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Relationship between parent involvement and preschool children's social competence and learning behaviors

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THE RELATIONSHIP BETWEEN PARENT INVOLVEMENT AND PRESCHOOL CHILDREN'S SOCIAL COMPETENCE AND LEARNING BEHAVIORS

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ABSTRACT

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The purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. Research is emerging to suggest a positive relationship between parent involvement and preschool children's social competence and learning behaviors among Head Start populations. The participants in this study were a volunteer sample of parents and teachers of 130 preschool students. These preschool students attended preschool as tuition-paying students, students who attended preschool in order to receive special education, or students who attended preschool at no cost through a program that identified them as being at-risk. Parent involvement was measured using the *Family Involvement Questionnaire*. Social competence was measured using the *Penn Interactive Peer Play Scale* and learning behaviors were measured using the *Preschool Learning Behaviors Scale*. The results of the current study did not support a relationship between parent involvement and preschool children's social competence and learning behaviors. Implications for future research are discussed.

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To the students and families that I have crossed paths with

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CHAPTER I

INTRODUCTION

A substantial body of research on school age children indicates that parent involvement is shown to predict academic achievement (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Fan & Chen, 2001; Grolnick & Slowiaczek, 1994; Izzo, Weissberg, Kasprow, & Fendrich, 1999; Pomerantz, Moorman, & Litwack, 2007). This connection has been demonstrated consistently in the literature from kindergarten through high school. Furthermore, specific parent behaviors have been identified that promote academic success. This wealth of research has led to educational policies to promote parent involvement in children's academics at the local, state, and federal levels (Fan & Chen, 2001; Grolnick & Slowiaczek, 1994; Pomerantz et al., 2007).

A large body of research supports the importance of early childhood education and its link to later learning (Arnold et al., 2008; Fantuzzo, McWayne, Perry, & Childs, 2004; Fantuzzo et al., 2007; Marcon, 1999). Early childhood is the time in which children acquire the foundational skills for learning and development in the school-age years (Fantuzzo et al., 2007). Parent involvement is believed to be important to children's early academic achievement as well (Arnold et al., 2008; Marcon, 1999). Parent involvement has been identified as a key component of national educational policies for early childhood programs (Fantuzzo et al., 2004). Little research is available regarding the relationship between parent involvement and preschool children's school

performance (Arnold et al., 2008). In addition, little information is available regarding what influences parent involvement in early education and what types of parent behaviors increase preschool children's academic performance.

Academic performance in preschool-aged children has been emphasized more and more in the recent years. For example, Head Start has shifted from a focus on enhancing social competence to emphasizing school readiness skills like early literacy skills and early mathematics (Fantuzzo et al., 2007). Aspects of emerging literacy skills in preschool children include knowledge of letters and print and language development (Arnold et al., 2008). Emerging math skills in preschool children include rote counting and understanding quantity concepts.

Academic skill development has moved to the forefront of early childhood education. However, the literature indicates that children's social, emotional, and behavioral adjustment is as important as academic readiness skills (Blandon, Calkins, & Keane, 2010; Coolhan, Fantuzzo, Mendez, & McDermott, 2000; Longoria, Page, Hubbs-Tait, & Kennison, 2009; Rose-Krasnor, 1997; Webster-Stratton & Reid 2004). Research indicates that social competence is related to academic success and is also important for later learning (Blandon et al., 2010; Longoria et al., 2009). Poor social competence skills can also potentially constrain a child's academic, cognitive, and social development (Blandon et al., 2010). Social, emotional, and behavioral adjustment may be a stronger predictor of academic performance than IQ (Webster-Stratton & Reid, 2004).

Social competence is a multifaceted concept that can be defined as the ability to be effective in social interactions with respect to achieving goals (Rose-Krasnor, 1997). The term social competence can be divided into three distinct areas: Play Interaction,

Play Disruption, and Play Disconnection (Coolhan et al., 2000). Play Interaction includes behaviors like helping to settle peer conflict and encouraging others. Play Disruption includes behaviors such as not being able to wait a turn and disrupting the play of others. Refusing to join in the play of others when asked and wandering during free play are examples of Play Disconnection behaviors.

Preschool age children will not be able to benefit from academic instruction unless they hold the necessary foundational skills for learning (Logue, 2007). In the literature, these foundational skills are referred to as learning behaviors. Learning behaviors are "observable patterns of behavior that children display as they approach classroom learning tasks" (Fantuzzo et al., 2007, p. 46). Learning behaviors can be divided into three distinct dimensions: Competence Motivation, Attention/Persistence, and Attitude Toward Learning. Competence Motivation describes a child's curiosity and motivation to understand and succeed in learning activities. Attention/Persistence describes a child's ability to attend to relevant information and persist with tasks that are difficult. The Attitude Toward Learning dimension reflects a child's demeanor during learning activities as well as how they interact with peers and adults during these activities (Fantuzzo et al., 2007).

An emerging body of research suggests a relationship between parent involvement and preschool children's academic performance (Arnold et al., 2008; Fan & Chen, 2001; Fantuzzo et al., 2004). Parent involvement has generally been defined as a multifaceted concept. Parent involvement behaviors have been divided in to Home-Based Involvement, School-Based Involvement, and Home-School Conferencing (Fan & Chen, 2001). Home-Based Involvement behaviors can include things like helping with

homework or asking about school. School-Based Involvement includes behaviors that occur at school such as attending parent-teacher conferences. Home-School Conferencing behaviors include activities such as attending class trips and talking to the child's teacher about learning activities to do at home (Fantuzzo et al., 2004). Research regarding the relationship between parent involvement and preschool children's social competence and learning behaviors is just beginning to emerge with some populations despite the critical nature of these skills to current and future learning in preschool age children.

Rationale

While children's academic development is a priority within early childhood programs, learning behaviors are foundational skills that young children need to enhance their school success. Learning behaviors are key contributors to school success for preschool children (Coolhan et al., 2000; Fantuzzo et al., 2007; Marcon, 1999; McDermott, 1999; McDermott, Leigh, & Perry, 2002). The development of these learning behaviors in young children is a national priority (Coolhan et al., 2000).

Learning behaviors like attention and persistence contribute to early math, language, and literacy skills. They have also been found to predict later academic achievement (Fantuzzo et al., 2007). The improvement of a child's learning behaviors tends to transfer to similar behaviors and generalizes to academic achievement, social adjustment, and potentially to cognitive ability. Learning is facilitated when children are able to meet expectations for appropriate classroom behavior like following directions, attending to tasks, and being motivated to complete tasks. Therefore, learning behaviors are fundamental in increasing children's academic success (McDermott et al., 2002).

Social competence has also been identified as a foundational skill important for school readiness and later learning. Social competence has been linked to school adjustment and learning in preschool age children (Blandon et al., 2010). Positive peer relationships during preschool are associated with positive adjustment and academic success in elementary through high school. Self-regulation has also been connected to future school success and long-term development (Fantuzzo et al., 2007; Rose-Krasnor, Rubin, Booth, & Coplan, 1996). Conversely, poor peer relationships have been linked to emotional maladjustment, delinquent behavior, and school failure (Blandon et al., 2010; Coolhan et al., 2000).

