that some children and parents were assessed multiple times throughout the study. Thus, given this constraint of the design, the current study was a posttest only control study. In order to increase the power of the study, however, the data from spring 2005 and the spring 2006 of Black, Hispanic, and White parents were combined. Parents with children who turned 3-years old by March 1st of both spring 2005 and spring 2006 were included.

Parent Outcome Measures

The outcome measures included parent interactive reading skill and parent responsiveness. Both scales are standardized to have a mean of zero and a standard

deviation of one. Additionally, an interview was conducted to gather additional information on the dimensions of the home literacy environment.

Parent Interactive Reading Skill and Parent Responsiveness to Child

Data were collected from staged parent child interactions and a parent interview. The first staged interaction involved the parent and child reading a book together and the second interaction involved them playing with a toy together. These interactions were videotaped and coded. Coders received several days of training and practice coding. They were required to reach a minimum of 85 percent reliability before beginning, and random checks were conducted to ensure continued reliability (Judkins et al., 2008).

Coders used three different coding systems to code the joint book-reading task. The first system focused on the mechanics of reading together called the Reading Aloud Profile-Together (RAPT). Fifty-five parent and child behaviors were rated during prereading, during reading, and during post reading. If a coder observed a particular behavior a minimum of one time during the task, they endorsed the corresponding item. The second coding systems called the Contingency Scoring Sheet instrument was comprised of eight sections. Each section was rated on a 7-point Likert scale to score parent and child behaviors during the joint book-reading task. The eight sections include: parental supportiveness, parental stimulation of cognitive development, parental intrusiveness, parental negative regard, parental detachment, child engagement of parent, child's sustained interest, and child negativity towards parent. Quality Indicators was the third scale used to score the quality of the reading interaction on three dimensions: the degree to which parent introduced and contextualized new vocabulary words, the extent to which the parents used open ended questions in order to support the child in

imagination, making predictions, and providing rich description, and the child's engagement in the reading activity. It consisted of three 5-point Likert scales. Unlike the RAPT which indicates whether a behavior occurred, the Quality Indicators provided information on the frequency of higher and lower quality behaviors that occur over the course of the entire book reading task. For the toy interaction activity, coders used the same Contingency Scoring system described above. Research staff conducted a parent interview regarding the frequency and type of reading activities at home.

Across these three measures, there were a total of 90 variables. Judkins and colleagues (2008) compressed this information and created two scales based on a combination of variable clustering and factor analysis. The first scale, parent interactive reading skill, was comprised of 49 items and the second scale, parent responsiveness, was made up of 41 items. Appendix 1 displays the two scales and the set of items that dominate each scale.

Since there are no pre-existing measures of reliability and validity for these two scales, Judkins et al. (2008) conducted a factor analysis to derive scales with items of unequal weights because computing Cronbach's alpha would underestimate the scales' reliability. Thus, Judkins et al. (2008) employed an alternative approach to measure the reliability of the two scales with unequal weights, proposed by Gorsuch (1980). Using this method, the overall alpha for the 49 items in parent interactive reading was 0.79, and among the 22 items with larger than average weights the alpha coefficient was 0.84. Based on the 41 items in the parent responsive scale, the overall alpha was 0.55 and among the 15 items with larger than average weights, the alpha coefficient was 0.80.

CHAPTER FOUR:

RESULTS

The following chapter will first review the data set used for this study. Then, descriptive data that compared the Pfl group and control group on a range of demographic and risk factors will be presented. Additionally, descriptive data comparing White, Black, and Hispanic parents on the same demographic and risk factors will be displayed. Inferential statistics results will then be provided along with a rationale and explanation of the type of statistical procedure that was utilized.

This analysis is drawn from a secured data set governed by policies of the Department of Education. As such, licensees are required to round all unweighted sample size numbers and degrees of freedom to the nearest ten; the results reported below reflect this requirement. All statistical analyses were performed with SPSS Version 15.0.

Descriptive Statistics

The total sample included 440 participants. The rounded data for the Pfl group (N =220) were 30% White participants, 10% Black participants, and 60% Hispanic participants. The rounded data for the control group (N=220) were 20% White participants, 10% Black participants, and 70% Hispanic participants. In the original study, families enrolled at CLIO projects were generally eligible if their child was between 36 and 60 months of age at the time of the assessment and were not yet attending kindergarten.

To assess the comparability of the Pfl treatment group and the control group, baseline demographic information and reports of risk factors by intervention group were conducted. One-way analyses of variance (ANOVA) for continuous variables and chi-square tests for nominal variables were used to test for differences among participants in the Pfl intervention group and the control group. Descriptive statistics and comparisons are reported in Table 1 below. As indicated, interactive book reading skill and the age of mother were significantly different between the two groups.

Table 1.
Outcome Measures, Demographics, Risk Factors by Treatment Group

Factor	Partners for Literacy		Control Group		
	M	SD	M	SD	ANOVA
Parent responsiveness	-.314	0.89	-0.311	.097	<i>Ns</i>
Interactive book reading	.46	1.00	.01	0.90	<i>Significant**</i>
Years lived in US	7.01	8.92	8.25	4.3	<i>Ns</i>
PPVT score	67.56	24.19	67.82	22.59	<i>Ns</i>
Age of mother	29.79	5.65	31.26	5.59	<i>Significant**</i>
Age of child in	52.94	8.07	53.00	7.62	<i>Ns</i>
Home language not English	N 130		N 100		χ^2 <i>Ns</i>
Child is male	70		80		<i>Ns</i>
Mother married	80		100		<i>Ns</i>
Mother has college degree	10		20		<i>Ns</i>
Monthly household	80		100		<i>Ns</i>

income >\$1500			
Child has special needs	10	20	<i>Ns</i>
Family moved once in last 12 months	30	30	<i>Ns</i>
*p<0.05 **p<0.01			

Baseline demographic information and reports of risk factors by ethnicity were also examined. One-way analysis of variances (ANOVAs) for continuous variables and chi-square tests for nominal variables were used to test for differences among ethnic groups. When these effects were significant, pair wise comparisons were examined using the follow up test, Tukey test for unequal *ns*. Descriptive statistics and comparisons are reported in Table 2.

