

January 2012

Increasing Parental Involvement in Early Childhood Education

Kendall Jeffries

University of South Florida, kjeffri2@mail.usf.edu

Follow this and additional works at: <http://scholarcommons.usf.edu/etd>



Part of the [Pre-Elementary, Early Childhood, Kindergarten Teacher Education Commons](#)

Scholar Commons Citation

Jeffries, Kendall, "Increasing Parental Involvement in Early Childhood Education" (2012). *Graduate Theses and Dissertations*.
<http://scholarcommons.usf.edu/etd/4340>

This Thesis is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact scholarcommons@usf.edu.

Increasing Parental Involvement in Early Childhood Education

by

Kendall L. Jeffries

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Psychological and Social Foundations
College of Education
University of South Florida

Major Professor: Kathy Bradley-Klug, Ph.D.
Julia Ogg, Ph.D.
Jeffrey Kromrey, Ph.D.

Date of Approval:
November 8, 2012

Keywords: Parent-directed interventions, early literacy skills, preschool, intervention
integrity, intervention acceptability

Copyright © 2012, Kendall L. Jeffries

Table of Contents

LIST OF TABLES	iii
LIST OF FIGURES	iv
ABSTRACT	v
CHAPTER ONE: INTRODUCTION	1
Conceptual Framework	2
Purpose and Research Questions	3
Significance of the Study	5
CHAPTER TWO: REVIEW OF THE LITERATURE	6
Introduction	6
Parental Involvement in Early Education	7
Unidimensional models of PI	7
Multidimensional models of PI	9
Outcomes of Parental Involvement during Preschool	13
Short-term outcomes	13
Academic outcomes	13
Behavioral and social outcomes	20
Long-term outcomes	21
Predictors of Parental Involvement during Early Education	24
Parental Literacy Teaching	26
Purpose of the Present Study	28
CHAPTER THREE: RESEARCH METHODS	30
Participants	30
Recruitment procedures	31
Inclusion/exclusion criteria	32
Participant attrition	33
Risks and costs to participants	35
Participant compensation	35
Protection of human subjects	35
Measures	35
Screening measures	35
Preschool early literacy indicators (PELI)	35
DIBELS FSF & LNF	37
Outcome measures	38
Demographic questionnaire	38

Family involvement questionnaire (FIQ)	39
Early Literacy Intervention	40
Intervention Integrity	42
Research Design	43
Procedure	43
Ethical considerations	43
Assessment schedule	44
Intervention group procedures	45
Control group procedures	46
Data Analysis	46
Evaluation of data	46
Data analyses	47
Statistical power	48
 CHAPTER FOUR: RESULTS	 49
Intervention integrity	49
Descriptive statistics	50
Home-based involvement	51
School-based involvement	51
Home-school conferencing	51
Correlation Data	53
Repeated Measures Analysis of Variance	54
Research question one	54
Research question two	55
 CHAPTER FIVE: DISCUSSION	 60
Research Question One	60
Research Question Two	64
Limitations	65
Ideas for Future Research	66
Implications for Practice	68
Conclusions	70
 REFERENCES	 72
 APPENDICES	 83
Appendix A: Demographic Questionnaire	84
Appendix B: List of FIQ Items Contained under Each Involvement Category	85
Appendix C: Sample Lesson Plan	86
Appendix D: Informed Consent Form	89
Appendix E: Institutional Review Board Approval Form	92

List of Tables

Table 1	Parent Demographic Information by Condition	34
Table 2	Child Demographic Information by Condition	34
Table 3	Average PELI Scores Across Three Time Points	36
Table 4	DIBELS FSF and LNF Benchmark Goals at the Beginning of Kindergarten	38
Table 5	Assessment Schedule	45
Table 6	Intervention Integrity	50
Table 7	Descriptive Statistics	50
Table 8	Correlation Matrix	53
Table 9	Two-Way Repeated Measures ANOVA for Home-Based Involvement	54
Table 10	Two-Way Repeated Measures ANOVA for School-Based Involvement	54
Table 11	Two-Way Repeated Measures ANOVA for Home-School Conferencing	54
Table 12	Descriptive Statistics for Number of Years Parents Received Services	56
Table 13	Three-Way Repeated Measures ANOVA for Home-Based Involvement	56
Table 14	Three-Way Repeated Measures ANOVA for School-Based Involvement	57
Table 15	Three-Way Repeated Measures ANOVA for Home-School Conferencing	57

List of Figures

Figure 1	Average FIQ HBI Scores Pre- and Post-Intervention	52
Figure 2	Average FIQ SBI Scores Pre- and Post-Intervention	52
Figure 3	Average FIQ HSC Scores Pre- and Post-Intervention	52
Figure 4	Average FIQ HBI Scores Across Time Based on Years of Experience	56

Abstract

Parental involvement during preschool has been linked with stronger pre-literacy skills, acquisition of mathematical skills, well-developed social skills, and positive attitudes toward school (Arnold, Zeljo, Doctoroff, & Ortiff, 2008; Powell, Son, File, & San Juan, 2010). Parents' active involvement in their children's learning is a recommended strategy in engaging families in children's education experiences (Henderson & Mapp, 2002). The purpose of the current study was to measure the impact of parents' active participation in a parent-directed early literacy intervention on parental home-based involvement, school-based involvement, and home-school conferencing among Head Start parents and their preschool-aged children. The study used a quantitative research design, in which preschool children and their parents were randomly assigned to an intervention or control group to assess later levels of parental involvement as a result of the intervention across three time points. This relationship was also examined in the context of parents' prior experience with their children's preschool education. Following implementation of the intervention, average levels of Home-Based Involvement increased among parents in the intervention group. Assigning Head Start parents an active role in developing their preschoolers' pre-literacy skills may be an effective strategy to increase home-based parental involvement activities.

Chapter One: Introduction

The preschool years represent crucial opportunities for the development of parental involvement (PI) in children's early education (Arnold et al., 2008), as parents' active involvement in their children's learning has been shown to improve children's academic, behavioral, and social outcomes (Marcon, 1999; Powell et al., 2010; Senechal, 2006). In particular, PI facilitates children's development of pre-literacy skills such as phonological awareness and letter name knowledge (Powell et al., 2010). These skills have been shown to be essential for later school success (Blachman, 1994). Moreover, the transition to preschool marks the beginning of an important relationship between home and school (Powell et al., 2010). A child's first experiences in school are often parents' first experiences as critical stakeholders in their child's formal schooling. PI during preschool may also allow parents to develop skills in working collaboratively with school personnel. PI may be particularly important for children from low-income families (Reynolds, Weissberg, & Kaspro, 1992). The preschool years are therefore an optimal time to establish PI and to familiarize parents of children at-risk for academic difficulties with the skills children need to acquire prior to entering elementary school.

Although a link between PI during elementary, middle, and high school and later outcomes has been established (Domina, 2005), few studies have examined PI during the preschool years and its impact on later outcomes. However, it has been found that the effectiveness of PI declines as children age (Catsambis & Garland, 1997; Crosnoe, 2001). This finding underscores the importance of gaining a better understanding of the value of

PI during children's earliest educational experiences. The scant research available on the outcomes of PI demonstrates many positive influences of parent involvement on children's academic, behavioral, and social outcomes. For instance, parents' active involvement during the preschool years has been positively associated with children's pre-literacy development, acquisition of mathematical skills, well-developed social skills, and positive attitudes toward school (Arnold et al., 2008; Powell et al., 2010). Children's later reading achievement during the elementary and middle school years is an additional long-term benefit of PI during preschool (Miedel & Reynolds, 1999). These positive outcomes have given rise to the instillation of government initiatives to increase PI in today's schools. For instance, one of the six central goals delineated in the 2002 No Child Left Behind Act includes the promotion of PI in children's education (No Child Left Behind [NCLB], 2001).

Conceptual Framework

The importance of PI reflects Bronfenbrenner's (1986) Ecological Systems Theory, which underscores the substantial influence of environmental interactions on a child's development. This theory holds that the relationship between a child's family and school is multidirectional; the family influences the school, while the school influences the family. Under the premise of this theory, PI has typically been defined as parents' engagement in activities such as volunteering at school, communicating with teachers, participating in academic activities at home, and attending school events, meetings, and conferences (Hill & Taylor, 2004). Traditional definitions of PI have emphasized parents' concrete behaviors in one or two contexts such as at home or at school. However, other frameworks have advocated for a more multidimensional aspect of PI

that incorporates the countless other ways in which parents become involved, such as the ways in which parents and schools communicate with one another, as well as parental influences on school-wide decisions. For example, one such multidimensional framework of PI often cited in the literature includes Epstein's (1995) six dimensions of parental involvement. Two of Epstein's (1995) dimensions reflect home-based involvement and include ways in which parents meet the basic needs of their children, as well as the behaviors in which parents engage to facilitate a positive learning environment at home. Two separate dimensions involve school-based involvement and describe the communication patterns between a child's family and the school on specific education issues, in addition to parents' active participation in learning activities at the school. The last two dimensions pertain to parents' influence on administrative decisions that affect the student body at large.

Purpose and Research Questions

The purpose of the present research proposal is to contribute to the literature base and 'best practices' in providing services to low-income preschool students and their families by examining a way in which PI may be increased during the preschool years. Parents' active involvement in their children's learning, such as through teaching specific literacy skills, has been shown to improve children's academic outcomes (Senechal, 2006) and is a recommended strategy in engaging families in children's education experiences (Henderson & Mapp, 2002). As such, this study will measure the impact of parental literacy teaching on PI among Head Start parents and their preschool-aged children. The Head Start program is a federally funded preschool program available to low-income preschool-aged children (U. S. Department of Health and Human Services,

2000). Head Start recognizes and regularly promotes PI as an important contributor to the academic achievement of preschool students at-risk. As such, the program provides an excellent context in which to study patterns and predictors of PI among low-income families.

PI will be operationally defined in the current study as parents' scores on a quantitative questionnaire measuring levels of school-based involvement, home-based involvement, and home-school conferencing. For the purpose of the current study, parental literacy teaching has been defined as parents' active participation in a parent-directed early literacy intervention in the development of their children's phonological awareness and letter knowledge. Parental teaching activities will include employing mnemonic strategies to teach their children new letters, engaging in activities that help their children identify the onset sound of a word, and using alphabet flashcards to assess their children's correct and incorrect letter name responses.

The study will utilize a quantitative design in an attempt to answer the following research questions:

1. What is the relationship between parents' early literacy teaching and later levels in PI as measured via the following constructs:
 - Home-Based Involvement: Parental behaviors that actively promote a learning environment at home for children, such as providing learning experiences in the community and arranging areas in the home for learning materials.
 - School-Based Involvement: Behaviors and activities in which parents engage at school with their children, such as volunteering in the classroom, attending class trips, and facilitating the planning of events or fundraisers.

- Home-School Conferencing: Communication practices between parents and school personnel regarding a child's educational progress, such as discussing a child's difficulties with the teacher or educational activities that can be completed at home.
2. What is the relationship between parents' early literacy teaching, later levels in the three constructs of PI, and parents' prior experience with their children's preschool education?

Significance of the Study

Early intervention and prevention practices are greatly needed to facilitate the development of literacy skills and the prevention of academic, behavioral, and social problems among today's population of students. PI may have an important role in helping young children experience later school success. For instance, PI has been directly linked with academic achievement (Fantuzzo, McWayne, Perry, & Childs, 2004), associated with social competence, and inversely related with problem behaviors among preschool students (Powell et al., 2010). However, further research is needed in this area to identify ways in which PI can be promoted and increased during the preschool years, particularly with low-income children. Children who grow up in poverty are at higher risk for negative outcomes such as lower levels of cognitive development, academic achievement, and socio-emotional well-being (Allhusen et al., 2005). As such, the findings from this study may shed light on a new strategy that can be utilized by preschool program developers and educators to increase PI among low-income families in order to improve the academic, behavioral, and social outcomes of at-risk preschool-aged students.

Chapter Two: Review of the Literature

Introduction

There has been a significant emphasis placed on the importance of PI throughout the past two decades. The reauthorization of the Elementary and Secondary Education Act of 1996 mandated that a percentage of Title 1 funds be dedicated to increase the collaborative practices between schools and families. Moreover, one of the central objectives of the National Education Goals Panel (1999) emphasized home-school partnerships and parental participation in promoting children's social, emotional, and academic growth. The U.S. Department of Education and the No Child Left Behind Act of 2002 have incorporated PI as one of their fundamental tenets (Domina, 2005; Fantuzzo et al., 1999). The Head Start program, a federally funded preschool program for low-income families, has also embraced PI as a crucial component of their program's philosophy (Administration for Children and Families, 2006).

The importance of parents' involvement in their children's educational experiences reflects Bronfenbrenner's (1986) Ecological Systems Theory, which underscores the substantial influence of environmental interactions on a child's development. According to this model, the relationship between a child's family and school is multidirectional; the family influences the school, while the school influences the family. This theory is also the basis of what is called the Family Support Hypothesis, which emphasizes parents' participation in early intervention practices as beneficial to children's school performance (Reynolds, Mavrogenes, & Bezruzko, 1996; Seitz, 1990).

In light of these theoretical frameworks, the review of the literature that follows will explore the frameworks, defining characteristics, outcomes, and predictors of PI. The review will begin with a brief description of unidimensional models of PI developed throughout the years, followed by a discussion of the models that have been created to capture a more multidimensional definition of PI. The short-term and long-term academic, behavioral, and social outcomes of PI during preschool will be presented next. Subsequent sections of the review will illustrate the predictors of PI during the preschool years and the effects of parental literacy teaching on child outcomes. The chapter concludes with a description of the purpose of the present study.

Parental Involvement in Early Education

Unidimensional models of PI. The earliest definitions and frameworks used to describe PI were great in number and emphasized the common roles and behaviors in which parents engage in their children's education at home and at school. Many of these frameworks are unidimensional, in that parent involvement behaviors are displayed in only one or two contexts (e.g., home, school). In one of these early frameworks, Gordon (1979) outlined the activities in which parents should engage when interacting with their children's schools. These activities or roles included those of teacher, decision maker, volunteer, paraprofessional, adult educator, and adult learner (Gordon, 1979). In 1990, Alice Honig categorized PI into seven categories that focused on learning opportunities for parents within the home. For example, one category included home visitation, in which members of parent education organizations provided child development information to parents in their homes. Other categories comprised of parents' teaching

their children within the home, parents' viewing education programs on television, and child education programs intended for the entire family (Honig, 1990).

In 1991, Eugenia Berger similarly developed six roles she believed parents should play in their children's education. According to her model, parents should be teachers, spectators of their children's education, employed resources, volunteers, volunteer resources, and policymakers. Henderson and Mapp (2002), after reviewing a series of studies on PI at the elementary level, also identified behavioral dimensions of PI at home and at school. Several common activities among the studies included parents' engagement in educational activities at home, monitoring of children's time spent out of school, communication with their children regarding school and what they are learning, and attendance at school events, such as parent-teacher conferences. Hill and Taylor (2004) defined PI as parents' engagement in activities such as volunteering at school, communicating with teachers, participating in academic activities at home, and attending school events, meetings, and conferences. More recently, Domina (2005) utilized six behavioral variables from the National Longitudinal Survey of Youth (NLSY; Baker, Canada, Mott, & Quinlan, 1993) to measure PI. Four of the variables included parents' attendance at school conferences, PTA participation, volunteering in the classroom, and volunteering outside the classroom, such as chaperoning school field trips. Two other variables measured the frequency with which parents helped and checked their children's homework.

In sum, many of the frameworks and theories developed to describe PI have emphasized the behaviors associated with PI in both home and school settings. These frameworks do not encompass a broader conceptualization of ways in which parents can

become involved in their children's education, such as in communication practices between home and school. In response to this shortcoming in the literature, several frameworks have advocated for a more multidimensional aspect of PI (Fantuzzo, Tighe, & Childs, 2000).