A developmental-ecological perspective suggests that for young children, their development is primarily affected by parents as well as childcare and/or early education settings (Bronfenbrenner, 1979; Fantuzzo et al., 2004). Family involvement has become a key component of national educational policies given the research that links parent involvement and academic achievement. These policies call for schools to work to increase parent involvement in order to support the academic, social, and behavioral development of children (Fantuzzo et al., 2004). There is a vast amount of research that identifies the connection between parent involvement and academic achievement in school age children. This research also identifies specific parent behaviors that promote achievement. However, these results cannot be generalized to preschool children. Research suggests that the effects of parent involvement on preschool children's development and academic achievement could be even more pronounced during these early years (Arnold et al., 2008). If we can identify whether there is a connection between parent involvement and preschool children's development of learning behaviors

and social competence, we can then identify how parents can be involved in developing these skills. This will lead to our ability to be more proactive rather than reactive in child development and school success.

There are many early childhood programs and research-based interventions in early childhood that include a parent involvement component. Recently, parent involvement in early childhood has been called into question, as there is surprisingly little research available (Benedict, Horner, & Squires, 2007; Taylor & Machida, 1994). Some research has identified early intervention programs where some types of parent involvement were not found to have a positive effect on early development (Marcon, 1999).

There is a need to continue to research on parent involvement in relation to social competencies and learning behaviors. Social competencies and learning behaviors are key contributors to school success in preschool aged children (Blandon et al., 2010; Coolhan et al., 2000; Fantuzzo et al., 2007; Marcon, 1999; McDermott, 1999; McDermott et al., 2002). These skills also contribute to later learning, behavior, and social interaction skills. A preschool child's development is primarily affected by parents as well as teachers based on a developmental-ecological perspective. Some literature suggests that the effects of parent involvement in preschool child's education may be even more pronounced than during the school age years (Arnold et al., 2008). Research will aid in the design of effective ways to involve parents to promote school success (Marcon, 1999). This research can inform policies from the local to the federal level for how we integrate parent involvement into preschool children's academic experiences. These relationships need to be identified in order to strengthen family involvement at the

preschool level to promote development and allow us to be more proactive in preschool children's education.

Statement of Purpose

The purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. Three specific dimensions of parent involvement were explored in regard to social competence and learning behaviors. These three dimensions included Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Social competence skills were broken down into three dimensions as well: Play Interaction, Play Disruption, and Play Disconnection. Three dimensions of learning behaviors were measured: Competence Motivation, Attention/Persistence, and Attitude Toward Learning.

Delimitations

This study included children from the ages of three through five who participate in a public school district preschool program in the Rocky Mountain region. The population was limited to children this age in order to specifically address a preschool population as much research has already been done regarding school age children and parent involvement. Children from a public school district preschool program were chosen rather than children who did not attend a preschool setting or children who attended a community preschool program. This specific school district program included children who demonstrated age-typical development as well as those children who were identified as at-risk and those children who received special education support. A suburban population made up primarily of Caucasian families was selected as some research has already been done in urban settings with low-income, African-American

families and little research has been conducted on a suburban population. Only self report measures completed by teachers and parents were used to gather data.

Definitions

Academic achievement - A child's performance in academic areas (e.g., reading, language arts, math, science, etc.).

Learning behaviors - "Observable patterns of behavior that children display as they approach classroom learning tasks" (Fantuzzo et al., 2007, p. 46).

Parent involvement – Includes obligations of parents, obligations of schools, parental and community involvement at school, provision of learning activities at home, participation in school decision-making, and collaboration with the community (McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004)

Preschool child – A child between the ages of 3 through 5 who has not yet entered kindergarten.

Social competence – The ability to be effective in social interactions with respect to achieving goals (Rose-Krasnor, 1997).

School-age child – a student who is in any grade from kindergarten through twelfth grade.

CHAPTER II

REVIEW OF LITERATURE

As discussed in chapter one, the purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. This literature review explored the research on parent involvement and its effects on children's academic performance. The definitions of parent involvement and indicators of academic achievement found in the literature are discussed, followed by a brief review of literature pertinent to school-age children and finally within preschool. It should be noted that a significant majority of the literature available on this topic addresses parent involvement at the kindergarten through twelfth grade levels. An emerging body of research does exist regarding preschool children. The preschool research is reviewed in more detail, as this is the focus of the current study. The literature available on the relationship between parent involvement and preschool children's academic achievement will be reviewed. The focus of the current study, preschool children's learning behaviors and social competence is discussed as they relate to academic achievement. Finally, the direction of the current study is stated.

Developmental-Ecological Perspective

A developmental-ecological perspective provides a conceptual framework for the current research study. This perspective, developed by Urie Bronfenbrenner in 1979, suggests that development across the lifespan should be considered within the structure of

the environments that surround an individual. It begins with those environments that are closest to a person, like family, which is the Microsystem. The next level of the model, the Mesosystem, is comprised of the relationships between the Microsystems. The model then extends to the Exosystem, which include environments that the individual does not necessarily have direct interaction with, but nevertheless affects development (Bronfenbrenner, 1979). Beyond the Exosystem is the Macrosystem, which describes the culture in which the individual lives. Each of these environments and the individual are ever changing throughout the lifespan. The relationships among these environments and with the individual themselves are also ever-changing (Bronfenbrenner, 1979; Fantuzzo et al., 2004).

Those environments in which a young child functions directly and the connections between these environments are the basis for the current research. For young children, their Microsystem typically includes parents, childcare settings, and/or early education settings. How these groups interact with each other as well as with the child themselves affects the child's development based on the developmental-ecological model (Bogenschneider, 1997; Fantuzzo et al., 2004). Within these groups, their unique characteristics are going to influence a child's development. In the family structure, these characteristics could include socioeconomic status, level of parent education, cultural factors within the family, and parents' expectations about education. Characteristics of the child that may influence their own development could include the child's aptitude, motivation, and self-concept within academic domains (Gonzalez-Pienda et al., 2002). Characteristics of the educational setting, like the educational level of the teachers, how many children are in a classroom, and the level of motivation to connect

with parents are also going to influence a child's development according to Bronfenbrenner's model (Bronfenbrenner, 1979).

Characteristics of the child and the educational setting are important factors in children's early development. The developmental-ecological perspective suggests the family system is the most influential and proximal system in children's early learning (Fantuzzo et al., 2004). Therefore, parent involvement and its impact on a child's education is a natural relationship to assume given this perspective. One could also assume that parent involvement would influence a child's academic performance based on this perspective. Characteristics of the family, the child, and the educational setting are also important to consider as they relate to a child's development (Gonzalez-Pienda et al., 2002; Grolnick & Slowiaczek, 1994).