One-way ANOVAs conducted to evaluate differences by ethnicity yielded several significant findings. Poc hoc analyses using the Tukey test for unequal *ns* indicated a significant effect across all groups for the number of years lived in the United States. These results must be interpreted with caution; however, because not every participant in the sample was asked how many years they resided in the United States. All Hispanic parents were posed this question while only Black and White participants who indicated that English was not the primary language spoken at home were asked about their length of time living in the United States. Therefore, this finding does not accurately represent the entire sample of White and Black parents, though it does provide information on a small set of White and Black families whose home language was not English and were not born in the United States.

Post hoc analyses yielded a significant difference on the standardized score obtained on the PPVT among White, Black, and Hispanic mothers. White mothers

obtained the highest score compared to Black and Hispanic mothers. Black mothers performed significantly better than Hispanic mothers. Additionally, a significant age effect revealed that Hispanic mothers were significantly older than either White or Black mothers.

Chi Square analyses examining differences by ethnicity also yielded two significant findings. There were a significantly greater proportion of Hispanic mothers who reported that their home language was not English compared to White or Black mothers. However, approximately 10% of Black mothers reported that English was not their home language. This finding suggests that the Black sample was comprised of a portion of immigrant families who spoke a language other than English as opposed to a homogeneous, English-speaking sample of Black families. A detailed breakdown of country of origin was not provided in the data set or supporting materials. Therefore, a more fine-grained understanding of the participants' background was not provided in the report published by Judkins et al. (2008) to understand this unanticipated finding. Finally, chi square analyses showed that the proportion of White, Black, and Hispanic mothers who were married also differed, with a greater significant proportion of Hispanic mothers married compared to White or Black mothers.

Table 2.
Outcome Measures, Baseline Demographics and Risk Factors by Ethnicity

Factor	White		Black		Hispanic		ANOVA
	M	SD	M	SD	M	SD	
Parent responsiveness	0.89^a	0.78	-0.54^b	1.28	0.50^b	0.90	Significant**
Interactive book reading	0.25 ^a	1.03	0.05 ^b	1.03	0.25 ^a	0.96	<i>Ns</i>
Years lived in US	15^a	11.31	4^b	1.87	8.4^c	4.61	Significant**
PPVT score	90.93^a	11.19	76.56^b	15.11	58.54^c	21.46	Significant**
Age of mother	29.54^a	5.71	28.83^a	6.61	31.14^c	5.38	Significant**
Age of child	52.93	8.03	50.98	7.87	53.29	7.75	<i>Ns</i>
Home language is not English	N 0		N 10		N 240		Π^2 Significant**
Child is male	60		30		150		<i>ns</i>
Mother married	50		20		230		$\Pi^2(10)=88.76$ **
Mother college degree	10		10		20		<i>ns</i>
Monthly household income >\$1500	50		30		180		<i>ns</i>
Child has special needs	20		10		30		<i>ns</i>

Family moved once in last 12 months	20	20	60	<i>ns</i>
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*p<0.05 **p<0.01

Inferential Statistics

The effects of the intervention were reported using an “intent to treat” approach to match how the original CLIO study accounted for missing data. Therefore, all parents in the sample were included whether or not they completed the parenting sessions. This procedure provided a more conservative approach to investigating the effects of the intervention. In addition, missing data were dealt with by imputing parent assessment scores for those parents who participated in the book task and the toy task. The secured data set included inputted parent assessment scores and covariates.

The study used hierarchical linear modeling (HLM), which is geared toward the analysis of data in which characteristics of one unit of analysis (e.g., parents) are nested within and vary among larger units (e.g., project sites). Until recently, dealing with nested data structures has been difficult both conceptually and computationally. For instance, traditional approaches, which conduct a group level analysis where data are aggregated across individuals are inappropriate because variables take on different meanings and have different effects at different levels (e.g. parents, project sites). In such situations, aggregating data will potentially not account for meaningful lower-level variance in an outcome measure. HLM resolves this issue by separating the lower level effect and the higher-level effects explicitly into different parts of the same overarching model.

Secondly, in multilevel data there is dependency among observations and research consistently demonstrates that people within a particular group or context tend to be more

similar to each other in terms of an outcome variable than they are to people in a different group or context. Thus, the fact that parents have the same exposure within a project site means that responses from parents within each project site are not independent of one another. This dependency requires appropriate modeling in order to avoid misestimation of standard errors, (standard errors could be smaller than they should be) that would occur in traditional methods such as ordinary least squares regression and subsequently increase the risk of a Type I error. HLM takes into account these dependencies by calculating error at each level, resulting in more accurate standard errors of the estimate than traditional methods.

For example, by using HLM in this study the two sources of variation in parent outcomes - (a) variation between families within sites and (b) variation between sites - was parceled out. This method allows for an error term at each level (parent and site), and it results in a more accurate standard error for the regression coefficients. While analyzing nested data with ordinary least squares regression (OLS) would yield coefficients for site and parent, the OLS method would most likely underestimate the standard error and increase the risk of a Type I error. The reason for this is that the significance of a regression coefficient (OLS or multi-level) is determined by calculating a new test statistic, which is computed by dividing the regression coefficient by its standard error. The resulting test statistic is then distributed so that values greater than 1.96 in absolute magnitude are significant at the .05 level. Therefore, if the standard error were underestimated (too small) the resulting test statistic would be larger than it would be using an accurately estimated standard error, thereby increasing the chances of getting a significant test statistic and increasing the risk of making a Type I error.