Multidimensional models of PI. Jeynes' (2005) meta-analysis challenged the traditional behavioral conception of PI. In addition to parents' involvement behaviors, Jeynes (2005) uncovered subtler and less concrete variables influencing PI. These variables include parents' communication practices with their children regarding school activities, expectations of academic achievement, attendance and participation in school functions, and parental style in regards to feelings of trust and approachability within the parent-child relationship. The effect sizes produced from the meta-analysis demonstrated strong support for Jeynes' (2005) multidimensional framework. For example, while the effect size for parental expectations at the elementary level was .58, the effect size for parent attendance at school activities was .21 (Jeynes, 2005). As such, the variables associated with discrete parental behaviors contributed less to the measure of PI than did more dynamic and abstract variables.

Grolnick and Slowiaczek (1994) viewed PI as parents' dedication of resources to a child. Their model incorporates both developmental and educational aspects of PI and differentiates parents' overall involvement with their child from their involvement in the child's education. The framework lists three types of involvement that encompass parents' involvement behaviors, personal involvement, and cognitive/intellectual involvement. Examples of parents' involvement behaviors may include volunteering in the classroom or attending open houses. Grolnick and Slowiaczek (1994) theorized that

specific involvement behaviors would provide the parent with information needed to further the child's learning in school. Moreover, they believed a teacher may attend to a student more after seeing the parent's involvement behaviors. A parent's personal involvement entails the child's affective experience of PI. An example of this category is the child's perception that his or her parent finds school important and enjoys interacting with her or him at school. Finally, parents are cognitively and intellectually involved in their children's education when they introduce intellectually stimulating materials to a child, such as books or current events (Grolnick & Slowiaczek, 1994). Children's exposure to these materials was theorized to reduce the gap between home and school and facilitate children's practicing of skills needed for school. Within all three of these categories, the authors underscored the importance of the child's perceptions of and experiences with the resources provided to them by their parents. For instance, a child must be influenced by the resources in order for PI to occur (Grolnick & Slowiaczek, 1994).

Hoover-Dempsey and Sandler (1997) developed a multidimensional theory of PI that has been frequently referenced in the literature. According to this model, parents' decisions to become involved in their children's education are based on several constructs, including parents' personal construction of their roles as parents, personal sense of efficacy in helping their children succeed in school, and the demands and opportunities provided by the child and the school for family involvement. Parents' role construction refers to the expectations that a family or community have of parents' behaviors, parents' expectations for their own behaviors, and the actual behaviors in which parents engage related to children's education (Hoover-Dempsey & Sandler,

1997). Parents are believed to exhibit more PI when there are expectations for positive parent involvement in children's education. Parents' self-efficacy in helping their children succeed entails parents' beliefs that their involvement efforts will have a positive impact on their children's academic outcomes. Under this construct, parents' goals and actions related to their children's education are based on parents' perceptions of their own capabilities. In this way, parents who have a stronger sense of self-efficacy are believed to maintain higher academic goals for their children. Finally, parents' levels of PI will depend on the extent to which they believe their child and the personnel at their child's school want them to be involved. Effective invitations and demands for PI include children's expressions of the importance or need for PI, an inviting school climate, and teacher behaviors that facilitate PI (Hoover-Dempsey & Sandler, 1997).

Finally, Epstein (1995) underscored the importance of more abstract constructs and the multidimensional ways in which parents can become involved in children's early education in her framework of PI. Epstein's (1995) six dimensions of parent involvement are based on the perspective of the schools. As such, two of Epstein's (1995) dimensions reflect home-based involvement and include the ways in which parents raise and meet the basic needs of their children, as well as the behaviors in which parents engage to facilitate a positive learning environment for their children. Two separate dimensions involve school-based involvement. One of these categories describes the communication patterns between a child's family and the school on specific education issues, school programs, and students' progress. Rather than simply emphasizing parents' communication patterns with schools, Epstein (1995) also listed the school's contact with parents as another opportunity for parents to become involved. The other

form of school-based involvement entails parents' active participation in learning activities at the school, such as volunteering and responding to teachers' efforts to recruit help and support within the classroom. The last two dimensions pertain to parents' influence on school politics decisions that affect the student body at large and parents' collaboration with the broader community. Within this category, parents might be described as being leaders and representatives in making school decisions. In collaborating with the community, parents' roles may include identifying resources and services in the community that can be used to augment school programs and practices (Epstein, 1995).

While many previous models pinpointed parental behaviors in one or two contexts, Epstein's (1995) model expanded the common definition of parent involvement to include multidimensional aspects, such as reciprocal and dynamic communication patterns between home and school, as well as parents' impact on systems-level decision-making. In 2000, Fantuzzo, Tighe, and Childs created the Family Involvement Questionnaire based on Epstein's (1995) six categories of parental influence. This scale was the first measure of multidimensional levels of parent involvement behaviors, as prior measures had featured a small number of items that delineated PI in limited contexts (Fantuzzo et al., 2000).

To conclude, though the definition of PI has remained inconsistent in the literature (Fan & Chen, 2001), the frameworks described above suggest an emphasis on multidimensional aspects of parents' involvement behaviors related to their children's educational experiences beyond the behaviors that occur exclusively within the home or

at school. As such, the definition of PI in the current study will similarly be constructed to encompass multidimensional qualities of parental involvement.

Outcomes of Parental Involvement during Preschool

Few studies have examined PI during the preschool years and its impact on later academic, behavioral, and social outcomes. Much of the research has instead focused on the link between PI during elementary, middle, and high school and later outcomes (Domina, 2005). However, the effectiveness of PI has been shown to decline as children age (Catsambis & Garland, 1997; Crosnoe, 2001). This finding underscores the importance of gaining a better understanding of the value of PI during children's earliest educational experiences. In light of the need for further research in this area, the following section will review the short-term (i.e., immediate or within one school year) and long-term (i.e., beyond Kindergarten) academic, behavioral, and social outcomes that have been associated thus far with PI during preschool.

Short-term outcomes.

Academic outcomes. Several studies investigating the relationship between PI in preschool and young children's academic achievement have utilized Head Start populations. Head Start is a federally funded program established in 1965 to promote school readiness in children from low-income families aged three to five (McKey et al., 1985). PI is a major component of the Head Start program. As such, McKey et al. (1985) conducted a meta-analysis of five studies on the effects of PI on students enrolled in Head Start and other early development programs to determine the effects of PI on children's cognitive outcomes. Each of the five studies compared the cognitive development of children of highly involved parents to children of less involved parents.

After identifying a mean effect size of .238 in the analysis of high versus low parent involvement, the authors concluded that children of parents who were highly involved in their children's preschool education yielded higher cognitive scores than children of parents who were less involved (McKey et al., 1985). It is important to note that the authors did not list in the meta-analysis the measures used to assess children's cognitive development or PI.

Tyler and Machida (1994) conducted a longitudinal study using a sample of sixty-three preschool students and their parents enrolled in Head Start. PI was one of several variables examined in relation to preschoolers' cognitive and social development throughout the school year. PI was assessed by teacher ratings on a five-item questionnaire using a 5-point Likert scale ranging from "consistently" (5) to "never" (1). The questionnaire items measured the extent to which parents volunteered in the classroom, provided information in response to teacher requests, attended parent meetings, and engaged in activities with their children as suggested by the teacher. An average rating was computed for each parent. The Developmental Indicators for the Assessment of Learning – Revised (DIAL-R) was used to assess children's conceptual and language skills (Taylor & Machida, 1994). The DIAL-R was administered by the Head Start program at the beginning and end of the school year. Teachers rated PI in January and again at the end of the school year. The authors found a significant but modest positive correlation between PI and children's higher conceptual and language skills at the end of the preschool year.

In 1997, Mantzicopoulos examined the relationship between PI, home literacy activities, and other parent variables and the academic competence of 93 Head Start

children. PI was gauged using the Parent/Family Involvement Index (PFII; Cone, Delawyer, & Wolfe, 1985). This measure was completed by the students' teachers, who reported whether or not parents engaged in a variety of PI activities. These activities included contacting the teacher, transporting children from and to school, observing their children at school, engaging in educational activities at home, attending parent education meetings, volunteering in the classroom, communicating with and supporting other parents at the school, and becoming involved with school administration. The PFII contained a final item that assessed teachers' overall ratings of parents' PI on a scale of one (not involved) to six (highly involved). The Home Literacy Activities and Maternal Educational Expectations Questionnaire (Stipek, Milburn, Clements, & Daniels, 1992) was administered to parents to assess literacy activities that take place in the home and mothers' educational expectations for their children. The Parenting Dimensions Inventory (Slater & Power, 1987) assessed the affective dimensions of the parent-child relationship. Preschoolers' levels of academic competence were measured by their scores on a standardized test of achievement (Kaufman Assessment Battery for Children; K-ABC), their teachers' ratings of their cognitive competence, the children's own self-ratings of their competence, and mothers' reports of their early school adjustment. The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1984) was completed by the Head Start children and their teachers to measure students' cognitive and academic competence. In contrast to the study conducted by Tyler and Machida (1994), children's scores on the K-ABC were not associated with teachers' ratings of parents' overall school involvement using the final item on the PFII. However, mothers who fostered a supportive home learning

environment were more likely to have children who had adjusted better to the school environment. Children's school adjustment was also predicted by teacher ratings of PI (Mantzicopoulos, 1997). Mothers with supportive home environments were additionally more likely to have children who believed they had high cognitive competence.

A fourth study was conducted by Marcon (1999), who evaluated PI among 708 low-income parents and their four-year-old children. Teacher ratings were used to assess four types of contact between teachers and parents, including parent-teacher conferences, teacher visits to the parents' homes, parents' visits during class, and parents' facilitation of class activities. Teachers rated the four categories of contact by providing a "yes" or "no" response to each possible mode of contact. Overall scores of PI therefore ranged from zero to four, depending on the number of categories of contact endorsed by the teacher. Teacher ratings were translated into low (zero or one categories), medium (two categories), and high involvement (three or four categories) scores. Teachers administered the Vineland Adaptive Behavior Scales and the Early Childhood Progress Report to the children in their classes. The Early Childhood Progress Report was used to compare the preschoolers' academic performance to the district's expectations of the skills that should have been mastered by the students. Results revealed a positive correlation between parents' high involvement scores and preschoolers' emerging academic skills and language acquisition as assessed by the Early Childhood Progress Report (Marcon, 1999). Children whose parents were rated in the high involvement group had better mastered basic skills in mathematics and science, verbal ability, and social and work habits than children whose parents had been rated as having low or medium involvement. It is important to note that, similar to Tyler and Machida's (1994)

and Mantzicopoulos' (1997) studies, PI was solely measured by teacher ratings. Another caveat to this study was the methodology used to assess PI. If parents participated in one of the four forms of PI, teachers were expected to rate parents with a "yes" response regardless of the number of times the parents had engaged in the activity. As a result, this "all or nothing" assessment method possibly could have overestimated parents' levels of PI. An additional limitation of the study was teachers' administration of the Vineland Adaptive Behavior Scales to their students. Though teachers were trained by the authors to administer this assessment, this methodology may have increased the chances of teacher bias towards student success on the Behavior Scales.

Fantuzzo et al. (2004) investigated the impact of PI on the classroom competencies of 144 Head Start children for six months of the school year. PI was measured by the Family Involvement Questionnaire (FIQ; Fantuzzo, Tighe, & Childs, 2000), a multidimensional scale of family involvement. The FIQ measures levels of home-based involvement (i.e., reading to a child at home; asking a child about school), school-based involvement (i.e., volunteering in classroom; going on class trips), and home-school conferencing (i.e., talking with child's teacher about child's accomplishments). The authors identified a significant positive relationship between FIQ items measuring home-based involvement and children's receptive vocabulary skills assessed using the Peabody Picture Vocabulary Test-Third Edition. A positive relationship was also found between FIQ scores and teacher reports of preschool children's approaches to learning as assessed by the Preschool Learning Behaviors Scale (PLBS; McDermott, Green, Francis, & Stott, 1996), such as dimensions of competence, motivation, and persistence. Overall, home-based involvement activities demonstrated

the strongest relationship with classroom competencies measured by the Peabody Vocabulary test and PLBS. While the two previously discussed studies relied on teacher report for measures of PI, this study utilized parent report in isolation to assess this variable. Moreover, a limitation of the study was the short time frame (i.e., six months) in which PI was investigated for its relationship with classroom competencies.

Arnold et al. (2008) later conducted a study to further examine the relationship between PI and pre-literacy development. PI was assessed through teachers' responses to ten items of the Parent-Teacher Involvement Questionnaire (Reid, Webster-Stratton & Beauchaine, 2001). Items captured teachers' perceptions of parents' communication patterns and interest in communicating with their children's teachers. Children's pre-literacy skills were measured using standardized assessments of receptive and expressive vocabulary, auditory skills in identifying same or different words, rhyming words, and segmentation of words, and knowledge of print. In order to investigate the relationship between parents' psychological symptoms of depression and PI, parents were asked to complete the Brief Symptom Inventory (Derogatis, 1993). The authors additionally examined the effects of socio-economic status (SES) and single-parent status on PI. The results of the study revealed small to medium effect sizes. Higher PI was related to pre-literacy skills (Arnold et al., 2008). Moreover, a significant positive correlation was found between SES and PI. Parents' psychological symptoms of depression were not significantly related to PI. However, single parents were found to be less involved in their children's education than parents who had partners at home. As such, this study provided support for the importance of PI in the development of pre-literacy skills during

preschool, as well as the implications of SES and single-parent status in parents' decisions to become involved in their children's education (Arnold et al., 2008).

Finally, Powell et al. (2010) more recently examined the correlation between parent-school relationships and the academic outcomes of 140 students attending a state-funded preschool program. School readiness was assessed via the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997) and the Woodcock-Johnson III Tests of Achievement (Letter-Word Identification and Applied Problems subtests; McGrew & Woodcock, 2001) at the beginning and end of the school year. PI was also measured at the beginning and end of the school year via eleven items derived from a parent interview used in the FACES study (O'Brien et al., 2002). The items measured the frequency of PI activities using a five-point Likert scale. Examples of PI activities included parents' attendance at parent-teacher conferences, volunteer work in a classroom, observation of a classroom, assistance with field trips, delivery of materials, and attendance at social events and workshops. Powell et al. (2010) found that parents who reported high levels of PI had children who scored higher in mathematics skills at the end of the school year as compared to children whose parents reported low levels of PI. However, PI was not significantly associated with preschoolers' early reading and language skills.

In sum, the majority of the few studies conducted on the academic impact of PI among preschoolers enrolled in Head Start and other preschool organizations support the need for PI during the preschool years. Many of the studies found significant positive correlations between PI and preschool children's cognitive development, approaches to learning, language and vocabulary acquisition, and pre-literacy skills. Most of these

studies used one measure to assess PI. Moreover, the most commonly used measure of PI took the form of teacher ratings or reports.

Behavioral and social outcomes. The behavioral and social outcomes of PI during preschool have been overlooked in the literature. Only a few studies were identified that assessed these outcomes among preschool-aged children. In the study conducted by Marcon (1999), teachers rated the involvement level of low-income parents of 708 preschool students and completed the Vineland Adaptive Behavior Scales to assess the preschool students' communication, daily living, social, and motor skills. Teacher ratings of PI were based on the presence or absence of four types of teacher-parent contact. Parents who were rated as highly and actively involved had children who performed significantly better on the Vineland scales. No significant differences were found between children with parents who were rated with low or medium levels of involvement.

In 1999, Fantuzzo, Tighe, and Perry studied PI as measured by the Family Involvement Questionnaire (FIQ; Fantuzzo et al., 2000) and its relationship with 170 Head Start children's peer play behaviors in both home and classroom settings. Peer play was assessed by teachers' and parents' ratings on the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998). This measure is intended to differentiate children who maintain positive peer relationships from those who are not as socially successful with peers. Home-based involvement was significantly related to pro-social peer play behaviors as observed by parents and teachers in multiple contexts. School-based involvement was most associated with fewer

problematic peer play activities both at home and at school. Home-school conferencing had no significant relationships with adaptive peer play behaviors.

In a later study, Fantuzzo et al. (2004) investigated the relationship between PI and classroom conduct among 144 preschool-aged students attending Head Start. PI was measured at the beginning of the year using the FIQ (Fantuzzo et al., 2000). The Conners' Teacher Rating Scale-28 (CTRS-28; Conners, 1990) was used to assess children's difficult behaviors in the classroom at the end of the year, including those associated with conduct problems, hyperactivity, and inattention/passivity. Of the three involvement categories, home-based involvement was shown to have the strongest relationship with lower levels of behavior problems in the classroom and higher levels of attention and task persistence. School-based involvement was significantly related to children's cooperation behaviors.