Parent Involvement

The operational definition of parent involvement in education is not consistent in the literature. These inconsistencies span the preschool through high school range, and those definitions used for preschool children differed similarly to those used for school age children. In some studies, the concept of parent involvement was clearly defined, while in others it was more ambiguous (Fan & Chen, 2001; Mantzicopoulos, 1997). Due to differing definitions, it is difficult to draw conclusions and generalize results of the research to have a solid understanding of parent involvement and its effects on children's academic performance (Fan & Chen, 2001).

In some of the research, parent involvement is described as a unidimensional construct. Grolnick and Slowiaczek (1994) broadly defined parent involvement as a parent's commitment of resources to their child's academic experiences. However, the

majority of the literature states that parent involvement in education is better conceptualized as a multifaceted construct across all age levels. Therefore, most of the empirical research in this area has adopted a multifaceted approach to defining parent involvement within the context of children's education (Fan & Chen, 2001). Research in both the preschool and school age arenas suggests that parent involvement should be considered multidimensional in order to truly understand the effects of parent involvement on children's education (Fan & Chen 2001; Fantuzzo, et al., 2004; Grolnick & Slowiaczek, 1994).

Parent involvement in school has been described in some of the research as a set of specific behaviors that parents exhibit (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999). These behaviors could include attending conferences, volunteering, and following through with activities suggested by the teacher. Other research has categorized the specific behaviors that both parents and schools exhibit to define parent involvement. Three dimensions of parent involvement: Home-Based Involvement, School-Based Involvement, and Home-School Conferencing were identified and studied by Fantuzzo, McWayne, Perry, and Childs (2004) at the preschool level. These dimensions were based on Epstein's (1992) framework for parent involvement intended to guide schools in developing opportunities for increased parent involvement. Epstein's work is widely recognized in the literature and will be discussed in the next section of this literature review (Fan & Chen, 2001; Fantuzzo et al., 2004). Within these dimensions, specific behaviors were identified. Home-Based Involvement includes parent behaviors such as creating space for learning activities at home and providing learning opportunities in the community. School-Based Involvement includes parent

behaviors like volunteering at school or attending class trips. Home-School Conferencing includes both parent and teacher behaviors. Parent behaviors included talking to the teacher about how their child was performing academically, while teacher behaviors included providing learning ideas for home. Izzo, Weissberg, Kasprow, and Fendrich (1999) also considered parent involvement at the school age level within the dimensions of home-based, school-based, and home-school conferencing in their research.

Other literature reports more general distinctions within parent involvement by describing differences between home-based and school-based involvement in relation to a child's education (Fan & Chen, 2001; Pomerantz et al., 2007). Pomerantz, Moorman, and Litwack (2007) defined home-based involvement for school age children as a parent's practice related to school that takes place outside the school setting. These practices include helping with homework, helping their child choose what classes to take, and asking their children what happened at school. Home-Based Involvement includes activities such as reading with children and taking them to museums. School-based involvement includes those practices that parents engage in that require them to make direct contact with the school. Being present at school conferences, attending events like open house, and volunteering are examples of school-based involvement (Fan & Chen, 2001; Pomerantz et al., 2007).

A meta-analysis of the literature surrounding parent involvement and education by Fan and Chen (2001) grouped the differing definitions of parent involvement used in the research into four broad categories. The first category identified was parent-child communication. The behaviors of parent interest in home and schoolwork, helping with

homework, and talking about their child's progress in school with them fell in this category (Fan & Chen, 2001). The second category, home supervision, included amount of time spent doing homework, time children spent watching TV, the home environment's conduciveness to studying, and the expectation that children are to come home after school. Educational aspiration for children was the third category identified that included expectations for education and valuing academic achievement. Finally, the school contact and participation category included parent contact with the school, parents volunteering, and parents attending school functions (Fan & Chen, 2001).

For the current research, the definition of parent involvement will take a multifaceted approach, just as the literature suggests. The three dimensions of parent involvement initially described by Fantuzzo et al. (2004) that were based on Epstein's framework for parent involvement will be used for the current study. These dimensions include Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. These dimensions have been reported to be evident across early childhood settings (Fantuzzo et al., 2004).

In addition to differing definitions that lead to inconsistencies and lack of ability to generalize information in the research, a theoretical framework that provides guidance for researching parent involvement has also been lacking (Fan & Chen, 2001). One of these promising theoretical frameworks that have emerged in the research is one developed by Epstein (Fan & Chen, 2001). Epstein (1992, 1994) provides a widely recognized framework to account for different levels parent involvement in education. Epstein's framework has been chosen for the current research project as the major elements of her framework can be operationally defined and have empirical support

(Epstein et al., 2002; Fan & Chen, 2001). The definition of parent involvement adopted for this study as well as the tool that will be used to gather information on parent involvement is based on Epstein's model as well. This tool was and validated developed from a multivariate study of family involvement in early childhood (Fantuzzo et al., 2004).

Epstein's framework identified six types of school-related opportunities for parent involvement. Her framework was created specifically from the perspective of schools and how schools can create more parent involvement. The first area of parent involvement in this framework is *assisting parents in child-rearing skills*. This area focuses on helping parents to establish an environment at home in order to support their child as a student (Epstein et al., 2002). The next area, *school-parent communication*, focuses on helping to design effective modes of communication between school and parents. *Involving parents in school volunteer opportunities* is the third area of the framework. The fourth area of the framework is *involving parents in home-based learning* by providing them information on how to help children with homework and other learning activities done at home. *Involving parents in school decision-making* and *involving parents in school-community collaborations* make up the fifth and sixth areas of the framework (Fan & Chen, 2001). *Decision-making* involves including families in the decisions made at school, the committees, and the parent organizations that are part of the school. C*ollaborating with the community* includes working with businesses, colleges, and other agencies in the community to help strengthen programs at school as well as student learning (Epstein et al., 2002).

Academic Achievement

The indicators of academic achievement in preschool through twelfth grade vary just as the definitions and indicators of parental involvement do in the literature but to a lesser degree (Fan & Chen, 2001). A brief overview of the indicators of academic achievement from kindergarten through twelfth grade will be reviewed first followed by a brief review of the research on parent involvement and academic achievement for school age children. Following a review of this research, the indicators of academic achievement at the preschool level and the research available on parent involvement will be highlighted.

A meta-analysis conducted by Fan and Chen (2001) on parent involvement and academic achievement in kindergarten through twelfth grade grouped the commonly used indicator variables in the literature for academic achievement into three broad categories. The first category identified in the meta-analysis was overall grades. This category included measures like Grade Point Average (GPA) as well as grades in specific academic areas like math, reading, and social studies. Some of the research reviewed acquired grade information from the school while others used student report (Bogenschneider, 1997). The second category identified was test scores. Students' performance on tests in specific academic areas made up this category. For example, one research study used students' performance on subsections of standardized tests like the Metropolitan Mathematics Instructional Tests that is group administered and normed by grade level (Izzo et al., 1999). The final category identified as a way to measure academic achievement was grade promotion versus retention (Fan & Chen, 2001).