Hierarchical Linear Models

The effect of exposure to Pfl on each outcome variable (parent responsiveness and interactive reading skill) was estimated with four, two level HLM models where parent (the level one unit of analysis) was nested with project site (the level two unit of analysis). The original CLIO study used a four-level hierarchical model to examine parent outcomes. However, a two level model was deemed reasonable after exploring variance components at four levels that showed for this subsample of CLIO data the majority of variation is between families/children within sites.

Therefore, for the current study the hierarchical model accounted for the nesting of families/children within sites. For the two parent outcomes, parent responsiveness and interactive book reading, the same model building sequence was used. Additionally, treatment effects were estimated by including the same set of covariates used in the original CLIO study (Judkins et al., 2008) and reported on in the descriptive section above. The covariates in the HLM models included: maternal age in years; mother is college graduate; home language is not English; videotaped children were classified as having special needs; videotaped children are male; average age of videotaped child; and maximum times that any of the sample children in the family moved in the last year. Further, because the number of participants is not equal across centers, full maximum likelihood estimation was employed.

Parent Responsiveness

The results of the four 2-level models built to examine the three hypotheses regarding parent responsiveness are displayed in Table 4. A one-way ANOVA model was first investigated with no predictor variables specified at any level. This model,

referred to as a null model, partitioned the variance in the outcomes measures into within- and between –group components and determined the extent to which the variation that exists in parent responsiveness lies between project sites. An interclass correlation (ICC) was calculated to provide information on the degree to which there was a difference in interactive book reading between project sites and to determine whether the nesting of parents within project sites was systematically associated with parent responsiveness. The results of the ICC suggested that about 11% of the total variability in parent responsiveness lies between projects sites. Based on the ICC data, the research determined that a multilevel model was warranted in order to explain variability in intercepts between projects sites. Because sufficient levels of variance in parent responsiveness existed at each level, a second model investigated

Research Question 1a: Are there significant differences in parent responsiveness skills between participants receiving Pfl and parents in a control group not receiving the Pfl?

To answer this question of treatment main effect, treatment effects were represented as a dummy vector and entered as a fixed effect at level two of the model in order to test this main effect of treatment (control, Pfl). Results disproved the hypothesis that there would be significant differences on a measure of parent responsiveness between parents enrolled in Pfl than that of parents not receiving Pfl and in a control group. Instead, findings yielded no significant difference in parent responsiveness between the Pfl treatment group and the control group. Additionally, the ICC indicated that the addition of the treatment variable (Pfl vs. control) did not account for additional variation not explained in the null model.

Research Question 1b: Are there significant differences in parent responsiveness skills between White, Black, and Hispanic parents?

To investigate this research question of ethnicity main effect, a third model added ethnicity as a predictor of parent responsiveness at level one to the previous model that contained the treatment main effect. Ethnicity was modeled at level one since it was within participant variable. The ethnicity variable was represented by creating dummy variables for White and Black, making Hispanic the intercept (reference code) by default. Hispanics were chosen for the intercept because the majority of the sample was comprised of Hispanic participants. The intercept is the value of y when all covariates are zero. Thus, Hispanic participants were coded zero on White and zero on Black. Additionally, the ethnicity variables were group mean centered, accomplished by creating a new variable for ethnicity generated by subtracting the proportion of that ethnicity category in a person's site from their ethnicity code. For example, if someone was Black his or her score was 1 for black. If 70% of the site they attended was comprised of Black participants then their group mean centered race category was $1 - 0.70$, equaling 0.30 . A Hispanic person in this same site received $0.0 - 0.70$ or -0.70 as their race code. Each site had a different ethnicity breakdown, and thus the effect of ethnicity was factored into the models slightly differently for people in different sites. From this procedure, level one effects were more precisely separated from level two effects, potentially giving more power to detect the level two (treatment) effect.

As indicated, results from the third model yielded consistent findings with the second model indicating that there was no difference in parent responsiveness between participants in the Pfl group and the control group. With regards to the effects of

ethnicity on parent responsiveness, White mothers scored significantly higher than Hispanic mothers on a measure of parent responsiveness. There were no significant differences between Black and Hispanic mothers on a measure of parent responsiveness. The model suggested that approximately 12% of the total variability in parent responsiveness was found between project sites when accounting for treatment and ethnicity.

Research Question 1c: Are there significant differences in parent responsiveness skills between White, Black, and Hispanic parents receiving Pfl and White, Black, and Hispanic parents in a control group not receiving Pfl?

To examine the interaction between treatment and ethnicity, a fourth model included an interaction term. Findings from the model suggested that treatment effects did not vary by ethnicity for parent responsiveness. Additionally, the model also tested the main effect of treatment and ethnicity. Consistent with the previous models, treatment did not significantly predict parent responsiveness, and ethnicity significantly predicted differences in parent responsiveness between White mothers and Hispanic mothers. When accounting for treatment, ethnicity, and the interaction between treatment and ethnicity, approximately 14% of variability in interactive book reading lied between project sites.

Table 3.