Powell et al. (2010) also studied the relationship between PI and 140 children's adaptive and social skills at the beginning and end of the preschool year using parent interviews and the Social Skills and Problem Behaviors scales of the preschool version of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). Teachers completed both of the SSRS scales, which assessed children's levels of cooperation, assertion, self-control, and internalizing and externalizing behaviors. High levels of PI were significantly related to lower scores in problem behaviors and higher scores in social skills among the preschool participants.

Long-term outcomes. The studies described above delineate the impact of PI on children's academic, behavioral, and social growth in preschool. Even fewer studies have investigated the long-term effects of PI during preschool on later outcomes during the

elementary, middle, and high school years. Several of these few studies explored the longitudinal effects of PI among children recruited in the Chicago Longitudinal Study of Children at Risk (LSCAR; Reynolds & Bezruczko, 1993), a large project that examined the academic outcomes and social adjustment of 1,539 students who attended low-income, government-funded pre-Kindergarten and Kindergarten programs in Chicago in 1986. The following section of this chapter will review the findings of the studies associated with this project.

A large longitudinal study conducted by Miedel and Reynolds (1999) examined the relationship between the frequency and number of school involvement activities during preschool and children's later reading achievement in Kindergarten and eighth grade. PI was also analyzed for its effects on later grade retention and special education placements through age fourteen. Seven hundred and four parents in a government-funded early childhood program for low-income families were interviewed for their retrospective accounts on the frequency of their involvement and the number of activities in which they participated in their children's preschool. Both the frequency and number of parents' school involvement activities during preschool were significantly associated with children's reading achievement during Kindergarten as assessed by the Iowa Test of Basic Skills (ITBS) Early Primary Battery (Level 5; Hieronymus, Lindquist, & Hoover, 1980). Although the frequency of PI was marginally associated with later reading achievement scores on the ITBS (Level 13/14; Hieronymus et al., 1980) in eighth grade, the number of parent activities continued to be significantly associated with reading achievement in eighth grade. In particular, the authors found that as the number of involvement activities in which a parent participated increased, so did the level of

children's reading achievement. The involvement activities identified as the greatest predictors of later reading achievement included volunteering in the classroom and parent attendance at school assemblies. The frequency of PI in preschool was also significantly associated with lower rates of grade retention but not significantly associated with special education placement during elementary school. Moreover, the children of parents who were involved in at least six school involvement activities were 39% less likely to be retained before the age of fourteen. Though the number of involvement activities in which parents engaged was not significantly associated with children's special education placement, a significant relationship was found between the number of parent involvement activities and a decrease in the number of years children spent receiving special education services. The authors concluded from these findings that PI is greatly needed in early childhood programs, especially those that serve low-income families.

In another longitudinal study, Graue, Clements, Reynolds, and Niles (2004) examined the long-term effects of PI among 989 low-income children attending an early educational intervention program. Outcome measures used in the study included measures of school readiness at the start of Kindergarten and achievement at the end of Kindergarten using the ITBS (Hieronymus et al., 1980). Reading achievement was also assessed during the third and eighth grades, as well grade retention, special education placement, high school completion, and juvenile delinquency. PI was rated by the children's first grade teachers. The authors chose to measure PI during first grade as opposed to during preschool because previous research found that PI was relatively stable across the preschool and early elementary grades. However, an assessment of PI during the children's preschool years may have obtained more accurate results. PI was found to

be significantly associated with higher third and eighth grade reading achievement but not associated with a decrease in grade retention or special education placement. PI was not found to be significantly correlated with later juvenile delinquency by the age of eighteen nor with high school completion by the age of twenty-two. In sum, PI during preschool as rated by children's classroom teachers was associated with academic performance and achievement from Kindergarten through the eighth grade. These results reflect those found by Miedel and Reynolds (1999).

Predictors of Parental Involvement in Early Education

The following section will list the factors that have been shown in the research to predict levels of PI, including self-efficacy, role construction, and demographic variables such as socio-economic status. First, parents' self-efficacy beliefs and role construction facilitate parents' engagement in their children's education. Parental self-efficacy refers to parents' beliefs in their abilities to help their children experience academic success (Hoover-Dempsey et al., 2005). Parents with high levels of self-efficacy are typically more likely to become actively engaged in their children's education. These parents are also more persistent in overcoming obstacles to their children's success (Hoover-Dempsey et al., 2005). For instance, parents with stronger self-efficacy beliefs were found to more frequently participate in school activities, help their children learn at home, engage their children in activities that were intellectually stimulating, and monitor their children's progress in school (Grolnick, Benjet, Kurowski, & Apostoleris, 1997). Parental role construction is defined by parents' beliefs regarding their roles in helping their children's educational success (Hoover-Dempsey & Sandler, 1997). This factor involves parents' beliefs about their children's development, what they need to do to raise

their children, and the educational activities in which they should engage with their children at home (Hoover-Dempsey et al., 2005). Many studies have linked parental role construction with PI across a variety of age ranges (Drummond & Stipek, 2004; Grolnick et al., 1997; Sheldon, 2002).

Familial demographic variables have also been shown to influence levels of PI. In particular, a family's SES has been established as a significant predictor of PI in the literature (Griffith, 1998; Grolnick et al., 1997; Sheldon, 2002). For instance, one study found lower school involvement levels among families with low SES (Reynolds et al., 1992). However, other studies suggest that SES is not consistently related to levels of PI (Grolnick et al., 1997; Simon, 2004). Hoover-Dempsey and Sandler (1997) theorize that the relationship between SES and PI is based upon the resources available to families, teachers, and schools to create opportunities for parent involvement. SES also can impact the time and energy parents are able to devote to school involvement (Hoover-Dempsey & Sandler, 1997). For instance, the work schedules of parents of low SES may not allow enough time during the day for PI activities. Crozier (1999) found that parents with low SES may be more likely than parents with middle or high-incomes to consider their child's teacher as the "expert" in their child's education. This view may cause parents with low SES to perceive less need for their involvement in their children's academics. Single parents are also less likely to become involved in children's educational experiences (Arnold et al., 2008; Grolnick et al., 1997; Kohl, Lengua, & McMahon, 2000; Reynolds et al., 1992). Single parents have access to fewer resources that are needed for the occurrence of PI, such as time, money, and social support (Kohl et al.,

2000). Finally, ethnic or racial minority status has been associated with lower levels of PI (Moles, 1993).

Parental Literacy Teaching

For the purpose of the present study, parental literacy teaching has been defined as parents' assumptions of didactic roles in their preschool-aged children's early literacy skills. Although the association between parents' early literacy teaching practices and PI has not been adequately addressed in the literature, two parent-directed early literacy programs were identified that have been empirically linked with both positive child outcomes and PI.

The first program is called the Home Instruction Program for Preschool Youngers (HIPPY). The HIPPY program is a free two-year program that provides parents of low SES with lesson plans to use to help develop preschoolers' skills in language, sensory and perceptual discrimination, and problem-solving. Parents receive instruction in implementing the lesson plans at their home through biweekly home visits. Lesson plans consist of parents' reading books to their children and engaging them in instructional reading activities. In a longitudinal study conducted by Kagitcibasi, Sunar, and Bekman (2001), 280 preschool children from low-income families in Istanbul, Turkey, were randomly assigned to four conditions. These conditions consisted of a childcare program with no education offered, an educational nursery school, home care where their mothers received training through the HIPPY program, or home care provided by mothers who were not given training. After the children participated in one of the four conditions, the children's cognitive skills and school grades were assessed at the end of each school year during elementary school. Both the HIPPY program and the educational preschool

demonstrated positive impact on children's cognitive skills and grades in language. Mothers who were trained with the HIPPY program reported engaging their children in more cognitively stimulating activities, such as reading, telling stories, and teaching (Kagiticibasi et al., 2001). Mothers in the HIPPY program condition also made themselves more available to help with their children's homework and gave higher ratings of their ability to help with their children's homework at home. These mothers additionally maintained higher educational expectations and aspirations for their children. After seven years, the children whose mothers received the HIPPY training stayed in school longer, gained higher achievement in language, and experienced more gains in social development than children who participated in the other conditions (Kagiticibasi et al., 2001).

Another parent-directed early literacy program, Parents as Teachers (PAT), uses individual home-based instruction and group meetings to teach low-income parents the principles of child development and how to prepare their children for school success (Parents as Teacher National Center, 2001). Parents are taught how to engage in developmentally appropriate educational activities with their children. A couple of studies have linked this program with positive PI outcomes. For instance, 63% of parents who had participated in PAT requested parent-teacher conferences (Pfannenstiel, 1999). In contrast, only 37% percent of parents in a comparison control group who were not involved in the PAT program requested parent-teacher conferences to discuss their children's academic progress. Pfannenstiel, Lambson, and Yarnell (1996) found that 95% of PAT parents attended events at their children's schools, 67% volunteered monthly to volunteer in the classroom, 75% participated in PTA, and 67% communicated with their

children's teachers via telephone on average four times a year. Eighty-five percent of PAT parents initiated communication patterns with their children's teacher or school (Pfannenstiel et al., 1996). In sum, the little research that has been conducted on the relationship between parents' early literacy teaching practices and PI indicates that parents' engagement in literacy teaching activities is linked with increased PI and positive child outcomes.

Purpose of the Present Study

Parents' active involvement in their children's learning, such as through teaching specific literacy skills, has been shown to improve children's academic outcomes (Senechal, 2006) and is a recommended strategy for engaging families in children's education experiences (Henderson & Mapp, 2002). As such, this study will measure the impact of Head Start parents' participation in a parent-directed early literacy intervention on their levels of involvement in their children's preschool and later Kindergarten experiences. The relationship between parental early literacy teaching, its effects on PI, and parents' prior experience with their children's preschool education will also be examined. To date, there are no studies that have investigated whether efforts to increase PI should specifically target parents who are new to the education system and who may not be privy to ways in which they can become involved in their children's learning experiences. Might these parents especially benefit from direct intervention in increasing parental involvement? This is a unique question addressed in the current study. In particular, the study will determine the effects of parents' implementation of the intervention on later PI among parents who are within their first year of enrolling a child in

preschool compared to parents who have had children enrolled in preschool for more than one year.

The present research proposal will also attend to the gaps in the literature regarding ways in which PI is measured during the preschool years among low-income families. First, the primary means to measuring PI in the literature has been through teacher report. One disadvantage to this methodology may be teachers' limited knowledge of parents' PI activities within the home. Furthermore, a few of the measures used to collect teachers' ratings of PI require teachers to respond with "yes" or "no" to a set of activities that mainly target behavioral aspects of PI. This methodology does not yield important information such as the frequency and multiple dimensions of PI. In addition, the number of items used to assess PI has been limited (e.g., less than ten items). The current study will attempt to address these gaps by obtaining parents' assessments of their own levels of PI. Parents will evaluate the frequency with which they engage in communication practices and in a wide variety of behavioral involvement activities using a Likert scale.

Chapter Three: Research Methods

This chapter will review the research methods used in the current study. The participants of the study will be described first. This section includes a discussion of the recruitment procedures, inclusion/exclusion criteria, risks to participants, and protection of human subjects. The measures and the early literacy intervention will be described next, followed by a review of the research design and procedures. The chapter will end with a review of the data analyses that were conducted in order to answer the study's research questions. Please note that the data to be analyzed for the current study were collected as part of a larger study conducted for 15 weeks during the Spring, Summer, and Fall of 2011 by members of the Early Childhood Research Group at the University of South Florida. The members of this research group were all graduate students within the School Psychology program at this university.

Participants

Participants included 26 children in three local Head Start centers and their caregivers. The mean age of child participants at the start of the study was 4.69 years ($SD = 0.53$). Parent-child dyads were recruited based on parents' interest to participate in the study. The recruitment of 26 dyads allowed for an equal number of participants assigned to the intervention and control groups for comparison purposes.

The Head Start program serves over 3,400 children aged zero to five and their families (Hillsborough County Head Start, 2010). Children are eligible for the Head Start program if their parents' or guardians' income level falls below the federal poverty line

based on the number of dependent individuals in the family. Parents who work full-time or who are enrolled in school can apply to place their children in the full-day/full-year program. All families recruited through the study had children who were enrolled in the full-day program. The three Head Start centers from which participants were recruited are located within 10 square miles of each other. The first center provided services to 100 children, who were divided into five classes. The second center had 70 children divided and placed in four classes, and the third center had 60 children divided into three classes.

Recruitment procedures. To recruit participants, flyers advertising the study were developed and distributed by the centers' social workers to the English-speaking parent/child dyads enrolled at the three Head Start centers. Members of the research team also advertised for the study by visiting each Head Start center to distribute flyers and answer parents' questions about the study. In this way, a convenience sample was used in the present study. The flyers received by the parents explained that the study entailed participation in one of two interventions at home that may improve their children's pre-literacy skills and better prepare them for Kindergarten. The flyers also explained time requirements and directions on how to participate in the study. The directions instructed parents to sign and return the bottom portion of the flyer to the Head Start center, which would allow their child to be assessed via screening measures by one of the research team members. Parents who were interested in participating in the study were instructed to contact the Principal Investigator or their child's teacher at their convenience.

A total of 62 signed flyers were returned to the Head Start centers. Interested parents who voluntarily attended a parent training session received oral and written explanation of the study via the informed consent document and were given time to ask questions about the study before agreeing to participate. Only participants who signed the consent form participated. Consent forms were written using simple sentences and terminology that would be understood by all participants. Out of the 62 families who returned the signed flyers, 30 parent-child dyads were selected to participate in the study. Only 30 families were selected due to the limited amount of financial incentives that would be provided to families for completing the study.

Inclusion/exclusion criteria. Participants were selected using several inclusion and exclusion criteria. To be included in the study, parent-child dyads must have been enrolled in Head Start, be fluent in English, and complete consent procedures to return measures. In addition, children's scores on academic screening assessments must have fallen within the at-risk range. Children's scores were considered at-risk if they scored below 10 first sounds or 10 first letters on the Dynamic Indicators of Basic Early Literacy Skills First Sound Fluency (DIBELS FSF; Cummings, Good, Kaminski, & O'Neal, 2007) and Letter Naming Fluency (DIBELS LNF; Good et al., 2004) assessments, respectively. In addition, at least one of the DIBELS scores was required to fall at or below 15 to qualify for the intervention. The Preschool Early Literacy Indicators (PELI; Kaminski & Aguayo, 2012) was also used to identify the children who were most at-risk from a total of 62 potential participants. Parent-child dyads were excluded if parents reported their children had been identified as having a Learning Disability, cognitive or speech impairment, or an Autism Spectrum Disorder/Pervasive Developmental Disorder. Once

recruited, each child participant was screened to ensure that inclusion and exclusion criteria were met. Out of the 62 potential participants, 32 children met the inclusion criteria based on their scores on the screening measures. The sample size was then reduced to 30 by comparing the PELI scores of the children who had obtained identical scores on the DIBELS measures. The children who scored lowest on the PELI were selected to participate in the study.

Participant attrition. All 30 parent-child dyads who were selected and had verbally agreed to participate in the study were matched and randomly assigned to the intervention or control condition. Matching procedures will be described later in the chapter. Each parent was informed that they would need to meet with members of the research team to complete the pre-intervention measures. Two parents did not attend the initial meeting and complete the measures. During the intervention, two additional parents made the decision to discontinue the study due to relocation or medical reasons. As a result, the final sample included 26 parent-child dyads.

Table 1 displays the demographic information for the 26 parents who completed the study. The demographic information for the 26 children is featured in Table 2. The demographic data from the current sample was compared to the demographic profile of children and parents enrolled in Hillsborough County Head Start in 2009. The diversity of children enrolled in Head Start in 2009 consisted of 54% African-American, 33% Hispanic, and 12% Caucasian (Finney, 2009). These percentages closely represent those belonging to the sample in the current study, as 57% of the sample is identified as African-American, 23% is Hispanic, and 19% is Caucasian.