Given these three broad areas of academic achievement indicators identified by Fan and Chen (2001), it is not surprising that there is disagreement as to what indicators best measure academic achievement. Some educators have argued that grades are a better predictor of academic success than achievement scores. A student's grades include the teachers' evaluation of how the student thinks and solves problems as well as the students' ability to participate in a learning situation (Bogenschneider, 1997). How to gather information regarding a student's grades is also an area of disagreement. Those who use student report to gather this information suggest that the correlation between grades that are reported and actual grades is high (Bogenschneider, 1997). Furthermore, it was argued that it is easier to gain this information through student report, as some states require written permission from parents to gain access to these types of student records. Other research has also reported grade information through teacher report (Grolnick & Slowiaczek, 1994).

Parent Involvement and Academic Achievement in Kindergarten Through Twelfth Grade

Since the early 1980's, a vast amount of research has accumulated regarding parent involvement and its effects on children's academic achievement (Arnold et al., 2008; Bogenschneider, 1997; Grolnick & Slowiaczek, 1994; Izzo, Weissberg, Kasprow, & Fendrich, 1999; Pomerantz et al., 2007). Parent involvement has been shown to predict academic achievement from kindergarten through high school. Information from multiple sources to include parents, teachers, and students has provided this evidence across many studies. Longitudinal research demonstrates the long lasting positive effects of parent involvement (Arnold et al., 2008). Furthermore, it has been found that mother

and father's involvement in school are equally beneficial for both boys and girls (Bogenschneider, 1997).

Some of the research on school age children suggests that not all types of parent involvement have demonstrated positive effects, nor is a high amount of parent involvement necessarily good (Pomerantz, Wang, & Ng, 2005; Pomerantz et al., 2007). For example, the effects of parent involvement on homework completion have produced inconsistent results as far as its benefit. In one study, when mothers failed to maintain their positive affect while assisting with homework, it predicted children's poor motivation to complete homework six months later (Pomerantz et al., 2005). Frequent parent-school contact is not always associated with positive outcomes in the literature as well (Marcon, 1999). Although a study by Iverson, Brownlee, and Walberg (1981) that was cited in Marcon (1999) indicated that young students with academic difficulties tended to benefit from increased parent-school contact, older students showed detrimental effects with more frequent parent-school contact.

Less research has been conducted on home-based parent involvement. The research with school age children also demonstrates some consistencies with the school-based literature as far as having positive effects on children's achievement (Pomerantz et al., 2007). However, the results of the research on home-based parent involvement is less clear as some studies have indicated a benefit to this type of involvement and others have not (Pomerantz et al., 2007). Short term and longitudinal studies with a variety of ethnic and socioeconomic groups have produced these results as well.

Upon further investigation of the large body of research of parent involvement and academic achievement, Fan and Chen (2001) revealed that a small number of these

studies are empirically based. Fan and Chen focused on those empirical studies in the form of bivariate correlations between indicators of parent involvement and students' achievement as these types of studies lend themselves more readily to a meta-analysis. This focus resulted in the analysis of 25 studies. Their findings suggested that parent involvement and student achievement are positively correlated (Fan & Chen, 2001). However, the magnitude of this relationship differs among individual studies. Parents' aspirations and expectations for their child had the strongest relationship with academic achievement, while parental home supervision had the lowest relationship with academic achievement. Parental home supervision included behaviors like limiting television and having rules about homework completion. The authors suggested that the reason for this weak relationship might be due to the idea that close parental supervision could be a result of their child's poor academic performance. This research suggested that the relationship between parent involvement and academic achievement should not be generalized across different operational definitions of parent involvement nor should it be generalized across different areas of academic achievement (Fan & Chen, 2001).

In addition to promoting children's achievement through parent involvement, some literature also suggests the importance of parent involvement in other areas of development (Pomerantz et al., 2005; Pomerantz et al., 2007). Emerging research suggests that children's social and emotional functioning have been found to be stronger when parent involvement is present. However, much less research has been done on these areas of functioning in school age children (Pomerantz et al., 2005; Pomerantz et al., 2007).

Overall, the research available for school age children success suggests a positive relationship between parent involvement and academic success. Furthermore, specific parent behaviors have been tied to increased academic success. These behaviors include those at school, those at home, and those behaviors involved in school-home communication. Interventions to promote parent involvement have also been reviewed in the literature in order to increase academic functioning.

Academic Achievement in Preschool

Academic achievement in preschool has been defined and measured in many of the same ways as academic achievement in the literature on school age children. Academic achievement has been measured via standardized assessments such as vocabulary tests like the Peabody Picture Vocabulary Test as well as other tools like progress reports and observationally based measures like The Child Observation Record (Fantuzzo et al., 2004; Fantuzzo et al., 2007; Marcon, 1999). A variety of tools are used that look at more broad academic skills as well as tools that look at more specific skills, just as with school age children.

Although the literature on the relationship between academic performance and parent involvement is just beginning to emerge with a preschool population, a few studies have been conducted (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999). Parent involvement is widely believed to be critical to children's early academic development but few studies have actually evaluated this relationship empirically. White, Taylor, and Moss (1992) challenged the empirical basis behind the assumption that parent involve is important in early childhood but the review of research in this area suggests that this challenge has gone largely unaddressed (as cited in Arnold et al., 2008). It should not be

assumed that school age results would generalize to preschool populations (Arnold et al., 2008; Fantuzzo et al., 2007).

Overall, parent involvement was found to be positively related to preschool children's academic performance (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999). In one study, more active parent involvement, like volunteering in the classroom, correlated more strongly to academic performance than more passive types of involvement like attending parent-teacher conferences (Marcon, 1999). Increased parent involvement that was either active or passive was associated with higher academic performance in boys (Marcon, 1999). In another study, home-based parent involvement activities like reading to children and asking children about school showed a stronger relationship to academic performance than school-based parent involvement like volunteering as well as home-school conferencing. However, these two parent involvement activities also contributed to greater academic performance (Fantuzzo, 2004).

The research on parent involvement and preschool children's academic achievement have been limited by factors such as the population studied and using just one measure to look at academic performance and parent involvement. Many of the studies also relied on one source of report such as only teacher or parent report. All studies that used parent report had a vast majority of mothers who participated and very few, if any fathers (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999). Each study measured parent involvement in multiple ways but the definitions of parent involvement among the studies varied. Similarly, academic achievement was measured differently

across studies and only one study looked at achievement on multiple levels (e.g., literacy, mathematics, and science) (Marcon, 1999).