HLM Analyses of the Effects of Treatment Group and Ethnicity on Parent Responsiveness

	Unconditional Model			Main Effect Treatment Model			Main Effects Treatment and Ethnicity Model			Main Effects Treatment, Ethnicity, and Treatment by Ethnicity Interaction Model		
	B	SE	p-value	B	SE	p-value	B	SE	p-value	B	SE	p-value
PfL				0.13	0.14	0.38	0.13	0.14	0.38	0.13	0.14	0.38
White							0.49	0.17	0.0**	0.69	0.22	0.0**
Black							-0.28	0.20	0.16	-0.26	0.28	0.35
PfL* White										-0.52	0.35	0.14
PfL* Black										-0.92	0.41	0.82
Varian b/w sites	0.11	0.05	0.02*	0.10	0.05	0.03*	0.10	0.05	0.03*	0.11	0.05	0.02*
Varian w/i sites	0.8	0.0	0.0**	0.80	0.06	0.00**	0.77	0.05	0.0**	0.77	0.05	0.0**
ICC		11%			11%			12%			14%	
*p<0.05 **p<0.01												

Interactive Book Reading

The results of the four 2-level models built to examine the research questions and hypotheses 2a, 2b, and 2c are displayed in Table 4. First, a one-way ANOVA (null model) with no predictor variables specified at any level was developed to determine the extent to which variation exists in interactive book reading lies between project sites. The ICC revealed approximately 14% of the total variability in interactive book reading was between project sites. Given this level of variability, the development of a multilevel model was warranted.

Research Question 2a. Are there significant differences in interactive book reading skills between participants receiving Pfl and parents in a control group not receiving the Pfl?

The second model built investigated the main effect of treatment, specifically whether treatment group significantly predicted interactive book reading. It was hypothesized that parents in the Pfl group would perform significantly different on a measure of interactive book reading than that of parents not receiving Pfl and enrolled in a control group. The treatment variable was represented as a dummy vector and entered as a fixed effect at level two (control, Pfl). Results confirmed the hypothesis and revealed that treatment group significantly predicted interactive book reading. Pfl mothers scored significantly higher on interactive book reading than mothers in the control group. Compared to the null model, there was a reduction in explainable variation to 11% indicating that the addition of the treatment variable accounted for variation not explained in the null model.

Research Question 2b. Are there significant differences in interactive book reading skills between White, Black, and Hispanic parents?

To examine the main effect of ethnicity, a third model modeled ethnicity at level one since it was a within participant variable. Dummy variable represented ethnicity for White and Black, making Hispanic the intercept (reference code) by default. Hispanics were chosen for the intercept since the sample was majority Hispanic. The intercept is the value of y when all covariates are zero. Thus, Hispanic participants were coded zero on White and zero on Black. Additionally, the ethnicity variables were group mean centered in the same fashion as described above.

As demonstrated in the second model, mothers in PfL scored higher on interactive book reading than mothers in the control group. Additionally, the results confirmed the hypothesis that White, Black, and Hispanic parents would perform significantly different on a measure of interactive book reading. Specifically, combined across PfL and the control group, Black mothers scored lower on interactive book reading than Hispanic mothers. No significant differences were revealed between White and Hispanic mothers on interactive book reading. Additionally, there was approximately 12% of the total variability in interactive book reading between project sites when accounting for treatment and ethnicity.

Research Question 2c. Are there significant differences in interactive book reading skills between White, Black, and Hispanic parents receiving PfL and White, Black, and Hispanic parents in a control group not receiving PfL?

The fourth model examined the interaction between treatment group and ethnicity on interactive book reading. It was predicted that White, Black, and Hispanic parents

enrolled in Pfl would perform significantly different on a measure of interactive book reading compared to White, Black, and Hispanic parents not receiving Pfl and enrolled in a control group (hypothesis 2c). However, results revealed no significant differences in treatment effects on interactive book reading skills between ethnicity groups. As found in the preceding models for hypothesis 2a and 2b, mothers in the Pfl group obtained significantly higher scores on interactive book reading than mothers in the control group and that all Hispanic mothers, combined across Pfl and the control group, scored significantly higher on interactive book reading than Black mothers. When accounting for treatment, ethnicity, and the interaction between treatment and ethnicity, approximately 11% of variability in interactive book reading was found between project sites.

Table 4.

HLM Analyses of the Effects of Treatment Group and Ethnicity on Interactive Book Reading

	Unconditional Model			Main Effect Treatment Model			Main Effects Treatment and Ethnicity Model			Main Effects Treatment, Ethnicity, and Treatment by Ethnicity Interaction Model		
	B	SE	p- value	B	SE	p-value	B	SE	p-value	B	SE	p- value
PfL				0.36	0.14	0.02**	0.36	0.14	0.02**	0.36	0.14	0.02**
White							0.22	0.18	0.22	0.18	0.23	0.44
Black							-0.51	0.21	0.02*	-0.42	0.29	0.15
Tx* White										-0.11	0.37	0.77
Tx* Black										-0.20	0.42	0.63
Variance b/w sites	0.14	0.06	0.0**	0.10	0.06	0.04*	0.10	0.05	0.03*	0.10	0.05	0.03*
Variance w/i sites	0.82	0.05	0.01**	0.83	0.05	0.0**	0.82	0.06	0.0**	0.82	0.06	0.00*
ICC		14%			11%			12%			11%	
	p<0.05 **p<0.01											

CHAPTER FIVE:

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

This chapter will first provide an overview of the study and research questions. Then, the findings from the study will be reviewed and discussed. Additionally, study limitations, implications, and areas for future study will be addressed.

Overview of Study

The study draws upon extant data from a Study of Classroom Literacy Interventions and Outcomes in Even Start (CLIO), a national investigation of the Even Start Family Literacy program (Judkins et al., 2008). The hypothesis driving the CLIO study was that an increased focus in preschool and parenting instruction would enhance parent and child outcomes. In order to select parenting interventions that were evidenced based and literacy focused, developer's submitted proposals through a public process and Pfl was one of two programs selected for the CLIO study. The original CLIO study failed to investigate treatment effect differences among White, Black, and Hispanic parents on parent outcome, parent responsiveness or interactive book reading, or whether treatment effects differed depending on the ethnicity of the parents.