Table 1

Parent Demographic Information by Condition

Variable	Treatment	Control	Total
Gender			
Male	2	1	3
Female	11	12	23
Race/Ethnicity			
Black/African American	8	7	15
Hispanic/Latino	3	3	6
White	2	3	5
Relationship to Child			
Mother	11	12	23
Father	2	1	3
Highest Level of Education			
High School Graduate	3	5	8
Some Post-High School Education	8	5	13
College Graduate	2	3	5
Average Number of Children in Home	2	2.3	2.2
Caregivers in Home			
One	9	6	15
Two or more	4	7	11
Average Hours in Work & School per Week	35.5	25.42	30.5

Table 2

Child Demographic Information by Condition

Variable	Treatment	Control	Total
Gender			
Male	3	3	6
Female	10	10	20
Average Age (in years)	4.78	4.62	4.69
Race/Ethnicity			
Black/African American	8	7	15
Hispanic/Latino	3	3	6
White	2	3	5
Bi-Racial			

Risks and costs to participants. Risks included caregivers' increased stress levels due to the extra time needed to participate in the study. Participants incurred travel costs for the three times they were required to meet with the investigator at the Head Start Center or nearby public establishment (e.g., coffee shop, restaurant) to complete informed consent or measures during the study. Travel costs were not reimbursed.

Participant compensation. Participants who completed the study received a \$20 gift card to Wal-Mart, as well as a children's book for their home. Participants who withdrew from the study received compensation at a pro-rated value depending on the duration of their participation.

Protection of human subjects. Each parent/child dyad was assigned a code number. Data collected via measures used in the study were coded using these assigned code numbers. Data were kept in a computer file owned by the primary investigator and protected by a password. Only members of the research team had access to files containing study data. Signed consent forms and collected data will be stored in a locked file cabinet belonging to the principal investigator for at least five years after IRB approval has expired. Upon completing the study, the computer file containing data linked with participant names will be destroyed.

Measures

Screening measures. Three measures were used to screen children's early literacy abilities in order to ensure the inclusion/exclusion criteria were met: the PELI, DIBELS FSF, and DIBELS LNF.

Preschool early literacy indicators (PELI). The PELI (Kaminski & Aguayo, 2010) is a measure from the Dynamic Measurement Group that yields performance

scores on alphabetic knowledge, phonological awareness, comprehension, and vocabulary/oral language. An overall composite score is also obtained that describes a preschool student’s general early literacy skill mastery. Items are presented within a picture book that is read by the examiner and the child. Throughout the story, children respond to questions asked by the examiner. Alphabetic knowledge is assessed through children’s identification of upper-case and lower-case letters. Ten items assess phonological awareness, nine items measure children’s comprehension of the featured story, and three items gauge vocabulary/oral language. Children are given as much time as needed to respond to items. To determine test-retest reliability, Kaminski (2012) administered the PELI to 131 preschool children at the beginning, middle, and end of the school year. Table 3 displays the average scores in each of the four composite areas across time.

Table 3

Average PELI Scores Across Three Time Points

	Beginning of Year	Middle of Year	End of Year
Alphabetic Knowledge	10.00	17.45	20.22
Phonological Awareness	6.86	7.50	8.11
Comprehension	8.89	10.24	9.14
Vocabulary/Oral Language	17.04	19.13	18.74

Kaminski (2012) also found significant correlations between PELI subtest scores and scores obtained from the Clinical Evaluation of Language Fundamentals Preschool – Second Edition (i.e., PELI Vocabulary and Oral Language; $r= 0.52-0.71$), the Test of Preschool Early Literacy (TOPEL) Print Knowledge subtest (i.e., Alphabetic Knowledge; $r= 0.56-0.92$), and the TOPEL Phonological Awareness subtest (i.e., Phonemic Awareness; $r= 0.56$).

DIBELS FSF & LNF. The DIBELS (Kaminski, Cummings, Powell-Smith, & Good, 2008) assessments are brief indicators of overall performance in early literacy skills. The DIBELS FSF is a timed measure of early phonological awareness intended for children in prekindergarten through the Fall and Winter of Kindergarten. During administration of this measure, students are required to identify the first sounds of orally presented words for one minute. Children earn two points per item for providing the first phoneme of a word. One point is given for providing the first two or three phonemes of a word. No credit is given if a child repeats a word, provides more than three phonemes, or responds with a related word. Cummings et al. (2007) found a test-retest reliability correlation of .86 for this measure. The FSF was also found to predict later scores on other DIBELS measures of phonemic awareness (i.e., Nonsense Word Fluency, $r=.53$; Phoneme Segmentation Fluency, $r=.71$). Regarding alternate form reliability, a correlation of .92 was reported for the administration of one probe (Whalen, 2006). When three probes were administered, reliability slightly increased to .98.

The DIBELS LNF is a timed measure of letter naming fluency intended for children during their prekindergarten and Kindergarten years. While completing this measure, students are asked to point to and name a random assortment of 52 capitalized and lowercase letters on a page for one minute. Correct responses are totaled to generate a score. Hintze, Ryan, and Stoner (2003) found the alternative form of reliability of this measure to be very good (0.94). Moreover, reliability improves minimally from .93 to .98 as the number of administered probes increases from one to three (Whalen, 2006). Concurrent validity with the Rapid Naming, Phonological Awareness, and Phonological

Memory Composites of the Comprehensive Test of Phonological Processing (CTOPP) were .58, .53, and .52, respectively.

The University of Oregon Center on Teaching and Learning (2008) has established three levels of risk status associated with DIBELS FSF and LNF scores at the beginning of Kindergarten. Table 4 presents the normative data associated with these measures.

Table 4

DIBELS FSF and LNF Benchmark Goals at the Beginning of Kindergarten

	Score	Status
FSF	0-3	At risk
	4-7	Some risk
	8 and above	Low risk
LNF	0-1	At risk
	2-7	Some risk
	8 and above	Low risk

Outcome measures.

Demographic questionnaire. A demographic questionnaire was completed by each parent at the beginning of the study. The questionnaire collected parent demographic data, such as gender, race/ethnicity, and highest level of education obtained. Demographic data collected for the child included the child's name, gender, date of birth, and race/ethnicity. Parents were also asked to record the number and ages of children that live in the home, as well as the number of adults in the home who care for the children. Parents then reported the number of years they had received services for any of their children through the Early Head Start or Head Start programs. Finally, parents estimated the number of hours they spent working or attending school in a typical week. A copy of this questionnaire is presented in Appendix A.

Family involvement questionnaire (FIQ). The FIQ (Fantuzzo et al., 2000) was designed based on Epstein's (1995) multidimensional model of parent involvement. The FIQ yields scores in the three areas of School-Based Involvement (SBI), Home-Based Involvement (HBI), and Home-School Communication (HSC). See Appendix B for a list of items contained under each involvement category in the survey. SBI is defined by the behaviors and activities in which parents engage at school with their children, such as volunteering in the classroom, attending class trips, and facilitating the planning of events or fundraisers. Examples of items that assess this construct include, "I participate in planning classroom activities with the teacher" and, "I volunteer in my child's classroom." HBI is defined by parental behaviors that serve to actively promote a learning environment at home for children, such as providing learning experiences in the community and arranging an area in the home for learning materials. Examples of items that assess this construct include, "I review my child's school work" and, "I share stories with my child about when I was in school." HSC is defined as communication practices between parents and school personnel (e.g., teachers) regarding a child's educational progress, such as discussing a child's difficulties with the teacher or educational activities that can be completed at home. Examples of items that assess this construct include, "I talk to my child's teacher about his/her daily school routine" and, "I talk to my child's teacher about the classroom rules." Parents respond to each item by selecting, "rarely," "sometimes," "often," or "always." Scores are obtained for each construct by adding the numerical values associated with each of the four responses (i.e., one point for "rarely," two points for "sometimes," three points for "often," four points for "always"). During

the development of the FIQ, Fantuzzo et al. (2000) found mean HBI, SBI, and HSC scores for 583 Head Start parents to be 48.3, 53.6, and 49.6, respectively.

The FIQ was normed with a national sample, with T-scores ($M=50$, $SD=10$) obtained for each dimension (Perry, Fantuzzo, & Munis, 2002). This measure was tested with and developed for low-income parents of preschool-aged children (Fantuzzo et al., 2004). It is therefore an appropriate measure to use with the sample population of the current study. Content validity was established for this measure through the use of focus groups with minority parents of preschool children. Parents were asked to generate ideas for items for different types of involvement. The three types of school involvement (i.e., SBI, HBI, HSC) were confirmed through factor analyses. Moderate correlations were established among the three constructs. In particular, a correlation of .36 was found between HBI and SBI, a correlation of .42 was found between HBI and HSC, and a correlation of .52 was found between SBI and HSC. In establishing the internal consistency of the measure, Fantuzzo et al. (2000) found high alpha coefficients greater than .80. Construct validity has also been demonstrated for the FIQ (Fantuzzo et al., 2000). In particular, the SBI, HBI, and HSC constructs corresponded with Cronbach's alphas of .85, .85, and .81, respectively (Fantuzzo et al., 2000).

Early Literacy Intervention

The parent-implemented intervention used to increase PI was created by Sundman-Wheat (2012) and focused on developing alphabetic knowledge and phonological awareness skills. The intervention combined two evidence-based practices: the mnemonic strategy (Raschke, Alper, & Eggers, 1999), and a sequence used to develop phonological awareness (Sindelar, Lane, Pullen, & Hudson, 2002). During the

intervention, parents use prompts, elaborations, questions, and performance feedback to encourage greater communication with their child regarding the lesson material. During this intervention, parents followed a scripted intervention package that employed mnemonic strategies to teach new letters. Phonological awareness was taught through an onset identification activity, in which children generated words that began with the same sound. The intervention consisted of 27 lesson plans that occurred three times per week for 15 to 20 minutes. A sample lesson plan can be found in Appendix D. Parents were required to first record the date, beginning time, and end time of each completed lesson plan. The steps and strategies involved in the intervention implementation were as follows:

- a. The parent first presented 26 alphabet flashcards to the child in a random order and recorded their child's correct and incorrect letter name responses. If the child produced the incorrect letter, the parent corrected their child (i.e., "This is an A"). The flashcards featured both the upper and lower-case version of each letter.
- b. The parent then taught the child a new letter using a mnemonic strategy. Parents presented a letter flashcard and its corresponding picture card in order to increase the child's likelihood of remembering the letter name. While presenting these the letter and picture cards, the parent said a sentence corresponding with the picture that contained a cue for the letter name (e.g., The alphabet card featuring "Ss" was shown to the child along with a picture card of an escalator. While presenting these two cards, the parent said, "Escalators are moving stairs"). The parent and child practice the alphabet-picture association by repeating the sentence. The

visual cues are eventually faded as the child begins to say the phrase and letter name independently without the alphabet and picture cards.

- c. The parent reviewed three letters from previous lessons by showing the child the picture and letter cards next to each other. The parent then asked the child to produce the sentence associated with the picture and say the letter name. Parents either praised their child for producing the correct letter or corrected their child if they gave an incorrect response.
- d. The parent practiced identifying the onsets of a word with their child at an increasingly difficult pace. During this activity, children reported whether the first sounds of two different words matched (e.g., “Do tree and bed start with the same sound?”). Parents emphasized the sounds of each word while repeating them to the child. If the child gave the incorrect response, the parents corrected their children by re-emphasizing the first sounds for the child (e.g., “/t/ /t/ t/ /ree/ and /b/ /b/ /b/ /ed/ do not start the same. Listen, /t/ /t/ t/ /ree/ and /b/ /b/ /b/ /ed/”). After nine lessons, the question changed to, “Tell me the first sound in mop.” Parents guided their children in shortening the answer to the first phoneme.
- e. Parents completed each lesson by completing a Likert rating form that asked how well the session went. The form prompts parents to provide an explanation of how well the session went and any concerns they had about the lesson or their children’s progress.

Intervention Integrity

Once parents completed and returned lesson plans to their Head Start center, members of the research group examined the lesson plans for completeness. For each

lesson, parents were required check off, fill out, or circle yes or no at various times throughout each of the four activities in the lesson (e.g., letter check, new letter lesson, letter view, and first sound practice). A lesson plan was considered to be complete if parents checked, completed, or circled each of these prompts. Each lesson contained a range of 58 to 64 prompts. Intervention integrity was quantified by dividing the number of completed prompts in the lesson by the total number of prompts to be completed. This percentage was created for each lesson and then averaged across the 27 sessions to determine a parent's overall level of intervention integrity.

Research Design

The current study applied a true experimental design using both between-subject and within-subject designs to determine the effects of parental literacy teaching on PI when compared to a control group. Child participants were matched according to gender and their pre-literacy scores as measured by the PELI, DIBELS FSF, and DIBELS LNF. Parent-child dyads were then randomly assigned to the intervention or control group. A quantitative approach was selected due to the use of an empirically validated and published questionnaire. The questionnaire was selected to best capture the frequency of parents' involvement activities. In addition, the demographic questionnaire also contained numerical data regarding the number of years parents had participated in the Head Start program. As such, the collection of continuous numerical data provides a rationale for the use of a quantitative research design.

Procedure

Ethical considerations. The larger empirical study conducted by the Early Childhood Research Group was submitted for approval to the University of South Florida

Division of Research Integrity and Compliance Institutional Review Board (IRB).

Approval was also granted by the Hillsborough County Head Start Division of Children's Services. The informed consent form completed by parents can be found in Appendix E. Attempts were made by members of the research group to make sure that participants of the study were treated in an ethical manner and that all parent information and data were kept confidential. Parent-child dyads were assigned and identified by code numbers, and all data were kept in a locked file cabinet in the principal investigator's office. Data were entered into data entry sheets that were protected using a password.

Assessment schedule. Please refer to Table 5 for the assessment schedule that was utilized in the study. Children and parents completed the first group of measures during a pre-intervention meeting. Most of the parent-child dyads met with a member of the research team at one of the Head Start centers. However, a proportion of the parents were unable to meet at one of the centers and expressed discomfort about meeting in their homes. As a result, a small number of pre-intervention meetings took place in neutral locations within the area (e.g., coffee shops, small restaurants).

Children were screened using the DIBELS FSF, DIBELS LNF, and the PELI during one of the pre-intervention meetings at the Head Start centers. At the centers, children were administered these measures at a table in a quiet hallway. Attempts were made to limit any distractions. Parents completed measures in the presence of one of the research team members, who answered any questions about the measures and checked the forms for completeness. Parents completed the Demographic Questionnaire during the pre-intervention meetings at the beginning of the study. The FIQ was completed by each child's caregiver at the beginning of the study, after the intervention (nine to ten

weeks), and during a long-term follow-up meeting (12 to 13 weeks after the beginning of the intervention). Parents spent approximately five to ten minutes completing the Demographic Questionnaire and the FIQ.

Table 5

Assessment Schedule

Time Label	1	2	3	4	5
	Pre-Intervention/ Screening	3 rd Week of Intervention	6 th Week of Intervention	End of Intervention (9 th -10 th Week)	Long-Term Follow-Up Fall 2011 (12 th – 13 th week)
Child	PELI FSF LNF				
Parent	Demographic Questionnaire FIQ			FIQ	FIQ

Intervention group procedures. During a pre-intervention meeting, each parent in the intervention group participated in a 75-90 minute training session at a Head Start center on how to implement the early literacy intervention. The training sessions were delivered by members of the research group, who were trained to teach parents how to implement the intervention. The training sessions were scripted in order to guarantee that all parents received the same content. During the training sessions for participants in the intervention group, one to two research group members met with one to two parents. During this session parents received the intervention materials and supplies needed to complete the intervention activities. Members of the research group provided instructions in how to implement the intervention, modeled the intervention for the parents, and then had each parent practice giving an intervention lesson to one of the members. After the practice lesson, members of the research group gave specific and

corrective feedback to the parents on how to implement the intervention correctly. Parents were encouraged to ask questions about the intervention throughout the training session. Parents were advised to complete the intervention in a quiet area in their home that was free of distractions. Parents were called each week by one of the research group members to remind them to complete lessons, ask any questions they have about the intervention, and prepare for necessary study meetings. Completed lesson plans were collected from the parents every three weeks by their respective Head Start center.