Learning Behaviors

Although academic achievement is at the forefront of educational literature, getting children prepared to learn is an important precursor to academic success. Because of its importance, promoting young children's readiness has become a national priority (Coolhan et al., 2000). These skills that young children need to possess in order to learn are often referred to as learning behaviors (Coolhan et al., 2000). Research by McDermott and colleagues defined learning behaviors as "observable patterns of behavior that children display as they approach classroom learning tasks" (Fantuzzo et al., 2007, p. 46). Coolhan, Fantuzzo, Mendez, and McDermott (2000) identified specific skills that constitute learning behaviors. The skills identified included motivation, task persistence, attention, taking initiative with tasks, and being open to new challenges. Other research has identified specific learning behaviors to include curiosity, cooperativeness, and engagement as well as the skills previously mentioned above (McDermott, 1999). Learning behaviors have been recognized as distinct, observable behaviors that indicate ways children become engaged in classroom activities (Fantuzzo et al., 2007).

Learning behaviors are included as essential components of young children's school readiness (Fantuzzo et al., 2007). However, the research currently available regarding learning behaviors is limited. Early research in this area suggests that learning behaviors contribute to other academic domains like preliteracy skills and early math knowledge. The research that has been conducted in this area of learning behaviors also

suggests that learning behaviors have been found to contribute to early academic outcomes as well as later school achievement and improved social skills (Coolhan et al., 2000; Fantuzzo et al., 2007). Similarly, children with low competence motivation, a specific learning behavior, show higher disconnected peer play and performed poorer on areas of kindergarten readiness (Fantuzzo et al., 2007).

A study by Marcon (1999) examined the impact of parent involvement on a variety of skill areas in preschool in an urban, Head Start population that was predominantly African-American. Among those studied, a child's ability to work until tasks are completed and their ability to seek help when needed, two skills that fall in the category of learning behaviors, were found to be positively correlated with parental involvement. More specifically, these two distinct learning behaviors were positively correlated more active types of parent involvement that included volunteer activities in the classroom than passive types of parent involvement like attending parent-teacher conferences (Marcon, 1999). This study was the only one found in the literature review that looked at the impact of parent involvement on preschool children's learning behaviors. This study was limited by its use of only teacher report to gather information and population of children who participated in the study.

Social Competence

Parent involvement likely has effects on areas other than academic success and learning behaviors. One area of development in preschool children that is also considered important for learning is social competence (Arnold et al., 2008). The impact of parent involvement on children's social competence may be even more pronounced for children in early childhood when children develop foundational behavioral skills for

learning like peer interaction and emotional regulation. Peer interaction skills and emotional regulation are considered specific behaviors that make up social competence (Arnold et al., 2008).

Most definitions of social competence in the literature have been relatively broad. In the 1970's, researchers defined it as how well one interacts with peers, reaches social goals, makes friends, and is well-liked. Sarason (1981) emphasized problem-solving behavior, person perception, and perspective taking (as cited in Longoria et al., 2009). Raver and Zigler defined social competence as a child's ability to feel good about themselves while interacting positively with others (Longoria et al., 2009). Social competence has also been defined as children's skills for building positive relationships with other children and adults. For the current study, social competence shall be defined in a broad sense as "…children's ability to be effective in their social interactions with respect to achieving their goals" (Rose-Krasnor, 1997, p. 112).

Indicators of children's social competence in the literature have included social skills, presence or absence of problem behavior, and a child's ability to get along with and be liked by their peers. More specifically, indicators have included the ability to successfully engage in and manage social interactions, utilize appropriate behavioral and emotional strategies, and the ability to maintain relationships over time (Blandon et al., 2010). Early indicators of young children's social competence have been considered the building blocks for children's later social competence (Coolhan, et al., 2000; Rose-Krasnor, 1997).

Research has shown that social competence is related to academic success (Blandon et al., 2010; Longoria et al., 2009). Peer acceptance, which is an indicator of

social competence, has been shown to be associated with higher student motivation and engagement at school in older children (Blandon et al., 2010). Social competence has also been linked to positive adjustment, verbal ability, and general school success (Blandon et al., 2010; Coolhan, et al., 2000). Research indicates that the development of children's emotional and social competence provides a foundation for children's later functioning across peer and school contexts. By contrast, it can also potentially constrain the development of a range of skills to include academic, cognitive, and social areas (Blandon et al., 2010).

Children's early social interactions with parents, caregivers, and/or educators are particularly important for learning socially appropriate behavior as well as academic achievement (Blandon et al., 2010: Coolhan, et al., 2000). Therefore, it makes sense to consider the relationship between parent involvement and social competence. Similar to the research available on the association between parent involvement and preschool children's academic success and learning behaviors, very little research exists on the association between parent involvement and preschool children's social competence. In the few studies that are available, research is emerging to suggest a positive relationship between parent involvement and preschool children's social competence (Fantuzzo et al., 2004; Marcon, 1999). Home involvement behavior was related significantly to children's peer play competencies (Fantuzzo et al., 2004; Marcon, 1999). In one study, more active types of parent involvement at school were related to increased levels of social competence in preschoolers. These active types of parent involvement fell in the category of volunteering (Marcon, 1999).

Conclusion

Within early childhood, there is little empirical research available regarding the relationship between parent involvement and children's academic achievement. However, even less research is available on the association between parent involvement and preschool children's learning behaviors and social competence. Although there is a large body of research addressing the phenomenon of parent involvement and its role in academic achievement with school age children, these results should not be generalized to preschool age children (Arnold et al., 2008). While continued research is needed in this area, perhaps a more important gap in the research with parent involvement in preschool children's schooling is its effects on a child's learning behaviors and social competence. Social competence and learning behaviors are key foundational skills that a child needs to have in order to succeed in school and these skills impact academic achievement (Fantuzzo et al., 2007). Although some research has emerged in this area, the focus of the some research has been on single dimensions of parent involvement or child development. Furthermore, these studies have relied on data collected from only one source. The results of the available research are also limited by their sample. Understanding the relationship between parent involvement and preschool children's learning behaviors and social competence will help us to create opportunities for parents and educators to increase young children's current and future academic and social development.

CHAPTER III

METHODOLOGY

In this section, the participants recruited for the study will be discussed. Next, the measures that were completed by the classroom teachers as well as the parents will be described. Finally, the procedures will be discussed as far as recruiting participants, collecting data, and procedures to analyze the data.

Participants

The participants in this study were selected from a suburban public school district in the Rocky Mountain region. All preschool teachers and parents from this suburban school district were invited to participate in the study. The participants were recruited from 47 preschool classrooms. One of the preschool teachers had recently resigned according to the preschool coordinator for the program so invitations were sent to 46 preschool teachers. Teachers who had been teaching in their classrooms for at least 11 weeks (including breaks) were invited to participate to ensure that the teachers knew the students who would potentially participate. Students in the classrooms represented one of three groups. The first group consisted of students who paid tuition to attend preschool. The second group included children who received special education services within the classroom and were on an Individual Education Program (IEP). The third group was students who attended preschool at no cost who participated in the Colorado Preschool Project (CPP). CPP was designed to provide preschool experience for children

who demonstrated a variety of at-risk characteristics. These at-risk characteristics could have included a parent who was unemployed, a sibling with a disability, frequent moves, or financial need. For three year-olds to qualify for the CPP program, they have to demonstrate at least three at-risk characteristics. For four year-olds to qualify for CPP, they have to demonstrate at least one at-risk characteristic. Within each classroom, there were up to 15 students. Approximately six of the students received special education services in the classroom. The total number of students within each classroom varied as well as the number of student attending as tuition-paying, CPP students, and students who received special education services.