Therefore, the study addressed whether the Pfl intervention, ethnicity, and the interaction between Pfl and ethnicity predicted significant differences in parents' abilities to interact with children in responsive and cognitively stimulating ways. The current study drew from a subset of the CLIO data that included only White, Black, and

Hispanic parents enrolled in Pfl and White, Black, and Hispanic parents not receiving Pfl and enrolled in a group.

Study Findings

The first set of findings reviewed will be regarding the difference in treatment effects between participants receiving Pfl and participants not receiving Pfl. Following, the findings relating to the effect of ethnicity on outcomes will be discussed. Finally, a discussion on whether treatment response was a function of ethnicity will be presented.

Treatment Main Effects

The current study first investigated whether participants in the Pfl intervention group performed significantly different on a measure of interactive book reading and a measure of parent responsiveness. It was hypothesized that participants in the Pfl group would perform significantly different on a measure of parent responsiveness compared to parents not receiving Pfl and in the control group (hypothesis 1a). Secondly, it was hypothesized that participants in the Pfl group would perform significantly different on a measure of parent interactive book reading compared to participants not receiving Pfl and enrolled in the control group (hypothesis 2a).

A large body of research has linked the outcome measures in the study, parent responsiveness and interactive book reading skills, to young children's literacy, language, and social development. Specifically, sensitive, emotionally responsive care has shown to predict language and cognitive development of children from majority and minority ethnic groups (Bornstein, 1989; & Gottfried et al., 1998) and children reared in homes that are emotionally supportive environments have higher cognitive abilities than children reared in less responsive homes (Brooks-Gunn et al., 1996). Research has also shown

that caregiver warmth and responsiveness is related to children's self regulation, a key foundational skill required for success in school (Brody & Flor, 1998) and a powerful predictor of children's motivation and interest in literacy and early literacy development (Roberts et al., 2005; Sonnenschein et al., 1996).

Secondly, interactive book reading has also long been shown to be an important variable related to language and literacy development (Bus et al, 1995; Phillips & Lonigan, 2005; Scarborough & Dobrich, 1994; & Snow et al., 1998). Children who are actively engaged in the story and whose parents ask more questions, elaborate on their previous comments, and foster longer answers make greater gains literacy and vocabulary skills (Justice et al., 2000). Given these strands of research, program developers and experts in the field have focused efforts on home literacy practice and family life as a vehicle to strengthen the cognitive development of young children

In the current study, parent responsiveness was measured by parent and child ratings on the following main items during a book reading task and a play situation: parent supportiveness, child engagement of parent, child negativity towards parent, child verbally responds to questions from parent about book, parent directs child's attention to illustration, parent cognitive stimulation, and child sustained interest. Parents and children were measured on interactive book reading skills by ratings on the following main items during a book reading task: parent cognitive stimulation, child verbally responds to questions from parent about book; parent captures child's attention and expresses interest in book; quality of open ended question and techniques for eliciting responses to them; child labels and names pictures, child make comments; relates to text,

pictures or parent's comments; parents discusses/expands on new information; and parent expands on child's comments/questions about story.

To investigate whether Pfl promoted parents' responsiveness and interactive book reading skills, the effects of Pfl and the control group were compared across all participants, regardless of ethnicity. Findings revealed that the participants in the Pfl group performed no differently on a measure of parent responsiveness than their counterparts in the control group. One possible reason for the lack of effect Pfl had on parent responsiveness may be the strategies used to teach parent responsiveness. Pfl relied on group format and follow up practice in children's early education classroom. Within the literature, however, interventions effective at promoting parent responsive used one-on-one, videotape/feedback approaches with a parent "coaching" method to increase parents' responsiveness (e.g., Bernstein, Hans, & Percansky, 1991; Kelly, Zuckerman, & Rosenblatt, 2008).

With regards to interactive book reading skill, parents enrolled in Pfl performed significantly better than their counterparts enrolled in the control group. Thus, these results suggest that the Pfl parenting curriculum is an effective intervention to teach low-income parents' interactive book reading skills.

Ethnicity Main Effects

Research suggests that aspects of home environments, such as parent responsiveness and interactive book reading, are crucial to children's cognitive development; however, a disproportionate amount of the extant research on this topic has been primarily been conducted with middle class, White families. Therefore, it is not surprising that some of the research findings that pertain to relations between particular

parenting practices and child development have been mixed when applied with other diverse groups (Whiteside-Mansell et al., 2009) suggesting that these dimensions may operate differently across ethnic and socioeconomic groups (Bradley et al., 2001; García Coll, 1990). To address this issue, the current study examined whether ethnic differences exist in parent responsiveness and interactive book reading in the sample of low-income White, Black, and Hispanic participants (hypothesis 2b).

With regards to parent responsiveness, results in this study revealed no significant difference between Black and Hispanic parents. The lack of difference between Black and Hispanic parents may be explained by the fact that the current sample is entirely drawn from low socioeconomic status and parenting styles may differ more as a function of socioeconomic status than race or culture (Aikens & Barbarin, 2008; Bradley et al., 2001). For instance, studies have highlighted the significant association between SES and cognitive enrichment and parent responsiveness independent of ethnicity (Hart & Risley, 1995; Raviv, Kessenich, & Morrison, 2004). Research suggests that socioeconomic status can be a more powerful predictor of parenting than ethnicity and demonstrates how socioeconomic status shapes children's learning environments (Hart & Risley, 1995; Hoff, 2003). However, it remains uncertain how ethnicity and socioeconomic status combine to affect the pattern of relations between children's home environment and their development (Bradley et al., 2001). Recent studies suggest that once factors related to family resources and characteristics, such as maternal education level, extent of knowledge about child development, degree of conflict in home, child age, religious service attendance, are controlled for few differences emerge in parent behaviors across ethnic groups (Barrueco, Lopez, & Miles, 2007).