Control group procedures. During the training sessions for participants in the control group, one research group member met with one to two parents. Parents in the control group received informational brochures and a thirty-minute presentation on the importance of reading with their child. The brochure provided a checklist that parents could complete to assess the literacy environment in their home, as well as a list of developmental milestones during the preschool years related to reading. Parents were taught how to complete and interpret the findings of the checklist, as well as how to help their children reach the reading milestones. The brochure also featured guidance in using dialogic reading strategies with their children (Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994). Parents were additionally encouraged to read to their child for at least fifteen minutes three times a week.

Data Analysis

Evaluation of data. Subsequent to the administration of the measures, research team members checked the questionnaire forms for skipped items. Participants were asked to complete any skipped items that were found. During data analysis, the primary researcher compared collected data to the normative FIQ scores of 583 Head Start parents

collected by Fantuzzo et al. (2000). This was done to ensure the reasonableness of the data and to determine whether average PI scores from the current sample of Head Start parents exceeded or fell behind the normative scores of this study population (Bowling, Bond, Jenkinson, & Lamping, 1999).

Data analyses. The FIQ consists of three subscale scores for each of the three involvement categories (i.e., SBI, HBI, HSC). These three scores were analyzed independently. For the first research question, the scores obtained from each of the three FIQ administrations (i.e., pre-intervention, post-intervention, long-term follow up) were compared between the intervention and control groups using a Two-Way Repeated Measures Analysis of Variance (ANOVA). This analysis was used to obtain a group by time interaction effect, in which changes in PI between the intervention and control groups were observed in each of the three categories due to the intervention across time. To address the second research question, a Three-Way Repeated Measures ANOVA was conducted to determine if there were differences between the values between the intervention and control groups based on whether parents had children who received services through Early or Head Start for less than or more than a year.

Variance-explained effect sizes (i.e., partial eta squared) were calculated to assess the parent-directed intervention's effects on parents who implemented the early literacy intervention compared to parents in the control group. A correlation matrix was also used to determine relationships among subscale scores of the FIQ (i.e., HBI, SBI, HSC) between each time point and across variables. Analyses will be conducted to confirm that the samples used in each of the two groups met the assumptions of normality and equal variance through the computation of skewness and kurtosis values.

Statistical power. The current study's small sample size may reduce statistical power and weaken the accurate detection of significant group differences. Typically, a power index greater than .80 is considered statistically powerful (Park, 2008). Moreover, partial eta squared values of .14 and .06 are interpreted as strong and medium effect sizes, respectively (Sink & Mvududu, 2010). Thus, a power index of .80 and a partial eta squared value greater than .06 were desired for data analyses.

Chapter Four: Results

This chapter presents the data collected through the current study that address the two research questions. The first research question investigated the relationship between parents' early literacy teaching and changes in the three constructs of PI (i.e., HBI, SBI, and HSC) across time. The second research question addressed this relationship while controlling for parents' previous experience with their children's preschool education. The chapter will begin with a discussion of parents' intervention integrity, followed by a presentation of the descriptive data. Correlation data and univariate results obtained from Repeated Measures Analyses of Variance (ANOVA) will then be summarized. Although the proposed methodology had originally included three time points of data collection using the Family Involvement Questionnaire (FIQ), data were collected from only 12 of the 26 participants during the third time point. In addition, two of the 26 participants did not complete the FIQ during the second time point. As a result, data will be presented for only the 24 participants for whom FIQ scores were obtained immediately before and after the intervention (i.e., first two time points).

Intervention Integrity

To measure intervention integrity among parents in the intervention group, the number of completed prompts in the lesson (e.g., check off, fill out, or circle yes or no) was divided by the total number of prompts to be completed. This percentage was computed for each lesson and then averaged across the lessons. Parents' average percent of completed lessons ranged from 72.36% to 99.34%. The overall average of lesson

completeness was 92.67% with a standard deviation of 10.29. These data indicate parents in the intervention group completed the intervention with high levels of integrity. With the exception of participants 1 and 3, parents completed, on average, more than 90% of the lessons. The average percentages for the 11 parents are presented in Table 6.

Table 6

<i>Intervention Integrity</i>	
Participant	Average Percent of Completed Lessons
1	72.57
2	96.31
3	72.36
4	99.34
5	98.65
6	98.12
7	98.83
8	99.06
9	94.21
10	91.26
11	98.67

Table 7

<i>Descriptive Statistics</i>		Intervention (N=11)				Control (N=13)			
		<i>Mean</i>	<i>SD</i>	<i>Skew</i>	<i>Kurt</i>	<i>Mean</i>	<i>SD</i>	<i>Skew</i>	<i>Kurt</i>
Home-Based Involvement	Pre-Intervention	40.64	8.46	-0.73	-0.99	42.00	6.67	-0.51	-0.62
	Post-Intervention	45.55	4.25	-0.79	0.20	39.62	7.05	-0.14	-0.42
School-Based Involvement	Pre-Intervention	22.82	9.12	1.02	1.03	19.31	5.47	0.53	0.12
	Post-Intervention	25.73	9.62	0.71	0.00	23.46	9.08	2.03	5.03
Home-School Conferencing	Pre-Intervention	27.73	6.71	-0.05	0.54	26.31	6.03	-0.83	-0.29
	Post-Intervention	30.09	7.75	-0.50	-0.43	27.46	6.79	-0.13	-0.90

Descriptive Statistics

The participants' descriptive data are presented using mean subscale scores and variability data for each of the three involvement categories (see Table 7). Each of these

categories will be discussed independently. Parents receive points in each construct based on the numerical value attached to their response (e.g., one point for “rarely”).

Home-based involvement. Average HBI scores among parents in the intervention group increased by 4.91 points between pre- ($M = 40.64$, $SD = 8.46$) and post-intervention time points ($M = 45.55$, $SD = 4.25$) (see Figure 1). Higher variability, as indicated by standard deviation values, was noted prior to the intervention. On average, parents in the control group exhibited a decline in levels of HBI before ($M = 42.00$; $SD = 6.67$) and after the study ($M = 39.62$; $SD = 7.05$). Minimal changes in variability were observed between time points.

School-based involvement. Mean scores in SBI among parents who received the intervention increased by 2.91 points (Time 1 $M = 22.82$, $SD = 9.12$; Time 2 $M = 25.73$, $SD = 9.62$), with little change in variability across time (see Figure 2). Parents in the control group also experienced growth in SBI across time (Time 1 $M = 19.31$, $SD = 5.47$; Time 2 $M = 23.46$, $SD = 9.08$). Greater variability in scores was observed during the second time point of data collection.

Home-school conferencing. HSC increased by 2.36 points from baseline ($M = 27.73$, $SD = 6.71$) to post-intervention ($M = 30.09$, $SD = 7.75$) among participants in the intervention group (see Figure 3). Scores of parents in the control group increased marginally between baseline ($M = 26.31$; $SD = 6.03$) and post-intervention ($M = 27.46$, $SD = 6.79$). Standard deviations inflated slightly among both groups of parents across time.

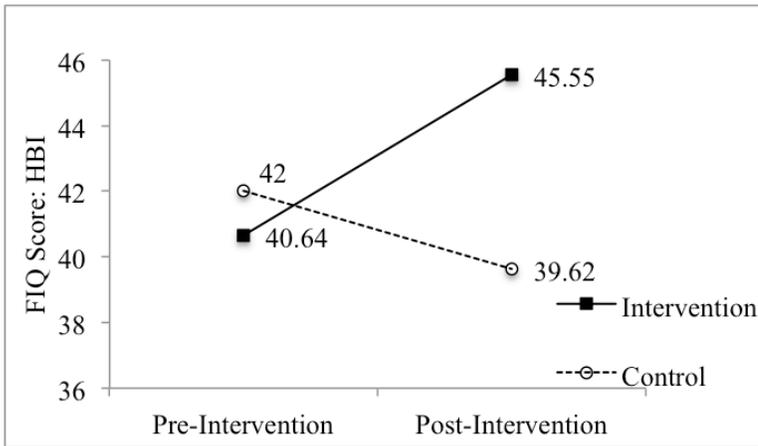


Figure 1. Average FIQ HBI Scores Pre- and Post-Intervention.

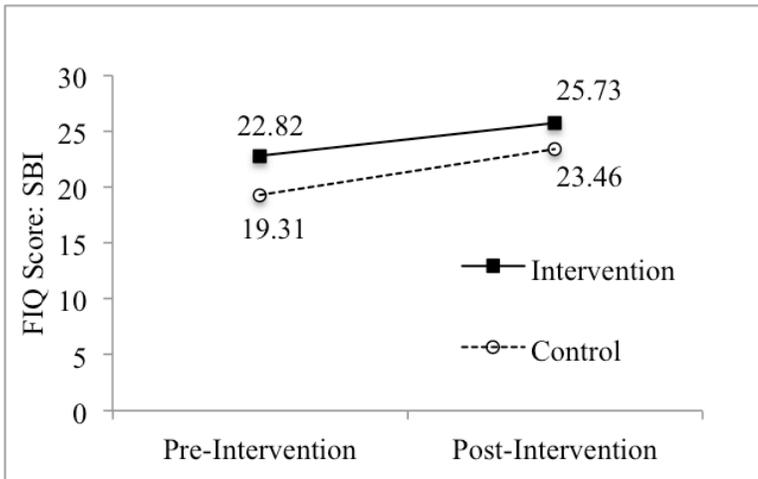


Figure 2. Average FIQ SBI Scores Pre- and Post-Intervention.

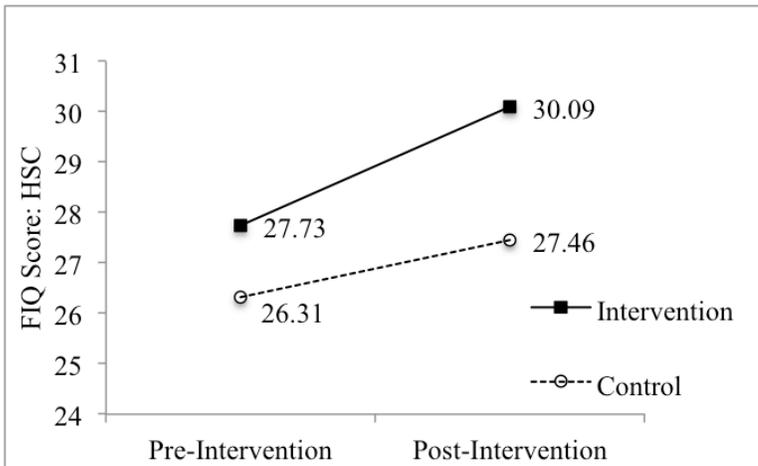


Figure 3. Average FIQ HSC Scores Pre- and Post-Intervention.

Correlation Data

Pearson correlations were computed to explore the relationships among the subscale scores of the FIQ between Time 1 and Time 2 and across variables. The correlation matrix is presented in Table 8. The magnitude of the correlations ranged from .02 to .86. The strongest positive relationship was between levels of SBI before and after the intervention, $r_{34} = 0.86, p < .001$. Another strong positive correlation was found between HSC before and after the intervention, $r_{56} = 0.74, p < .001$. Moderate correlations were found between HSC at Time 1 and levels of HBI before and after the intervention, $r_{23} = 0.59, p < .01$; $r_{25} = 0.42, p < .05$. Moderate relationships were also identified between baseline HSC and SBI levels before and after the intervention, $r_{35} = 0.66, p < .01$; $r_{45} = 0.50, p < .05$. Levels of HSC after the intervention were moderately correlated with HBI before and after the intervention, $r_{16} = 0.52, p < .05$; $r_{26} = 0.57, p < .01$. Similarly, levels of SBI pre- and post-intervention were moderately correlated with HSC post-intervention, $r_{36} = 0.48, p < .05$; $r_{46} = 0.56, p < .01$.

Table 8

Correlation Matrix (N = 24)

PI Construct		(1)	(2)	(3)	(4)	(5)	(6)
(1) HBI Time 1	Pearson Corr.	1.00					
	Sig. (2-tailed)						
(2) HBI Time 2	Pearson Corr.	0.27	1.00				
	Sig. (2-tailed)	0.21					
(3) SBI Time 1	Pearson Corr.	0.35	0.11	1.00			
	Sig. (2-tailed)	0.09	0.59				
(4) SBI Time 2	Pearson Corr.	0.32	0.02	0.86***	1.00		
	Sig. (2-tailed)	0.13	0.92	<.00			
(5) HSC Time 1	Pearson Corr.	0.59**	0.42*	0.66**	0.50*	1.00	
	Sig. (2-tailed)	0.00	0.04	0.00	0.01		
(6) HSC Time 2	Pearson Corr.	0.52*	0.57**	0.48*	0.56**	0.74***	1.0
	Sig. (2-tailed)	0.01	0.00	0.02	0.00	<.00	

Note: * $p < .05$ level. ** $p < .01$. *** $p < .001$

Repeated Measures Analysis of Variance

Research question one. To address the first research question, a Two-Way Repeated Measures ANOVA was conducted to obtain group by time interaction effects, in which changes in PI between the intervention and control groups were observed in each of the three categories across time. An alpha level of .05 was used to determine statistical significance. Each construct was analyzed independently. Results are shown in Tables 9, 10, and 11.

Table 9

Two-Way Repeated Measures ANOVA for Home-Based Involvement

Source	SS	df	Mean Square	F Value	Sig.	η^2
Group	62.12	1	62.12	1.00	0.33	0.085
Time	18.99	1	18.99	0.63	0.44	0.027
Time*Group	158.49	1	158.49	5.22	0.03	0.192
Error (group)	1360.36	22	61.83			
Error (time)	667.99	22	30.36			

Table 10

Two-Way Repeated Measures ANOVA for School-Based Involvement

Source	SS	df	Mean Square	F Value	Sig.	η^2
Group	99.40	1	99.40	0.78	0.39	0.246
Time	148.62	1	148.62	10.74	0.0034	0.328
Time*Group	4.62	1	4.62	0.33	0.57	.015
Error (group)	2799.52	22	127.25			
Error (time)	304.30	22	13.83			

Table 11

Two-Way Repeated Measures ANOVA for Home-School Conferencing

Source	SS	df	Mean Square	F Value	Sig.	η^2
Group	48.84	1	48.84	0.61	0.44	0.149
Time	36.86	1	36.86	2.92	0.10	0.117
Time*Group	4.36	1	4.36	0.34	0.56	.015
Error (group)	1762.97	22	80.14			
Error (time)	278.12	22	12.64			

Analyses yielded a significant group by time interaction effect for the domain of HBI, $F(1, 22) = 5.22, p < .05, \eta^2 = .192$, indicating that the change in levels of HBI pre- and post-intervention was not the same for the intervention and control groups. This interaction is an important outcome with which to answer the first research question of the study in regards to HBI. The group by time interaction effects for SBI, $F(1,22) = 0.33, p < .05, \eta^2 = .015$, and HSC, $F(1,22) = 0.34, p < .05, \eta^2 = .015$, were non-significant. These results indicate that differences in SBI and HBI were not caused by parents' early literacy teaching. However, the time effect within the domain of SBI was found to be significant, $F(1, 22) = 10.74, p < .05, \eta^2 = .328$. It is important to note that while the majority of computed partial eta squared values were found to exceed .06, the time factor for HBI and the interaction effects for both SBI and HSC did not exceed .06. These select partial eta squared values are therefore interpreted as weak effect sizes.

Research question two. A three-way Repeated Measures ANOVA was conducted to determine any differences between the FIQ scores obtained from the intervention and control groups while controlling for the number of years in which parents had children who received services through Early Head Start or Head Start. Table 11 displays the sample sizes, means, and standard deviations associated with HBI, SBI, and HSC scores over time based on the number of years in which children in both groups had received services. One caveat to interpreting these data is that the sample sizes and means displayed for each group in Table 11 are considerably unbalanced. Moreover, averages were not computed for participants in the intervention group with less than one year of experience, as there was only one participant in this category. These data should therefore be interpreted with caution.