For the current research study, cluster sampling was used with volunteer selection. Teachers from the 46 preschool classrooms were recruited to participate first. In classrooms with consenting teachers, parent participation was solicited. The target *N* for the current study ranged from 31 to 73 (Green, 1991) in order to provide sufficient power for data analyses with three predictor variables. The three predictor variables, or independent variables in this study, included Home-Based Involvement, School-Based Involvement, and Home-School Conferencing.

Measures

Learning Behaviors

The *Preschool Learning Behaviors Scale* (PLBS) was developed from the *Learning Behaviors Scale* for children ages 5 to 17 (McDermott et al., 2002). The PLBS is designed for children ages 3 to 5 ½ and is completed by teachers. The PLBS consists of 29 items each representing a specific learning-related behavior. Construct validity for the PLBS has been established with two national samples that both revealed three reliable

dimensions: Competence Motivation, Attention/Persistence, and Attitude Toward Learning. The Competence Motivation dimension explores a child's curiosity and motivation to understand and succeed in learning activities. Statements within this dimension include things such as *"Easily gives up activities"* and *"Tears when faced with difficulty"*. A child's ability to attend to relevant information and persist with difficult tasks is measured by the Attention/Persistence dimension. Items in this dimension include *"Cannot settle into an activity''* and *"Uncooperative in group activities"*. The Attitude Toward Learning dimension reflects a child's demeanor during learning activities as well as how they interact with peers and adults during these learning activities. *"Aggressive or hostile when frustrated"* and *"Shows little desire to please teacher/aide"* are examples of items within this dimension (Perry, McDermott, Cohen, & Fantuzzo, 2000).

Cronbach's alpha coefficients were .87 for Competence Motivation, .88 for Attention/Persistence, and .78 for Attitude Toward Learning from the national validation sample of 170 children ages 3.6 to 5.5 years (McDermott et al., 2002). Convergent and divergent validity has also been established with a sample of 170 low-income urban preschool children. Multimethod, multisource validity and analyses have been further substantiated with each of the three dimensions of the PLBS for use with preschool age children (Fantuzzo et. al, 2007).

Social Competence

The *Penn Interactive Peer Play Scale* (PIPPS) was used to measure children's social competence (Coolhan et al., 2000). The PIPPS is both a teacher and parent rating comprised of 32 items that look at preschool children's interactive peer play skills.

Teachers and parents each report on how often they observe certain interactive behaviors during a child's free play. Validity and reliability investigations revealed three reliable dimensions of the PIPPS: Play Interaction, Play Disruption, and Play Disconnection. Within the Play Interaction component, items included describe prosocial behaviors like encouraging others and helping settle peer conflict. Items in this dimension include things such as *"Helps other children"* and *"Encourages others to join play"*. The Play Disruption dimension describes negative behaviors like disrupting play and not being able to wait a turn. Specific items on this dimension include *"Starts fights and arguments"* and *"Is physically aggressive"*. Items in the Play Disconnection dimension include *"Is ignored by others"* and *"Refuses to play when invited"* (Hampton & Fantuzzo, 2003). The PIPPS-T was standardized on a sample of 663 African-American Head Start children between the ages of 37 and 64 months. The PIPPS-P was standardized on 297 Head Start children between the ages of 37 and 64 months. Convergent and divergent validity was established using the *Social Skills Rating Scale* (SSRS), the *Conner's' Teacher Rating Scale* (CTRS-28), and a peer sociometric procedure. Reliability coefficients for the PIPPS-P and PIPPS-T were found to be acceptable as well.

Parent Involvement

Family members' involvement in their child's education was measured using the *Family Involvement Questionnaire*, or FIQ (Fantuzzo et al., 2004). This questionnaire is a multidimensional rating scale that parents complete to measure the type of and extent of their involvement in their child's education. The questionnaire contains 42 items that are answered using a Likert scale (*Rarely, Sometimes, Often, and Always*). These items fall

within three parent involvement dimensions on the FIQ: School-based Involvement, Home-Based Involvement, and Home-School Conferencing (Cronbach's r = 85, .85, and .81, respectively). Items within the School-Based Involvement category include *"I volunteer in my child's classroom"* and *"I participate in planning school trips for my child"*. Items in the Home-Based Involvement dimension include *"I bring home learning materials for my child"* and *"I spend time working on my child's number skills"*. The Home-School Conferencing area includes items like *"I talk to my child's teacher about classroom rules"* and *"I talk to my child's teacher about my child's accomplishments"*. Concurrent validity has been established through significant correlations between each of the three dimensions and parent volunteer experiences in early childhood programs for economically disadvantaged children (Fantuzzo, Tighe, & Childs, 2000).

Each parent who elected to participate completed a brief questionnaire regarding demographic data. This questionnaire included questions about marital status, socioeconomic status, ethnicity, age of parents, and employment status. It also included a question to gather information whether the student attended preschool as a tuition-paying student, a CPP student, or a student on an IEP.

Procedures

Approval to conduct the study was secured from the University of Northern Colorado's Institutional Review Board and the school district. Recruitment involved two steps. First, teacher participation was solicited. Emails were dispersed to share information about the study with classroom teachers. The school district provided permission for the researcher to obtain the email address for each classroom teacher prior

to soliciting participation. An email was sent to each preschool classroom teacher in the school district describing the nature of the study, as well as issues of confidentiality and directions for how to express interest to participate. The researcher's phone number and email address was provided for teachers to ask questions. Permission from the teachers was obtained by the researcher though email for all participants. Issues of confidentiality and the nature of the research study were clarified as necessary before gaining written permission. Teachers provided the address of the preschool on the consent form in order to deliver the surveys to the preschool location. Surveys for the teachers who volunteered to participate were delivered to their classroom with a specific deadline date included with the surveys. All teachers who chose to participate received a $20 gift card to Lakeshore® after signing the consent form. Once they completed the checklists for each student who chose to participate by the deadline, she received an additional $20 gift card to Lakeshore®. Additionally, all teachers who participated and completed checklists for each child who participated by the deadline were entered into a drawing for a $50 Starbucks® gift card.