Secondly, White parents obtained higher scores on measure of parent responsiveness than Hispanic parents. This finding may be consistent with research that suggests that Hispanic parents tend to express warmth and freedom towards their children differently from White parents (Calzada & Eyberg, 2002; Guilamo-Ramos et al., 1997). However, overall, the research on Hispanic parenting is mixed. Hispanic parents have been rated to be relatively more permissive, nurturing, and egalitarian in some research. In other studies, Hispanic families have been rated as more authoritarian and control oriented (Halgunseth, Ispa, & Rudy, 2006) which experts have suggested may be related to the value that Hispanic culture places on raising a compliant and respectful child (Berlin et al., 2009).

Another important point to consider in light of the differences between Hispanic and White parents is the sensitivity of the parent responsiveness measure for ethnically diverse parents. Several longitudinal studies have clearly demonstrated the salience of responsive care giving for children's well being (NICHD Early Child Care Study, 2002). In particular, Black children raised in homes that are emotionally supportive tend to score higher on measures of cognitive ability than children raised in less supportive home environments (Brooks-Gunn, Klebanov, & Duncan, 1996). However, research on the salience of parent responsiveness is largely based on findings from studies with White, middle-income samples and some experts have argued that parental responsiveness may be expressed differently across groups and may not be a universal construct (Sue, 1999; Whiteside-Mansell, 2009). Thus, some parenting researchers have called into question measures designed to assess parent responsiveness for use with ethnic minority and low-income populations (Nadeem, Romo, Sigman, Lefkowitz, & Au, 2007; Sue 1999).

Additionally, research suggests that acculturation plays a role in parenting (Isapa, et al., 2006). Differences often emerge in parenting practices between English speaking and Spanish-speaking Mexican-American parents (Cabrera et al., 2006; Hill, Bush, & Roosa, 2003) and acculturation has been found to affect childrearing (Delgado-Gaitan, 1993) and discipline strategies (Buriel, Mercado, Rodriquez, & Chavez, 1991). Specifically, the parent style of highly acculturated individuals tends to match the parenting style most commonly used in their host culture (Cardona et al., 2000). In the current study, descriptive statistics suggest that acculturation among the Hispanic families was low. Approximately, 80% of Hispanic families spoke only Spanish at home and, moreover, Hispanic parents scored extremely low on the PPVT, a test of receptive language (a standard score of 58 on average), providing support for a possible low acculturation phenomenon and suggesting these parents likely adhere to parent styles more typical of Hispanic culture.

With regards to interactive book reading skills, results revealed no statistical differences on scores on interactive book reading between White and Hispanic parents, regardless of treatment group. This finding is surprising given several more recent studies that suggest that Hispanic mothers less frequently use strategies to promote interactive book reading, including employing more directives/requests, and instead display a greater number of descriptions labels with their preschool children (Garcia Coll & Patcher, 2002; Raikes et al., 2006). However, the lack of difference between participants in the current sample may be explained by the fact that White and Hispanic mothers were of the same socioeconomic status. As noted above, socioeconomic status has been shown to be an important predictor of the communication behaviors and

interactive strategies that parents use with their children (Hart & Risley, 1995; Rodriguez, Hines, & Montiel, 2009).

Hispanic mothers scored significantly higher on a measure of interactive book reading than Black parents. This finding is in line with previous research conducted by Hammer, Nimmo, Cohen, Draheim, and Johnson (2005) that compared the reading style of low-income Black and Puerto Rican mothers and their Head Start children. The study found that Puerto Rican mothers were more likely than Black parents to adopt a “child-centered style” which encouraged the child to speak more. Black mothers tended to use fewer labels and comments than Puerto Rican mothers. Therefore, it is likely that in the current study the Hispanic mothers employed a more interactive approach to storybook reading with their children than their Black counterparts.

Another possible reason to explain this finding is the small sample size of Blacks in the study. Approximately 10% of the sample was Black compared to Hispanics, who comprised over 60% of the study sample. Furthermore, a deeper investigation into the characteristics of the Black families in the sample suggests that a small portion of the Black families were immigrants who did not speak English. For instance, 10% of the Black families reported that English was not the language spoken in the home. As discussed previously, those families who indicated that English was not the primary language spoken in the home were followed up with a question about their length of time in the United States. As descriptive information revealed, non-English speaking Black families’ average length of time in the United States was significantly less than Hispanic families. This finding indicates that non-English speaking Black families may have been more recent immigrants to the United States and this may need to be taken into

consideration when examining the results of the Black parents. Additionally, facilitators of the parent education program predominately spoke either English or Spanish, or a mix of both. Thus, it is possible that the group of Black families who were recent immigrants and spoke a language other than English or Spanish had more difficulty benefiting from instruction and the curriculum.

Treatment as a Function of Ethnicity

Given that research suggests differences in parenting practices across ethnicity, the study proposed that Pfl would have differential effects on parent responsiveness and interactive book reading by ethnicity. However, the hypotheses that the treatment effects of parent responsiveness and interactive book reading would vary by ethnicity responsiveness were not supported (hypothesis 1c and 2c). There were no significant differences between White, Black, and Hispanic parents enrolled in Pfl on parent responsiveness or interactive book reading. The findings that ethnicity did not moderate treatment effects is consistent with prior research on parent education programs as well as prevention work in the area of substance abuse for adolescents (Lua et al., 2002; Reid et al., 2006).