Table 12

		<i>Descriptive Statistics for Number of Years Parents Received Services</i>					
		Intervention			Control		
		<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Parents with More Than One Year of Services	HBI Time 1	9	43.56	6.02	11	42.73	6.31
	HBI Time 2	9	45.67	4.64	11	39.09	7.19
	SBI Time 1	9	23.78	9.35	11	20.36	5.24
	SBI Time 2	9	25.89	8.92	11	23.73	9.67
	HSC Time 1	9	29.33	5.72	11	26.73	5.12
	HSC Time 2	9	31.33	6.89	11	27.64	7.00
Parents with Less Than One Year of Services	HBI Time 1	1	29.00		2	38.00	9.89
	HBI Time 2	1	47.00		2	42.50	7.78
	SBI Time 1	1	12.00		2	13.50	2.12
	SBI Time 2	1	13.00		2	22.00	7.07
	HSC Time 1	1	15.00		2	24.00	12.73
	HSC Time 2	1	16.00		2	26.50	7.78

Table 13

<i>Three-Way Repeated Measures ANOVA for Home-Based Involvement</i>						
Source	SS	df	Mean Square	F Value	Sig.	η^2
Time	129.24	1	129.24	5.88	0.03	.236
Group	2.48	1	2.48	0.04	0.84	.002
Time*Group	108.83	1	108.83	4.95	0.04	.207
Time*Years of Service	169.57	1	169.57	7.71	0.01	.289
Group*Years of Service	41.63	1	41.63	0.71	0.41	.036
Time*Years of Service*Group	17.66	1	17.66	0.80	0.38	.041
Error (time)	417.97	19	21.99			

ANOVA results are based on 23 participants, as one parent did not indicate the number of years they had received services on the demographic form. ANOVA results are organized by construct and are presented in Tables 12, 13, and 14. For HBI, there was a significant effect for time, $F(1,21) = 5.88, p < .05, \eta^2 = .236$.

Table 14

Three-Way Repeated Measures ANOVA for School-Based Involvement

Source	SS	df	Mean Square	F Value	Sig.	η^2
Time	65.88	1	65.88	5.30	0.03	.218
Group	7.12	1	7.12	0.06	0.81	.003
Time*Group	22.50	1	22.50	1.81	0.19	.087
Time*Years of Service	4.76	1	4.76	0.38	0.54	.019
Group*Years of Service	75.92	1	75.92	0.61	0.44	.03
Time*Years of Service*Group	11.47	1	11.47	0.92	0.35	.019
Error	235.97	19	12.42			

Table 15

Three-Way Repeated Measures ANOVA for Home-School Conferencing

Source	SS	df	Mean Square	F Value	Sig.	η^2
Time	12.07	1	12.07	0.87	0.36	.044
Group	51.16	1	51.16	0.72	0.41	.04
Time*Group	0.05	1	0.05	0.00	0.95	.00
Time*Years of Service	0.10	1	0.10	0.01	0.93	.00
Group*Years of Service	195.59	1	195.59	2.75	0.04	.13
Time*Years of Service*Group	1.97	1	1.97	0.14	0.71	.007
Error	263.70	19	13.88			

There were also significant two-way interactions between group and time, $F(1,21) = 4.95$, $p < .05$, $\eta^2 = .207$, and between time and years of received services from Head Start, $F(1,21) = 7.71$, $p < .05$, $\eta^2 = .289$. The change in levels of HBI therefore depends on the time and group interaction, as well as by whether or not parents received Head Start services for less or more than one year. However, the interaction effect for these three factors was non-significant, $F(1,21) = 0.80$, $p < .05$, $\eta^2 = .041$. To address the two-way interaction between time and years of received services, mean levels of HBI pre- and post-intervention were computed for parents whose children had received services for

less than one year and those who received services for more than one year. Figure 4 presents a visual analysis of these data. There were three parents whose children had received services for less than one year. The remaining parents ($N = 20$) had received Head Start services for their children for a range of one to four years. Parents with more experience with Head Start began the intervention with more HBI ($M = 43.1, SD = 6.03$) than parents with less experience ($M = 35, SD = 8.71$). Levels of HBI declined minimally over time among parents who had children who received services for at least one year ($M = 42.05, SD = 6.9$). In contrast, HBI levels increased over time among parents who had received services for less than a year ($M = 44, SD = 6.08$).

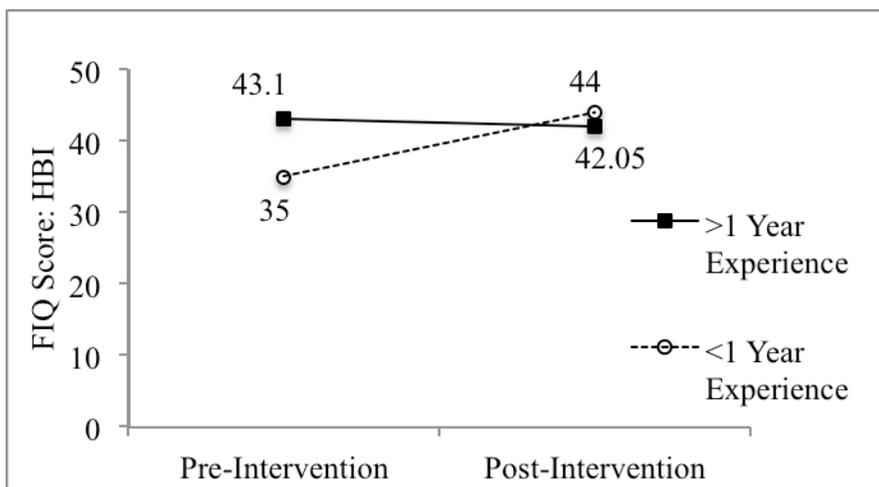


Figure 4. Average FIQ HBI Scores Across Time Based on Years of Experience.

A significant time effect was found for SBI, $F(1,21) = 5.30, p < .05, \eta_p^2 = .218$, indicating that all parents increased levels of SBI across time. The interaction among the three factors was not statistically different, $F(1,21) = 0.92, p < .05, \eta_p^2 = .019$. Finally, no main effects were statistically significant for the HSC construct. However, there was a significant two-way interaction between group and the number of years in which parents had children enrolled in Head Start, $F(1,21) = 2.75, p < .05, \eta_p^2 = .207$. In this way, the

change in levels of HSC depends on the interaction between group and by whether or not parents received Head Start services for less or more than one year. Many partial eta squared values, including all values computed within HSC, were identified as weak effect sizes.

In sum, a visual analysis of changes in PI over time indicated that average HBI, SBI, and HSC levels increased among parents who had participated in the early literacy intervention with their children. Parents in the control group exhibited a decline in levels of HBI and experienced growth in SBI and HSC across time. For HBI, a significant group by time interaction effect was found, indicating a difference in levels of HBI between the intervention group and the control group. When the relationship between the intervention and PI levels was analyzed while controlling for the number of years in which parents had received Head Start services, a significant two-way interaction between time and years of experience was identified. In particular, a visual analysis of the means showed that HBI increased over time among parents who had received services for less than a year and declined among parents who had received services for longer. A significant two-way interaction between group and years of experience was also identified for HSC. Finally, Pearson correlations identified very strong relationships between levels of SBI and HSC before and after the intervention.

Chapter Five: Discussion

Parents' active involvement in their children's learning experiences have been shown to improve children's academic outcomes (Senechal, 2006). As a result, parents' involvement (PI) activities, such as teaching specific literacy skills, have been recommended as strategies to engage families in their young children's education experiences (Henderson & Mapp, 2002). However, little research has investigated the impact of PI during the preschool years on later outcomes. Further research is needed to discover ways in which PI can be promoted during the preschool years, particularly with low-income children. The purpose of this study was to contribute to 'best practices' in meeting the needs of low-income preschool students and their families by exploring a strategy to increase PI during the preschool years. Using a quantitative design, the study measured the impact of a parent-directed early literacy intervention on PI among Head Start parents and their preschool-aged children. The two research questions were proposed to analyze the relationship between parents' early literacy teaching and later changes in three types of PI, as well as how this relationship is linked with parents' prior experience with Head Start programs. This chapter includes a discussion of the results related to these two research questions, followed by the presentation of the limitations of the study, ideas for future research, and implications for practice.

Research Question One

What is the relationship between parents' early literacy teaching and later changes in PI as measured by the three constructs of home-based involvement (HBI), school-based involvement (SBI), and home-school conferencing (HSC)?

The scores obtained from the two FIQ administrations were compared between the intervention and control groups. A two-way Repeated Measures ANOVA was used to yield descriptive data and group by time interaction effects. Though variability was observed in each parent's reporting of PI activities via the FIQ, levels of HBI significantly increased between baseline and immediately after parents implemented the early literacy intervention with their children. In contrast, parents in the control group experienced a decline in levels of their HBI.

This finding carries several implications for parents' involvement activities within the home as a result of the parent-directed early literacy intervention. In particular, it is important to note that only two out of the 13 items on the HBI dimension of the FIQ directly assessed the activities prescribed as part of the parent-directed intervention. These two items included, "I bring home learning materials for my child (tapes, videos, books)," and "I spend time with my child working on reading/writing skills." The remaining 11 items assessed the frequency with which parents engaged in other home-based activities such as sharing stories about school with their children, having conversations about their children's learning efforts, keeping a regular schedule and list of rules at home, and working on number skills with their children. In this way, parents in the intervention group increasingly reported engaging in a variety of HBI interactions and activities beyond those provided by the parent-directed intervention itself. The

effects of parents' early literacy teaching extended to other important domains of child development, such as parents' social interactions with their children, parents' providing structure and limit setting, and children's numeracy learning. These changes in PI practices reflect the multidimensional model of PI, which emphasizes more subtle aspects of PI, such as communication practices, academic expectations, and parenting style (Jeynes, 2005). Moreover, the findings are similar to those found by Kagitcibasi et al. (2001), who observed increases in mothers' reading, story-telling, teaching, and assisting with their children's homework after mothers' training through the HIPPY program.

Parents' reported increases in HBI carry implications for the academic, behavioral, and social outcomes of the children whose parents implemented the early literacy intervention. High levels of PI within the home have been linked to children's adjustment to the school environment, receptive vocabulary skills, pro-social peer play behaviors, lower levels of behavior problems, and higher levels of attention and task persistence (Fantuzzo et al., 1999; Fantuzzo et al., 2004; Mantzicopoulos, 1997). Given these findings in the literature, it is hypothesized that the increases in HBI levels among parents in the intervention group are linked to positive child outcomes in these select domains of academic, behavioral, and social outcomes. In addition, it is hypothesized that parents' increased levels of HBI will continue to hold constant in Kindergarten, as previous research has found PI to be relatively stable across preschool and the early elementary school years.

Of the three constructs, levels of HBI at baseline for both groups were the most comparable to normative data obtained by Fantuzzo et al. (2000). While Fantuzzo et al. (2000) found a mean HBI level of 48.3 among 583 Head Start parents, the mean baseline

level of HBI among the 24 participants in the current study was 41.5. Normative data assist with the interpretation of sample data by helping to explain what may be expected from the general population (Bowling et al., 1999). The relative closeness between the normative HBI mean and the participants' HBI mean may indicate that the HBI levels of the current sample are representative of those of the general population of parents whose children are enrolled in Head Start.

In regards to SBI and HSC, average levels of these two types of involvement increased over time in both groups and were not significantly different across conditions. These findings were also reflected in the analysis of correlation data. The strongest relationships identified in the correlation matrix were between levels of SBI and HSC at baseline and levels of SBI and HSC at post-intervention. This indicates that if parents began the early literacy intervention with high levels of SBI and HSC, they were more likely to exhibit high levels of SBI and HSC after they participated in the parent-directed early literacy intervention with their children. However, a visual analysis of the changes over time in these two constructs demonstrates that parents in the control group experienced less growth in HSC compared to SBI.

Several reasons have been hypothesized as to why changes in these two constructs were not observed. First, as part of the Head Start program, all parents are encouraged to participate in school-based activities (e.g., parent training, classroom visits). This could explain why parents in both groups exhibited a slight increase in SBI. Moreover, the lack of change in HSC over time and across groups may be due to the program standards, which require teachers to make regular contact with parents. It should also be noted that average baseline levels of SBI and HSC in the current study were considerably lower

than levels found by Fantuzzo et al. (2000) during the development of the FIQ. This inconsistency between levels found in the current study and those reported by Fantuzzo and colleagues (2000) suggests that participants' levels of SBI and HSC may not reflect those of the larger population of Head Start parents. Another caveat is that while the majority of computed partial eta squared values were found to exceed .06, the interaction effects for SBI and all values computed within HSC did not exceed .06. These select partial eta squared values are interpreted as weak effect sizes.

Research Question Two

What is the relationship between parents' early literacy teaching, its effects on the three constructs of PI, and parents' prior experience with their children's preschool education?

A three-way Repeated Measures ANOVA was conducted to analyze interaction effects between levels of PI over time and the amount of time in which parents had enrolled their children in Head Start or Early Head Start. No differences were found between the intervention and control groups in any type of PI based on time and the duration of children's enrollment in Head Start or Early Head Start. However, levels of HBI increased over time among parents who had received services through Head Start for less than one year. In contrast, parents who had received services for longer experienced a slight decline in HBI levels over time. Parents with more experience with Head Start began the parent-directed early literacy intervention with higher levels of HBI. This is not surprising given that parents who have received services for longer may have received more opportunities to develop patterns of HBI.

Although the differences in HBI levels were not attributed to the early literacy intervention, they may still carry implications for efforts made to increase parents' involvement activities. The current study sought to determine whether parents who are new to the education system might benefit from direct intervention in increasing PI. Parents with less experience in Head Start or Early Head Start began the study engaging in less HBI than parents with more experience, so they may indeed need direct intervention to improve levels of HBI. However, because parents with more experience were found to decline in levels of HBI over time, it is hypothesized that parents with more experience with the education system may also benefit from direct intervention to increase PI. An important caveat in interpreting these data is that there were only three participants who had received services for less than a year. The comparison of scores between two very imbalanced sample sizes could have therefore distorted the results.

Limitations

There are several limitations associated with this study. First, the study employed a small sample size of 26 parent-child dyads, and analyses were conducted on only the data collected from 23 or 24 of the participants. Although a larger sample size would have been preferred, the funding allotted to this study only provided compensation for a restricted number of parent-child dyads. In addition, limited data were collected during the third time point of data collection, which may have also reduced the statistical power of the study. One reason for this limited data collection may be that the incentive for the study (i.e., gift card) was distributed at the second time point of data collection. As a result, there was no extrinsic motivation for parents to complete the final administration of the FIQ. Another limitation of this study is the use of a convenience sample. A

random selection of participants would have been desirable in producing more valid and reliable results that reflected the larger population of parents whose children attend Head Start. However, a random selection of participants was not possible due to the limited number of parents who were willing to participate in the study. As a result, each parent whose child was receiving services through Head Start could not have an equal and known chance of being selected to participate in the study. To reduce this limitation, the demographic data of the study's sample of parents were compared and found to be similar to the demographic characteristics of all Head Start parents in the county. The FIQ scores of the current sample were also compared to normative data obtained by Fantuzzo and colleagues (2000). This was done to determine whether the parents were representative of a more general population of parents whose children receive services through Head Start. However, it is unknown whether this particular sample is representative of the population of parents at Head Start with respect to the number of years parents received services for their children. This limitation may hinder the generalization of these findings. Finally, the study solely utilized parent reports of PI using a research-based questionnaire. No other sources (i.e., reports from teachers and administrative personnel, other caregivers in the home such as the father, extended family member, or professional nanny) were used to assess PI. This is considered a limitation in the study, as PI behaviors were not confirmed through multiple methods of data collection.

Ideas for Future Research

The results of this study point to several areas that warrant further research. First, the study should be replicated with a larger sample of families of low SES to strengthen

the power of the study and determine if the intervention's effects on HBI maintain over time. Several follow up sessions should be incorporated in such a study to assess maintenance of effects over time. Beyond increasing the sample size, other methods could be used to measure PI levels, such as reports from other caregivers in the home or teachers. Future studies might investigate whether the positive effects of the intervention on levels of HBI may generalize to multiple caregivers, such as a sample of fathers or professional caregivers. Studies should also ascertain the generalization of the intervention's effects on families of varying socio-economic backgrounds or to parents of children in early elementary school, as PI also is very important in this educational stage, as well (Domina, 2005). An interesting research question might be whether parents' teaching practices in other subject areas, such as early numeracy skills, may also have a positive impact on levels of HBI. Such research may expand the number of options available to parents in terms of the teaching practices and materials they can use at home with their children.