Parent participation was solicited from the classrooms in which teachers had agreed to participate. All families in these classrooms were invited to participate. Classroom teachers were given a flyer to post in their classroom or the sign-in area to share information with parents who may be interested in participating. In addition, each family in the classroom was given an envelope containing the FIQ, PIPPS-P, demographic questionnaire, and letter describing the study, along with the researcher's contact information. Issues of confidentiality and the nature of the research study were clarified as necessary. Written permission for parent participation was not obtained as

their permission was implied if they completed and returned the surveys to the researcher. The parent was asked to return the surveys to the classroom teacher by a certain date. On this date, the researcher picked up the questionnaires that had been completed by the parent. A packet containing the PLBS and PIPPS-T was given to the teacher on this date for each parent who turned in their packet with the FIQ, PIPPS-P, and demographic questionnaire. Teachers were given a date by which their questionnaires had to be completed. The teacher was notified of this date in writing and was told that the researcher would pick up the questionnaires on that date.

Teachers completed the *Preschool Learning Behaviors Scale* (PLBS) and the *Penn Interactive Peer Play Scale* (PIPPS-T) teacher version. These scales could have been completed during direct observation of children or based on previous observations. Parents of the preschool children completed the demographic questionnaire as well as the *Family Involvement Questionnaire* (FIQ) and *Penn Interactive Peer Play Scale* (PIPPS-P) parent version. The FIQ, PIPPS-P, and demographic questionnaire could have been completed in one sitting or over time.

These questionnaires were delivered to the parents and preschool teachers during the spring semester of the school year. The spring semester of the school year was chosen, as parents would have had a number of opportunities to participate in their child's education by that time. Additionally, the teachers would be able to comment on children's behaviors more accurately at this time during the school year.

A specific date was provided in the questionnaire packet that was given to each parent and teacher who participated as a deadline for completing the surveys. Parents were notified that if they returned their questionnaires to the classroom teacher before the

deadline, they would be entered in a drawing to win a one of two one hundred dollar gift cards to Target®. Teachers were notified that if they completed their questionnaires by the deadline, they would receive a $20 gift card to Lakeshore®. In addition, if the teachers completed their questionnaires by the deadline, they would be entered to win a $50 gift card to Starbucks® if they wanted to be entered in a drawing.

Analysis of Data

To determine the relationship between parent involvement and a preschool student's level of social competence and demonstration of learning behaviors, multiple regression analysis was used. Confirmatory factor analysis was performed on the FIQ to confirm that the three subscales of Home-Based Involvement, School-Based Involvement, and Home-School Communication existed in the data. If these three subscales existed in the data, multiple linear regression models would be created for each research question to see how the FIQ dimensions related to the three dimensions of the PLBS that measured learning behaviors and the three dimensions of social competence measured by the PIPPS.

Research Questions

Q1 Do Home-Based Involvement, School-Based Involvement and Home-School Conferencing predict Play Interaction?

The independent variables within the multiple linear regression models were Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Play Interaction. Play Interaction was measured by the PIPPS completed by the child's teacher and by the child's parent

Q2 Do Home-Based Involvement, School-Based Involvement and Home-School Conferencing predict Play Disruption?

The independent variables within the multiple linear regression models were Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Play Disruption. Play Disruption was measured by the PIPPS completed by the child's teacher and by the child's parent.

Q3 Do Home-Based Involvement, School-Based Involvement and Home-School Conferencing predict Play Disconnection?

The independent variables within the multiple linear regression models would be Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Play Disconnection. Play Disconnection was measured by the PIPPS completed by the child's teacher and by the child's parent.

Q4 Do Home-Based Involvement, School-Based Involvement and Home-School Conferencing predict Competence Motivation?

The independent variables within the multiple linear regression models were Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Competence Motivation. Competence Motivation was measured by the PLBS completed by the child's teacher.

Q5 Do Home-Based Involvement, School-Based Involvement and Home-School Conferencing predict Attention/Persistence?

The independent variables within the multiple linear regression models were Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Attention/Persistence. Attention/Persistence was measured by the PLBS completed by the child's teacher.

Q6 Do Home-Based Involvement, School-based Involvement and Home-School Conferencing predict Attitude Toward Learning?

The independent variables within the multiple linear regression models were Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement, School-Based Involvement and Home-School Conferencing were measured by the FIQ that was completed by the parent. The dependent variable was Attitude Toward Learning. Attitude Toward Learning was measured by the PLBS completed by the child's teacher.

CHAPTER IV

RESULTS

The results of the data analysis that explored the relationship between parent involvement and preschool children's social competence and learning behaviors are presented in this chapter. A description of the sample is presented first, followed by the descriptive and statistical analyses of the data.

Sample Description

The sample consisted of 130 preschool students. The students were not required to directly participate in any way in the study. Rather, the child's parent(s) or guardian(s) and preschool teacher provided information by completed questionnaires. The sample included 78 male preschool students (60%) and 52 female preschool students (40%). Of the 130 preschool students, 73 (56.2%) were attending preschool as tuition-paying students. Forty (30.8%) of the 130 students attended preschool as students who received special education services and 17 (13.1%) attended preschool as part of the Colorado Preschool Project. In the total sample, 122 (93.8%) of the students came from two-parent families, and eight (6.2%) came from single-parent families. One hundred four (80%) of the students were described by their parent as White/Caucasian. Seven (5.4%) of the students were described as Hispanic/Latino, and seven others (5.4%) were described as Asian. One student's (.8%) ethnicity was described as Other. Eleven (8.5%) of the preschool students' parents marked more than one ethnic category.

A parent or guardian completed a demographic questionnaire, the FIQ, and the PIPPS-P for their child. Of the total number of participants, 122 (93.8%) of the questionnaires were completed by the child's mother. Five of the questionnaires were completed by the child's father (3.8%). Three (2.3%) of the questionnaires were reported to be completed collaboratively by both the child's mother and father. Within this group of parents and guardians, 61 (46.9%) reported being unemployed or stay-at-home parents. Thirty-six (27.7%) reported being employed full time, and 32 (24.6%) reported part-time employment. One parent marked more than one employment status. Ninety (69.2%) of the parents fell between the ages of 31 and 40. Twenty (15.4%) fell between the ages of 21 and 30, and 19 (14.6%) fell between the ages of 41 and 50. One (.8%) respondent reported being below 20 years of age.

The teachers of the children whose parents were also participating completed the PLBS and the PIPPS-T. A total of 10 female teachers participated in the study. The number of years that the teachers had been teaching in the specific program surveyed ranged from one year to eleven years. Many of the teachers who participated had prior experience teaching in other programs or in a different role (e.g. teacher assistant) in the current program surveyed.

Data Analysis and Results

Means, standard deviations, and the number of cases for each measure in the sample are included in Table 1. The total possible points for each measure are listed in the table as well as a comparison between the mean score and total possible score. The number of cases for each analysis differs for each measure, as those questionnaires that had missing responses were not included in the analysis resulting in varying *N* for each

measure. As a comparison, a previous study using the FIQ as a measure of parent involvement found the average score to be 113.7 with a standard deviation of 23.29 for a Head Start population in southern Colorado (Makofske, 2010). Scores on each of the measures suggest that the higher the score, the higher the behavior.