This non significant treatment by ethnicity interaction finding is important in light of the baseline parenting differences in parent responsiveness and interactive book reading. There is an ongoing debate within the literature about how program developers and educators partners enhance the parenting practices of low income, ethnically diverse. One position is that parenting programs that teach parents how to facilitate preschool children's language and literary development may be foreign to parents of culturally and economically diverse back ground (Purcell-Gates, 2000). Those from this viewpoint

warn that a lack of attention to the differences between a program's practices and those of families of diverse backgrounds may result in poor intervention outcomes and limited participants (Kummerer, Lopez-Reyna & Hughes, 2007)

In order to address these concerns, experts have discussed ways to improve participation and collaboration with parents from diverse backgrounds, program developers and the importance of understanding and respecting culturally specific beliefs and values (Rodriguez & Olswang, 2003). The Pfl developers took steps to ensure that the program was sensitive to different ethnic groups. The program was translated into Spanish and changes were made in the reading and picture materials to reflect the diversity of the participants. Program developers also devoted training time to not only the program content and curriculum but also topics including how to teach English language learners and ways to create an interactive and collaborative classroom to ensure a welcoming atmosphere for all participants (Judkins et al., 2008).

Within the literature, experts have proposed additional ways to develop culturally relevant intervention programs. Some have suggested that reaching out to parents and gaining an understanding of their knowledge and resources or "funds of knowledge" (Gonzalez, Moll, & Amanti, 2005) and integrating this information into programs improves the program's acceptability to diverse groups. In doing so, program developers and educators gain information regarding parents' current communication and interactive patterns, acknowledge families' funds of knowledge and provide them with strategies to add, not replace, their current practices (Rodriguez, Hines, & Montiel, 2009).

Within the literature, in order to guide more culturally literacy interventions and programs, researchers have begun to describe how to build upon the strengths of families.

For instance, Scott et al. (in press) suggest that family literacy programs for Black families should incorporate singing, rhymes, and cultural activities into literacy practices and involve the whole family and community members in reading and story telling activities. Whiteside-Mansell et al. (2009) suggest that educators can build upon the Mexican American's current communication and interactive patterns by supporting mothers to continue to pose questions, offer positive feedback, increase the amount of "talk" and model strategies (e.g., letter identification, relating children's personal experience to book content) to promote children's literary development. Others have also proposed that given the collectivist culture, parent programs should not solely focus on the parent for Hispanic families but include other family members (Scott et al., in press). Since interventions based on the child development literature may not reflect the cultural or individual values of all families, more research is needed on how to ground parent programs in strategies proven to be critical to children's long term success while at the same time acknowledging the legitimacy of the individual and cultural values of the family.

Limitations and Future Directions

The positive findings from this study suggest that Pfl is an effective intervention to teach interactive book reading skills to low income, White, Black, and Hispanic parents' in order to promote their child's cognitive development. Furthermore, findings suggested that baseline differences exist between Hispanic and Black parents on a measure of interactive book reading and between Hispanic and White parents on a measure of parent responsiveness. Thirdly, data suggested that the treatment effects of Pfl did not vary by ethnicity.

In addition to the findings of the present study, certain limitations must be considered when interpreting the results. First, the reliability of the parent responsiveness and interactive book reading scales is a concern because there were no independent evaluations of reliability of these scales. Judkins et al. (2008) explained that since factors analysis was used to derive the scales rather than forming a simple average of a set of related items, using Cronbach's alpha would underestimate the reliability and the alpha is only appropriate when items are equally weighted. To address the fact that the parent responsiveness and interactive book reading scales were comprised of items with unequal weights, Judkins et al. (2008) used an alternative method developed by Gorsuch (1980) to calculate reliability rather than the more traditional Cronbach alpha approach. This approach focuses on the items with the largest weights. The overall alpha for the 49 items in parent interactive reading is 0.79, and the alpha among items with larger than average weights was 0.84 which is acceptable. Among the 41 items in the parent responsiveness scale, the overall alpha was 0.55, and among the 15 items with larger than average weights, the alpha coefficient was 0.80. Given that the widely accepted cut off is that alpha should be 0.80 or higher, there are serious concerns regarding the reliability of the parent responsiveness scale in particular.

Additionally, there are questions regarding the validity of the parent responsiveness scale. First, the method used by Judkins et al. (2008) to compute validity for the scales was tenuous. The authors stated that to assess validity the two parent scales were used as putative casual variables rather than outcome variables. There was no statistically significant relationship found between interactive book reading and children's emergent literacy, which calls into question the validity of the parent

interactive book reading scale. Using the same method to assess validity, Judkins et al. (2008) found a statistically significant and positive relationship between parent responsiveness scale and a range of child outcomes.

Despite this weak attempt to assess validity, a close examination of the parent responsiveness scale suggests indicates some serious concerns. The CLIO study vaguely defined responsiveness as elements of the “. . . parent child interaction that involve reciprocal warmth and affection” (Judkins et al., 2008) and researchers have noted that parent responsiveness has a history of being inconsistently defined within the literature (Whiteside-Mansell et al., 2009). For instance, parent responsiveness has been defined as the degree to which a parent is emotionally available and generally sensitive to a child’s moods, interests, and needs, uses praise and encouragement, physical affection, provides attention to child and enthusiasm during interactions, and uses flexibility (e.g., prompt responses to child and appropriate pacing of interactions) (Bradley and Corwyn, 2005; Whiteside-Mansell, 2009). It appears that the CLIO definition focuses more on the parent-child interaction rather than on parent behaviors alone. For instance, five out of the nine items that dominate the parent responsiveness scale were related to child behaviors (e.g., child engagement of parent, child negativity toward parent, child verbally responds to questions from parent about book, child sustained interest). The remaining items, which measure parent behavior, capture parent supportiveness. Thus, it seems that original program evaluators were looking to examine the quality of the parent child interaction not just parent responsiveness. Future studies might reconfigure the parent responsiveness scale to include just parent behaviors or rename the scale to accurately capture what it purports to measure.

Additionally, it is possible that the observational setting itself, defined by either its novelty or its structure, may have had a beneficial effect or a detrimental effect on the behavior of parents and children. It can be argued that the controlled and observational nature of the observations is not comparable to real-life parenting. Observations of parent child interactions took place in a preschool center in which the parent and child were observed in a special part of the center and knew that they were being videotaped. These methodological limitations may have influenced child and parent behavior, possibly restricting the application of these findings. Additionally, other studies that measured parent responsiveness often used a combination of observational data and self report to account for the biases present in using only observations or self report measures alone.