Similar studies with larger sample sizes are also needed to investigate the impact of parents' pre-literacy teaching practices on involvement activities at school and parents' communication patterns between home and school. The current study did not find evidence for the use of the parent-directed early literacy intervention as a strategy to increase parents' SBI and HSC. Future studies with a larger sample are recommended to further examine the relationship between this parent-directed early literacy intervention and the constructs of SBI and HSC. Since the average levels of involvement found in the current study's sample were lower than those reported by Fantuzzo et al. in 2000, researchers should attempt to better understand the challenges and barriers to PI among

families who are particularly at-risk. The identification of challenges and barriers may assist with the discovery of solutions and resources that school personnel can offer to families of lower SES.

Comparable studies may also be able to investigate the relationship between parents' early literacy teaching, levels of PI, and parents' prior experiences with their children's preschool education. As no significant findings were able to shed light on this relationship in the current study, further research is needed to determine if parents who are new to the education system may benefit more from direct intervention to increase levels of PI.

Implications for Practice

The findings of the current study indicate that assigning Head Start parents an active role in developing their preschoolers' pre-literacy skills could be an effective strategy to increase home-based PI activities. Increases in HBI may in turn result in positive immediate and long-term academic, behavioral, and social outcomes for children. The intervention itself may also help develop preschool students' skills in letter knowledge and phonological awareness (Sundman-Wheat, 2012). Moreover, education professionals' use of the intervention would help meet the national goal of increased PI as mandated by the No Child Left Behind Act (No Child Left Behind [NCLB], 2001).

Hoover-Dempsey and Sandler (1997) theorized that the relationship between SES and PI depends upon the resources made available to schools and families to create opportunities for PI. Parents' early literacy teaching within the home is one such resource. Parents' implementation of the early literacy intervention used in the current

study may overcome the barriers to PI among parents of low SES, such as time and energy (Hoover-Dempsey & Sandler, 1997). For example, parents can implement the intervention at home during times that are most convenient for their schedules. In addition, the intervention requires few resources. According to the developer of the early literacy intervention, the materials used in the intervention are relatively inexpensive and easy to create (Sundman-Wheat, 2012). The most expensive component of the intervention is the photocopying of materials. However, this cost may be insignificant for parents and professionals with access to a copier. Other minor expenses included purchasing three-ring binders and note cards. Another barrier to PI that the early literacy intervention could potentially overcome is the tendency for parents of low SES to view teachers as “experts” in their children’s education (Crozier, 1999). By promoting parents as early literacy teachers within the home, parents also become “experts” of their children’s education. This new role may in turn cause parents to perceive more need for their involvement. Furthermore, the intervention may also be feasible for education professionals to recommend to parents, as the one-time training required is brief and associated with high intervention integrity. Parents’ use of the intervention could therefore be encouraged in a variety of settings and by a variety of education professionals, such as teachers and school psychologists employed in preschool settings.

The parent-directed early literacy intervention (Sundman-Wheat, 2012) could be used in the context of the Multi-Tiered System of Support (MTSS). Through MTSS, assessment data are systematically used to provide students with resources in order to improve their learning and success in school. MTSS involves three tiers. Tier 1 is focused on prevention and consists of high-quality core instruction provided to all

students. Tier 2 refers to moderately intensive interventions implemented to small groups of students who may not have responded to the core instruction. Tier 3 interventions are implemented with students who may continue to struggle despite receiving Tier 1 and Tier 2 instruction. These interventions are more intense and implemented at the individual level (National Center on Response to Intervention, 2010). In the context of PI, the parent-directed early literacy intervention could be used as a Tier 1 prevention strategy, in which all parents are encouraged to implement the intervention with their children at home. For instance, school personnel could provide a one-time training session during an open house event where all parents are invited to learn about ways in which they can become involved in their children's education at home. Measures of PI, such as the FIQ, could then be administered to all parents to identify those who may benefit from more targeted support (i.e., Tier 2) in increasing their levels of PI. School personnel could arrange to meet with these parents in small groups to review the intervention more thoroughly and practice or role-play intervention activities. Finally, the intervention could be utilized as a Tier 3 intensive intervention program for parents experiencing difficulty becoming involved in their young children's education. School personnel may work more extensively with these parents on an individual level during the training process and engage in more frequent contact with parents throughout their implementation of the intervention. For instance, teachers or school psychologists could conduct the training session during a home visit, provide parents with all of the materials needed, consult with parents to problem-solve any barriers to parents' implementation of the intervention, and continuously follow up with parents via their preferred contact method.

Conclusions

This study measured the impact of parents' active participation in a parent-directed early literacy intervention on parental HBI, SBI, and HSC among Head Start parents and their preschool-aged children. This relationship was also examined in the context of parents' prior experience with their children's preschool education. Average levels of HBI significantly increased over time among parents in the intervention group, indicating parents' engagement in a variety of home-based activities such as taking their children to the library and teaching their children early numeracy skills. Further research is needed to identify ways in which SBI and HSC can be promoted, as well as to determine whether parents with less or more experience with the education system may benefit from direct intervention in increasing PI. Promoting parents as teachers within the home setting may serve as a potential strategy to increase levels of parental involvement.

References

- Administration for Children and Families. (2006). *Head Start program performance standards*. Washington, DC: Office of Head Start.
- Allhusen, V., Belsky, J., Booth-LaForce, C., Bradley, R., Brownell, C. A., Burchinal, M., Campbell, S. B., Clarke-Stewart, K. A. et al. (2005). Duration and developmental timing of poverty and children's cognitive and social development from birth through third grade. *Child Development, 76*(4), 795-810.
- Arnold, D. H., Zeljo, A., Doctoroff, G. L., & Ortiz, C. (2008). Parent involvement in preschool: Predictors and the relation of involvement to pre-literacy development. *The School Psychology Review, 37*(1), 74-90.
- Baker, P. C., Canada, K. K., Mott, F. L., & Quinlan, S. V. (1993). *NLSY Child Handbook: A Guide to the 1986-1990 National Longitudinal Survey of Youth Child Data*. Columbus: Center for Human Resource Research, Ohio State University.
- Berger, E. H. (1991). *Parents as partners in education*. New York: Macmillan.
- Bowling, A., Bond, M., Jenkinson, C., & Lamping, D. L. (1999). Short form 36 (SF-36) health survey questionnaire: Which normative data should be used? Comparisons between the norms provided by the Omnibus Survey in Britain, Health Survey for England and the Oxford Healthy Life Survey. *Journal of Public Health Medicine, 21*(3), 255-270.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742.

- Catsambis, S. & Garland, J. F. (1997). *Parental involvement in students' education during middle and high school* (CRESPAR Report 18). Baltimore, MD: Center for Research on the Education of Students Placed at Risk, Johns Hopkins University.
- Chavkin, N. F., & Williams, D. (1993). Minority parents and elementary school: Attitudes and practices. In N. F. Chavkin & D. Williams (Eds.), *Families and schools in a pluralistic society* (pp. 72-89). Albany, NY: State University of New York Press.
- Cone, J. D., Delawyer, D. D., & Wolfe, V. V. (1985). Assessing parent participation: The Parent/Family Involvement Index. *Exceptional Children, 51*(5), 417-424.
- Conners, C. K. (1990). *Conners' Rating Scales manual*. Toronto, Canada: Multi-Health Systems.
- Crosnoe, R. (2001). Academic orientation and parental involvement in education during high school. *Sociology of Education, 74*, 210-230.
- Crozier, G. (1999). Is it a case of “we know when we’re not wanted”? The parents’ perspective on parent-teacher roles and relationships. *Educational Research, 41*(3), 315-328.
- Cummings, K. D., Good, R. H., Kaminski, R. A., & O’Neil, M. E. (2007). *Technical adequacy of DIBELS FSF* (Technical Report No. #3). Eugene, OR: Dynamic Measurement Group.
- Derogatis L. R. (1993). *Brief Symptom Inventory: Administration, scoring, and procedures manual*. Minneapolis, MN: National Computer Systems.
- Domina, T. (2005). Leveling the home advantage: Assessing the effectiveness of parental involvement in elementary school. *Sociology of Education, 78*(3), 233-249.

- Drummond, K. & Stipek, D. (2004). Low-income parents' beliefs about their role in children's academic learning. *The Elementary School Journal*, 104(3), 197- 213.
- Dunn, L., & Dunn, L. (1997). *Peabody picture vocabulary test, 3rd ed.* Circle Pines, MN: American Guidance Service, Inc.
- Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan*, 76, 701–712.
- Fan, X. & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1-22.
- Fantuzzo, J., Coolahan, K., Mendez, J., McDermott, P., & Sutton-Smith, B. (1998). Contextually-relevant validation of peer play constructs with African American Head Start children: Penn Interactive Peer Play Scale. *Early Childhood Research Quarterly*, 13, 411-431.
- Fantuzzo, J., Doll, B., Greenfield, D., & Slaughter-Defoe, D. (1999). Introduction to the special issue: Beginning school ready to learn: Parental involvement and effective educational programs. *School Psychology Review*, 28, 335–337.
- Fantuzzo, J., McWayne, C., Perry, M. A., & Childs, S. (2004). Multiple dimensions of family involvement and their relations to behavioral and learning competencies for urban, low-income children. *School Psychology Review*, 33, 467–480.
- Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology*, 92, 367-376.
- Fantuzzo, J., Tighe, E., & Perry, M. (1999). Relationships between family involvement in Head Start and children's interactive peer play. *NHSA Dialog*, 3, 60–67.

Finney, L. A. (2009). 2009 Annual report to the Board of County Commissioners.

Retrieved from

<http://hillsboroughcounty.org/headstart/resources/publications/2009annualreport.pdf>.

Good III, R. H., Kaminski, R. A., Shinn, M. R., Bratten, J., Shinn, M., Laimon, D., et al.

(2004). *Technical Adequacy of DIBELS: Results of the Early Childhood Research Institute on measuring growth and development* (technical Report No. 7). Eugene, OR: University of Oregon.

Gordon, I. J. (1979). *The effects of parent involvement on schooling*. In I. J. Gordon

(Ed.), *Partners: Parents and schools* (pp. 4-25). Washington, DC: Association for Supervision and Curriculum Development.

Graue, E., Clements, M. A., Reynolds, A. J., & Niles, M. D. (2004). More than teacher directed or child initiated: Preschool curriculum type, parent involvement, and children's outcomes in the child-parent centers. *Education Policy Analysis Archives, 12*(72), 1-38.

Gresham, F. M., & Elliott, S. N. (1990). *Social skills rating system*. Circle Pines, MN: American Guidance Service, Inc.

Griffith, J. (1998). The relation of school structure and social environment to parent involvement in elementary schools. *Elementary School Journal, 99*(1), 53-80.

Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*(3), 538-548.

Grolnick, W. S. & Slowiaczek, M. L. (1994). Parents' involvement in children's

- schooling: A multidimensional conceptualization and motivational model. *Child Development*, 65(1), 237-252.
- Harter, S., & Pike, R. (1984). The pictorial scale of perceived competence and social acceptance for young children. *Child Development*, 55, 1969-1982.
- Henderson, A. T. & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Austin, TX: Southwest Educational Development Laboratory.
- Hieronymus, A. N., Lindquist, E. F., & Hoover, H. D. (1980). *Iowa Tests of Basic Skills: Early Primary Battery*. Chicago: Riverside.
- Hill, N. E. & Taylor, L. C. (2004). Parental school involvement and children's academic achievement. *Current Directions in Psychological Science*, 13(4), 161-164.
- Hillsborough County Head Start. (2010). Head Start Early Start. Retrieved January 22, 2012 from <http://www.hillsboroughcounty.org/headstart/>
- Hintze, J., Ryan, A., & Stoner, G. (2003). Concurrent validity and diagnostic accuracy of the dynamic indicators of basic early literacy skill and the comprehensive test of phonological processing. *School Psychology Review*, 32(4), 541-556.
- Honig, A. S. (1990). *Parent involvement in early childhood education*. Washington, DC: National Association of Young Children.
- Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 3-42.
- Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. E. (2005). Why do parents become involved? Research findings and implications. *Elementary School Journal*, 106(2), 105-130.

- Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237-269.
- Jones, B. A. (1989). *Factors related to affective community based organization intervention in dropout prevention*. Unpublished doctoral dissertation, Columbia University.
- Kagitcibasi, C., Sunar, D., & Bekman, S. (2001). Long-term effects of early intervention: Turkish low-income mothers and children. *Applied Developmental Psychology, 22*, 333-361.
- Kaminski, R.A. (2012). [PELI year one data and comparisons to early literacy measures]. Unpublished raw data.
- Kaminski, R. A. & Aguayo, K. B. (2010). *Preschool Early Literacy Indicators: Administration and scoring guide*. Eugene, Oregon: Dynamic Measurement Group.
- Kaminski, R., Cummings, K.D., Powell-Smith, K. A., & Good III, R. H. (2008). Best practices in using Dynamic Indicators of Basic Early Literacy Skills for formative assessment and evaluation. In A. Thomas & J. Grimes (Eds.), *Best Practices in School Psychology* (5th ed.-vol. 4, pp. 1181-1203). Bethesda, MD: NASP Publications.
- Kohl, G. W., Lenga, L. J., & McMahon, R. J. (2000). Parent involvement in school conceptualizing multiple dimensions and their relations with family and demographic risk factors. *Journal of School Psychology, 38*(6), 501-523.
- Lunenburg, F. C., & Irby, B. J. (2002). *Parent involvement: A key to student*

- achievement*. Paper presented at the Annual Meeting of the National Council of Professors of Educational Administration (56th, Burlington, VT, August 5-10).
- Lyons, P., Robbins, A., & Smith, A. (1983). *Involving parents: A handbook for participation in schools*. YPIllanti: High/Scope Press.
- Mantzicopoulos, P. (1997). The relationship of family variables to Head Start children's preacademic competence. *Early Education and Development*, 8, 357-375.
- Marcon, R. A. (1999). Positive relationships between parent school involvement and public school inner-city preschoolers' development and academic performance. *School Psychology Review*, 28, 395-412.
- McDermott, P.A., Green, L. F., Francis, J.M., & Stott, D. H. (1996). *Learning Behaviors Scale*. Philadelphia, PA: Edumetric and Clinical Science.
- McGrew, K. S., & Woodcock, R. W. (2001). *Woodcock-Johnson achievement Test: technical manual, 3rd ed.*, Itasca, IL: Riverside.
- McKey, R. H., Condelli, L., Ganson, H., Barrett, B., McConkey, C., & Plantz, M. (1985). The impact of Head Start on children, families, and communities. Final Report of the Head Start Evaluation Synthesis and Utilization Project (DHHS. Pub. No. OHDS 85-31193). Washington, DC: U.S. Government Printing office.
- Miedel, W. T. & Reynolds, A. J. (1999). Parent involvement in early intervention for disadvantaged children: Does it matter? *Journal of School Psychology*, 37(4), 379-402.
- Moles, O. C. (1993). Collaboration between schools and disadvantaged parents: Obstacles and openings. In N. F. Chavkin (Ed.), *Families and schools in a pluralistic society* (pp. 21-49). Albany, NY: State University of New York Press.

- National Education Goals Panel. (1999). *The National Education Goals report: Building a Nation of Learners*. Washington, DC: U.S. Government Printing Office.
- No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).
- O'Brien, R. W., D'Elia, M. A., Vaden-Kiernan, M., Magee, C., Younoszai, T., Keane, M. J., et al. (2002). *A descriptive study of Head Start families: FACES technical report*. Washington, D.C.: Administration for Children, Youth and Families, U.S. Department of Health and Human Services.
- Parents as Teachers National Center. (2001). Retrieved November 12, 2011, from www.patnc.org/aboutus-whatispat.asp.
- Park, H. M. (2008). Hypothesis testing and statistical power of a test. Retrieved from <http://www.indiana.edu/~statmath/stat/all/power/power.pdf>
- Perry, M. A., Fantuzzo, J., & Munis, P. (2002). *Family Involvement Questionnaire Manual*. Philadelphia, PA: University of Pennsylvania.
- Pfannenstiel, J. (1999). *School Entry Assessment Project: Report of findings*. <http://www.parentsasteachers.org/atf/cf/{00812ECA-A71B-4C2C-8FF3-8F16A5742EEA}/seap.pdf>.
- Pfannenstiel, J., Lambson, T., & Yarnell, V. (1996). *The Parents as Teachers program: Longitudinal follow-up to the second wave study*. Overland Park, KS: Research & Training Associates.
- Powell, D. R., Son, S., File, N., & San Juan, R. R. (2010). Parent-school relationships and children's academic and social outcomes in public school pre-kindergarten. *Journal of School Psychology, 48(4)*, 269-292.