Additionally, there are data to suggest that the ethnic status of observers can affect observational ratings (Gonzales, Cauce, & Mason, 1996). Observational coders are typically blind to variables that may influence their behavior ratings, such as treatment status or child diagnosis. However, coders are not blind to ethnicity, as people make judgments about ethnicity based on appearance and behavior and the current study did not document the ethnicities of observers during the course of the study. Hence, it is impossible to examine the effects of the ethnicities of observers on the observed findings. Furthermore, there is accumulating research questioning the ability of observational measures to assess differences in parenting between ethnic groups (Calzada & Eyberg, 2002). Future research needs to address the cultural appropriateness of measures and methodologies when examining variables related to ethnicity.

Furthermore, this study fails to account for the heterogeneity among individuals from the same ethnic group. The current study included Hispanics and Black families who are large, heterogeneous groups of people rich in diversity and cultural subtleties; however, they were treated as a single group rather than being divided into groups based on country of origin or language, both of which could have influenced outcomes. Research findings have suggested that parenting differences among Hispanics depend on their country of origin (e.g., Rodriguez, Hines, & Monitel, 2009). In particular, Hispanics are a compilation of all Latin American cultures, all of which are similar in ways but grouping all these individuals together does not provide opportunities to examine within cultural differences (Garcia Coll, 1996). Similar issues apply to grouping Black participants into a single group. Thus, generalizations under the broad classification of Hispanic or Black should be considered carefully, given the heterogeneity among these groups. Future research should provide a more fine-grained analysis of Hispanic and Black participants and should focus on specific groups individually and not as a generalized ethnic or culture group.

Additionally, as mentioned previously the study did not use a measure of acculturation of participants. Therefore, the level of acculturation among Hispanic and Black families is unknown. This information is important contextual information to understand the extent to which Hispanic and Black families adopted middle income values related to education and childrearing. Future studies that investigate parenting differences among ethnic groups should include scales designed to measure acculturation and gather information on language use, cultural heritage, ethnic behaviors, ethnic interaction, and ethnic identity. Developers of programs should assess participants'

adherence to traditional cultural variables in addition to acculturation and acculturative stress with the understanding that not all families will adhere to the same cultural variables to the same extent. Collecting this information will provide developers the knowledge required to determine if possible adjustments to parenting interventions are needed.

While the current study and previous research suggests that ethnicity does not moderate treatment effects, future research should consider other factors to understand whether interventions are equally appropriate across ethnically diverse families. For instance, examining treatment acceptability and satisfaction among ethnic groups following treatment would shed light on ethnic minority families' perspective and judgments on the appropriateness of parent education program. Additionally, future research might examine parents' acculturation to determine if it would account for differences in treatment acceptability.

Furthermore, the CLIO study did not investigate the attrition rate of families to determine whether ethnic minority parents were more likely to drop out of the program. Research has identified a range of characteristics that may predict what families are more likely to drop out of parent education programs and minority group status has been identified (Kazdin, Holland, & Crowley, 1996). Future research should carefully examine characteristics that might be related to parent involvement in families from different cultural groups and in order to inform strategies for engaging parents.

Finally, the fidelity in which Pfl was implemented in each site remain questionable. Fidelity of the of implementation of the curricula were rated by both independent observers and curriculum developers. Fidelity ratings ranged from 1 (not

appreciably implemented) to 5 (fully implemented). In 2005 and 2006, the developers of Pfl rated the fidelity of implementation 2.59 and 3.10 respectively. In 2005 and 2006, independent observers rated the fidelity of implementation 3.32 and 3.40. These ratings suggested that both program developers and independent observers only rated implementation “half way implemented.” This finding suggests that future study of Pfl might include considering curriculum modifications or modification to parent education facilitator training procedures to improve the degree of fit between the Pfl developers defined components of the curriculum and its actual implementation.

Despite these limitations and areas for future directions, the results from this study contribute to the literature on family literacy and parent education literacy interventions and programs. First, the data shows the promise of Pfl to train low income, ethnically diverse group of parents how to promote their child’s language and literacy through interactive book reading. Second, different interactive book reading and parenting practices among White, Black, and Hispanic parents highlight the importance of carefully considering ethnicity when designing programs for diverse groups. The challenge for the future is two fold. Interventions need to be developed that reflect and draw upon the values and practices of ethnically diverse families. At the same time, interventions need to be developed that promote the ways in which parents interact with their children that are proven to set up children for the best outcomes in life.

APPENDIX A

Parent Outcomes Scales and Corresponding Items

Scale 1: Parent interactive reading skill	Scale 2: Parent responsiveness
Reading task- Contingency Scoring ▪ Parent cognitive stimulation	Reading task- Contingency Scoring ▪ Parent supportiveness ▪ Child engagement of parent ▪ Child negativity toward parents
Reading task- RAPT- Prior to reading ▪ Child verbally responds to questions from parent about book ▪ Parent captures child's attention and expresses interest in book	Reading task- During reading ▪ Child verbally responds to questions from parent about book ▪ Parent directs child's attention to illustration
Reading task- Quality Indicator ▪ Quantity of open ended questions and techniques for eliciting responses to them	Toy task- Contingency scoring ▪ Parental supportiveness ▪ Parent cognitive stimulation ▪ Child engagement of parent ▪ Child sustained interest
Reading task- RAPT- During reading ▪ Child labels, names pictures ▪ Child makes comments, relates to text, pictures or parent's comments ▪ Parent discusses/expands on new information ▪ Parents expands on child's comments/questions about story	

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