- Raschke, D., Alper, S., & Eggers, E. (1999). Recalling alphabet letter names: A mnemonic system to facilitate learning. *Preventing School Failure, 43*(2), 80-84.
- Reid, M. J., Webster-Stratton, C., & Beauchaine, T. P. (2001). Parent training in Head Start: A comparison of program response among African American, Asian American, Caucasian, and Hispanic Mothers. *Prevention Science, 2*, 209–227.
- Reynolds, A. J., Weissberg, R. P., & Kaspro, W. (1992). Prediction of early social and academic adjustment of children from the inner-city. *American Journal of Community Psychology, 20*, 599-624.
- Reynolds, A. J. & Bezruczko, N. (1993). School adjustment of children at risk through fourth grade. *Merrill-Palmer Quarterly, 47*, 457-480.
- Reynolds, A. J., Mavrogenes, N. A., Bezruczko, N. (1996). Cognitive and family-support mediators of preschool effectiveness. *Child Development, 67*(3), 1119-1140.
- Senechal, M. (2006). *The effect of family literacy interventions on children's acquisition of reading. From kindergarten to grade 3. A meta-analytic review.* Washington DC National Institute for Literacy.
- Sheldon, S. B. (2002). Parents' social networks and beliefs as predictors of parent involvement. *Elementary School Journal, 102*(4), 301-316.
- Simon, B. S. (2004). High school outreach and family involvement. *Social Psychology of Education, 7*, 185-209.
- Sindelar, P.T., Lane, H.B., Pullen, P.C., & Hudson, R.F. (2002). Remedial interventions for students with reading decoding problems. In M. R. Shinn, H. M. Walker, & G.

- Stoner (Eds.), *Interventions for Academic and Behavior Problems II: Preventive and Remedial Approaches* (pp. 703-727). Bethesda, MD: NASP Publications.
- Sink, C. A., & Mvududu, N. H. (2009). Meta-analysis. In B. T. Erford (Ed.), *Encyclopedia of counseling* (pp. 334-337). Alexandria, VA: American Counseling Association.
- Stipek, D., Milburn, F., Clements, D., & Daniels, D. (1992). Parents' beliefs about appropriate education for young children. *Journal of Applied Developmental Psychology, 13*, 293-310.
- Sundman-Wheat, A. (2012). *A head start to learning: Exploration of a parent-directed intervention to promote early literacy skill development*. (Unpublished doctoral dissertation). University of South Florida, Tampa.
- Taylor, A. R. & Machida, S. (1994). The contribution of parent and peer support to head start children's early school adjustment. *Early Child Research Quarterly, 9*, 387-405.
- The University of Oregon Center on Teaching and Learning. (2008). DIBELS benchmark goals: Three assessment periods per year. Retrieved from <https://dibels.uoregon.edu/benchmarkgoals.pdf>.
- U.S. Department of Health and Human Services. (2000). Head Start performance standards (1304, 40). Washington, DC.
- Whalen, A. (2006). Universal screening and progress monitoring. Oregon Department of Education. Retrieved from <http://www.ode.state.or.us/initiatives/idea/monitoringpresent.pdf>
- Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E.

(1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology*, 30(5), 679-689.

Whitehurst, G. J., Falco, F., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdez-Menchaca, M. C., & Caulfield, M. (1988). Accelerating language development through picture-book reading. *Developmental Psychology*, 24, 552-558.

Appendices

Appendix A: Demographic Questionnaire

Date: _____

Parent Information

Name: _____

Gender: Male Female Transgender

Race/Ethnicity:

- American Indian or Alaskan Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Pacific Islander
- White
- Multi-racial (please specify): _____
- Other (please specify): _____

Highest Level of Education Obtained:

- Less than High School
- High School Graduate
- Some post-high school education
- College graduate
- Post-graduate degree

Relationship to Child:

- Mother
- Father
- Grandparent
- Other (please specify): _____

Number of children (under 18 years) in the home: _____

Please list ages (in years): _____

Number of adults in the home who care for children (including you): _____

Have you ever received *Early Head Start* services: Yes No

Participation with Head Start: Please estimate the number of years *you* have received services through Early Head Start and/or Head Start _____ years

Time Demands: Please estimate the number of hours spent *working* and/or *attending school* (for your personal education) in a typical week- _____ hours

Child Information

Child's Name: _____

Child's Gender: Male Female Transgender

Child's Date of Birth: _____ (month / day / year)

Child's Race/Ethnicity:

- American Indian or Alaskan Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Pacific Islander
- White
- Multi-racial (please specify): _____
- Other (please specify): _____

Appendix B: List of FIQ Items Contained under Each Involvement Category

School-Based Involvement
7. I participate in planning classroom activities with the teacher
8. I attend parent workshops or training offered by my child's school
16. I participate in planning school trips for my child
19. I volunteer in my child's classroom
20. I participate in fundraising activities at my child's school
26. I go on class trips with my child
27. I participate in parent and family social activities at my child's school
28. I hear teachers tell my child how much they love learning
33. I talk with other parents about school meetings and events
35. I talk with people at my child's school about training or career development opportunities for myself
38. I meet with other parents from my child's classroom outside of school
40. I feel that parents in my child's classroom support each other
Home-Based Involvement
5. I review my child's school work
11. I keep a regular morning and bedtime schedule for my child
12. I praise my child for his/her school work in front of the teacher
13. I share stories with my child about when I was in school
14. I take my child places in the community to learn special things (e.g., zoo, museum, etc.)
18. I check to see that my child has a place at home where books or school materials are kept
23. I talk about my child's learning efforts in front of relatives and friends
24. I talk with my child about how much I love learning new things
25. I bring home learning materials for my child (tapes, videos, books)
29. I maintain clear rules at home that my child should obey
31. I spend time with my child working on reading/writing skills
41. I spend time with my child working on creative activities (like signing, dancing, drawing, and story telling)
42. I spend time with my child working on number skills
Home-School Conferencing
1. I attend conferences with the teacher to talk about my child's learning or behavior
2. I schedule meetings with administrators to talk about problems or to gain information
3. I talk to my child's teacher about his/her daily school routine
9. I talk to my child's teacher about the classroom rules
15. I talk with my child's teacher on the telephone
17. I talk to the teacher about how my child gets along with his/her classmates in school
21. The teacher and I write notes to each other about my child or school activities
22. I talk to my child's teacher about my child's accomplishments
30. I talk to my child's teacher about his/her difficulties at school
36. I talk with my child's teacher about school work he/she is expected to practice at home
37. I talk with my child's teacher about our personal and family matters

Appendix C: Sample Lesson Plan

Lesson Plan

Parent's Name: _____ Child's Name: _____

Date: _____ Begin Time: _____ End Time: _____

Letter Check:

A	_____	F	_____	K	_____	P	_____
a	_____	f	_____	k	_____	p	_____
B	_____	G	_____	L	_____	Q	_____
b	_____	g	_____	l	_____	q	_____
C	_____	H	_____	M	_____	R	_____
c	_____	h	_____	m	_____	r	_____
D	_____	I	_____	N	_____	S	_____
d	_____	i	_____	n	_____	s	_____
E	_____	J	_____	O	_____	T	_____
e	_____	j	_____	o	_____	t	_____

Do you have a mark for each letter? **Yes No**

New Letter for today:

M m Sentence for letter: I a**M** happy.

Teaching M m:

_____ Hold up the M m card and, next to it, the picture of a happy face.

_____ Say: "Here are two letters, and here is a picture. Every time you see these letters and this picture you are to say out loud, 'I am happy.'"

- "What are you going to say when you see these letters and this picture?"
 - Did your child repeat the sentence correctly? **Yes No**
 - Did you praise your child's efforts? **Yes No**

- Say: "The name of this letter is in the sentence. The name of this letter is M. What is the name of this letter?"
 - Did your child say the name of the letter correctly? **Yes No**

- Say: "Ok, here is the picture and here are the letters." (point to each one) "Every time you see this picture or these letters I want you to say the sentence 'I am happy' and M. Do that for me."
 - Did your child say the sentence and letter name correctly? **Yes No**
 - Did you praise your child's efforts? **Yes No**

- Say: "Now we are going to practice some more. First I am going to say it with you then I want you to do it all by yourself."
 - *Repeat each step until your child has responded correctly
 - _____ 1. Hold up both cards and say the sentence and letter name with your child

___ 2. Hold up both cards and whisper the words while your child says it
(Take away the picture)

___ 3. Have your child whisper the sentence and say the letter name.

___ 4. Have you child say the letter name.

- Did your child correctly complete all steps?

Yes
No

Letter Review

The letter from the previous sessions should be **A a**.

- Hold up the A a card and the picture of an ape. Ask your child, “Do you remember the saying for this letter? Please tell me it and the name for this letter.”

- Did your child remember the saying “An ape is big”?

Yes
No

- Did your child remember the letter name?

Yes

- Did you give praise or correction as needed?

No

Yes

No

- Did your child remember the letter name?

Yes

- Did you give praise or correction as needed?

No

Yes

No

Sound Practice

- Ask “Do **look** and **leg** start with the same sound?”(correct answer is YES)

- Did your child say YES?

Yes

- Did you provide praise or correction as needed?

No

Yes

No

- Ask “Do **two** and **blue** start with the same sound?” (correct answer is NO)

- Did your child say NO?

Yes

- Did you provide praise or correction as needed?

No

Yes

No

- Ask “Do **run** and **find** start with the same sound?” (correct answer is NO)

- Did your child say NO?

Yes

- Did you provide praise or correction as needed?

No

Yes

No

- Ask “Do **dog** and **down** start with the same sound?”(correct answer is YES)

- Did your child say YES?

Yes

- Did you provide praise or correction as needed?

No

Yes

No

- Ask “Do **yellow** and **apple** start with the same sound?” (correct answer is NO)

- Did your child say NO?

Yes

Appendix D: Informed Consent Form

Dear Parent or Legal Guardian:

This letter provides information about a research study that will be conducted in the Head Start Classroom by investigators from the University of South Florida. Our goal in conducting the study is to determine the effect of a parent-implemented early literacy activity on children's early literacy skills, behavior, and family outcomes.

- ✓ Who We Are: Dr. Kathy Bradley-Klug, an Associate Professor in the College of Education at the University of South Florida (USF), is the Primary Investigator for this study which will be conducted in conjunction with the Early Childhood Research Group at USF. We are planning the study in cooperation with the Head Start program to make sure that the study provides information that will be useful to the program.
- ✓ Why We are Requesting You and Your Child's Participation: This study is being conducted as part of a project entitled, "A parent-directed early literacy intervention package: Academic, behavioral, and family outcomes." Your child is being asked to participate because his or her scores on three early literacy skill assessments indicate that he or she is at risk for not acquiring skills necessary to easily learn how to read. Twenty-nine additional children and their parents will also be asked to participate in this study.
- ✓ Why You and Your Child Should Participate: We need to learn more about how parents can help their children improve their reading skills! The interventions we will be using have been effective when used by teachers to help children with their pre-reading skills and in a previous study with parents in Head Start. The information that we collect from children may help increase our awareness of how parents can help their children improve their reading skills. It is not certain that participating in this study will improve your child's reading skills.
- ✓ Compensation: By returning all forms, you and your child will receive compensation of \$20 in the form of a Walmart giftcard for participation in this study. In addition, you will be provided with a children's books at the completion of the study. The \$20 will be divided up into \$2 per week if you decide to decline participation during the study (i.e., if you participate for 5 weeks you will receive a \$10 giftcard).
- ✓ What Participation Requires: If you consent to participate in the study, you will be asked to participate in a reading program provided by the research team at the Head Start Center in the Spring or early Summer of 2011. Parents and their children who choose to participate will be matched based on gender, age, and child test scores and then assigned to either the intervention or control groups. The intervention group will receive the intervention first and the control group will receive the intervention later in the year (approximately June 2011). To give the intervention, parents must attend a training that will last for 30-60 minutes. The intervention will last 9 weeks. You will be asked to do the early literacy activities for 15-20 minutes a day, 3 days a week and complete surveys of home activities, your child's behavior, and parenting efficacy. In addition to doing the reading activity with you, your child will engage in brief early literacy skills assessments, 5 times over approximately 3 months. To examine that the intervention is used properly, two meetings will be set up where a member of the research team will observe you completing a lesson. These meetings will be set up at a time and place that is convenient for you (i.e., your home or Head Start Center). In addition, researchers will follow-up with parents in the Fall of 2011 and ask them to complete surveys one final time.

- ✓ These skill assessments require that your child name letters, retell a story, name and describe common objects, and say the beginning sounds of words for the trained researchers for less than 15 minutes per session, and will take place in the Head Start center during regular school hours.
- ✓ Please Note: Your decision to participate and to allow your child to participate in this research study must be completely voluntary. You are free to participate in this research study or to withdraw at any time. Your decision to participate, not to participate, or to withdraw participation at any point during the study will in no way affect your child's student status, his or her grades, or your relationship with Head Start, USF, or any other party.
- ✓ Confidentiality of Your Child's Responses: There are no known risks to your child for participating in this research. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us. Your child's completed assessments and recordings will be assigned a code number to protect the confidentiality of his or her responses. Only we will have access to the locked file cabinet kept by the Primary Investigator that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from assessments and surveys. All records from the study (completed surveys, assessments) will be destroyed in five years.
- ✓ What We'll Do With You and Your Child's Responses: We plan to use the information from this study to inform educators and psychologists about the effect of the parent reading activity on children's reading skills. The results of this study may be published. However, the data obtained from you and your child will be combined with data from other people in the publication. The published results will not include you or your child's name or any other information that would in any way personally identify you or your child.
- ✓ Questions? If you have any questions about this research study, please contact Kathy Bradley-Klug at (813) 974-9486. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Integrity and Compliance of the USF at (813) 974-5638.
- ✓ Want You and Your Child to Participate? To confirm you and your child's participation in this study, please complete the consent form below.

Sincerely,

Kathy Bradley-Klug, Ph.D., NCSP
 Associate Professor and Coordinator
 School Psychology Program
 University of South Florida

Consent for Parent and Child to Take Part in this Research Study

I freely give my permission to take part and let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Printed name of child

Date

Signature of parent
of child taking part in the study

Printed name of parent

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

Signature of person
obtaining consent

Printed name of person
obtaining consent

Date

Appendix E: Institutional Review Board Approval Form



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE

Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5633 • FAX (813) 974-5633

September 4, 2012

Kathy Bradley-Klug, PhD
Psychological and Social Foundations
4202 E. Fowler Ave.
EDU105
Tampa, FL 33620

RE: Approved Amendment Request

IRB#: MS2_Pro00002982

Title: A Parent-Directed Early Literacy Intervention Package: Academic, Behavioral, and Family Outcomes

Dear Dr. Bradley-Klug:

On 9/2/2012 the Institutional Review Board (IRB) reviewed and approved your Amendment by expedited review procedures.

The submitted request has been approved **from date:** 9/2/2012 **to date:** 3/21/2013 for the following:

-Study staff key personnel, Kendall Jeffries, will be analyzing a part of this study for her thesis project. In particular, she will be using data from the Family Involvement Questionnaire (FIQ) to see if levels of parent involvement increased across the three data collection phases. She will also be using data from the demographic form to address her hypotheses. These data have already been collected. This amendment is being completed to allow her to analyze these specific data independently. She will not be analyzing any other data collected via this study. No changes have been made to the study protocol, procedures, or sample.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

A handwritten signature in black ink that reads "John A. Schinka, Ph.D." is positioned above the typed name.

John Schinka, PhD, Chairperson
USF Institutional Review Board