Table 1

Means and Standard Deviations for the FIQ, PIPPS-P, PIPPS-T, and the PLBS

	Mean	Total	SD	*N*
FIQ	110.24	168	15.614	96
PIPPS-P	97.28	128	9.393	103
PIPPS-T	106.32	128	14.373	97
PLBS	48.77	58	8.762	97

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

The correlation matrix can be found in Table 2. A weak but significant correlation between the PIPPS-T and PIPPS-P was identified. These measures include the same items but are completed by either the child's parent or teacher. No other significant correlations were identified among the measures.

Table 2

Correlations Among the FIQ, PIPPS-P, PIPPS-T, and the PLBS

	FIQ	PIPPS-P	PIPPS-T	PLBS
FIQ	___	-.144	-.093	-.119
PIPPS-P		___	.265**	.017
PIPPS-T			___	-.047
PLBS				___

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*
***significant at the .01 level (2-tailed)*

Reliability analyses were completed for the FIQ, PLBS, PIPPS-P and PIPPS-T. A Cronbach's alpha from .6 to .7 is considered acceptable for research purposes, and a Cronbach's alpha of .8 or higher is considered good (Nunnally & Bernstein, 1994). Reliability coefficients were found to be acceptable to good for the PIPPS-T, FIQ and their subscales. Reliability coefficients for the PIPPS-P and PLBS were found to be good for the overall measures as well as their subscales. The reliability coefficients for each measure and subscales are reported in Table 3. The *n* was reported for each measure and subscale as well. The *n* differed for each measure and subscale as questionnaires and their subscales that had items missing were not included in the analysis.

Table 3

Reliability Coefficients for Each Measure and Subscales

Measure/Subscales	Reliability Coefficient	Number of Cases
FIQ	.892	96
Home-Based Involvement	.793	111
School-Based Involvement	.712	104
Home-School Conferencing	.851	109
PIPPS-P	.811	121
Play Interaction	.914	127
Play Disruption	.934	123
Play Disconnection	.898	126
PIPPS-T	.700	103
Play Interaction	.668	108
Play Disruption	.778	108
Play Disconnection	.824	110
PLBS	.924	126
Attention/Persistence	.920	126
Attitude Toward Learning	.842	126
Competence Motivation	.816	124

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

Factor Analysis

Once reliability analyses were completed for all measures, a confirmatory factor analysis was completed for each measure. Multiple approaches were used to estimate the number of factors present for each measure. Gorsuch (1997) suggested using common factor extraction methods such as principal axis or maximum likelihood factoring and oblique rotation such as promax. Ford, MacCallum, and Tait (1986) suggested that of the criteria that have been used to identify the estimated number of factors, parallel analysis (PA) and scree plots have the most support. For the current study, maximum likelihood factoring was used with promax rotation. Parallel analysis and scree plots were examined to estimate the number of factors present, and when two models were plausible the clarity of the factor pattern was used to select the most appropriate model.

Parallel analysis and scree plots for the FIQ indicated that the estimated number of factors was three. To further analyze the three-factor solution, the factor pattern was examined. Factors that were retained for the current sample fell at or above .4 as research suggests those factors that fall at .4 or above should be retained (Ford et al., 1986). The item numbers that fell at or above .4 were compared to the items that fell in to either the School-Based Involvement, Home-Based Involvement, or Home-School Conferencing category based on the factor analysis methods used to validate the measure (Perry, Fantuzzo, & Munis, 2002). This analysis revealed that 20 of the 42 items of the FIQ did not load into the factors indicated in the manual. Therefore, the results indicated that a three-factor solution did not fit the current sample based on this high number of mismatches.

Confirmatory factor analysis for the three subscales of Competence Motivation, Attention/Persistence, and Attitude Toward Learning of the PLBS was also completed. Parallel analysis and examination of the scree plot revealed a three-factor solution was present. Factor loadings for the three subscales were similar to the loadings reported by the PLBS, as only seven of the 29 items loaded into different factors. Therefore, the three-factor solution was maintained.

The three-factor solution that was anticipated did not occur in the data for the PIPPS-T. Parallel analysis and scree plots indicated a two-factor solution, as did the examination of the scree plot for the PIPPS-T. When three factors were selected for the PIPPS-T to be examined, it produced weak results when examining the factor loadings. Those loadings on factor one and two were strong, but the loadings were not similar when compared to the items identified in the PIPPS manual as loading into each subscale. Furthermore, regression coefficients for the third factor were weaker and were not similar to the items designated in the PIPPS manual (McWayne, Sekino, Hampton, & Fantuzzo, 2002). For the PIPPS-P, PA and scree plots indicated a three-factor solution was present. Further analysis of the factor loadings indicated a weak match between the items that loaded into each factor and the items reported in the PIPPS manual that fell in each subscale. Due to this weak match, a three-factor solution was not suggested for the current data.

Analyses for Research Questions

Based on the results of the confirmatory factor analysis, the research questions were revised to reflect the factor solution models present in the data. First, a description of each variable and how the measures were scored to create the independent and

dependent variables for the revised research questions will follow. Then, the revised research questions will be described and the results of the data analysis for each research question will be explained.

Because the three-factor solution for the independent variables of Home-Based Involvement, School-Based Involvement, and Home-School Conferencing measured by the FIQ did not appear in the data, a one-factor solution was created. To create the independent variable of "Parent Involvement", an overall parent involvement raw score was calculated for each participant in order to measure parent involvement. This method has been used in previous research to measure parent involvement (Makofske, 2010). Responses to the questions on the FIQ were reported on a Likert scale. A response of *rarely* corresponded to 1 point, a response of *sometimes* was 2 points, a response of *often* was 3 points, and *always* was 4 points. Out of a total of 168 possible points on the FIQ, the mean score on the FIQ was 110.24 for 96 cases with a standard deviation of 15.614, resulting in an average rating of 2.62 on the 4-point Likert scale. Therefore, the average response fell between *sometimes* and *often* for this sample.

The three-factor solution for the dependent variables of Play Interaction, Play Disruption, and Play Disconnection also did not appear in the factor analysis for the PIPPS-P or PIPPS-T. A one-factor solution called "Social Competence" was created and an overall raw score was calculated. The total raw score for the PIPPS-P was added to the total raw score for the PIPPS-T to create a "Social Competence" score. Items that were negatively worded were reverse-scored. Therefore, the higher the score, the higher the level of social competence. The mean raw score for 96 cases was 194.56 with a

standard deviation of 26.799. The total possible score for this Social Competence variable was 256.

Based on the results of the factor analysis, the six initial research questions were rewritten to reflect these results. After each research question follows a description of the data analysis and findings.

Q1. Does parent involvement predict learning behaviors?

To analyze this research question, simple linear regression models were used to determine if parent involvement predicted learning behaviors. The three subscales of the PLBS were analyzed separately given the results of the confirmatory factor analysis that the three subscales existed in the data. Competence Motivation was one of the three factors measured from the PLBS. The results of the regression analysis indicated no relationship between parent involvement and Competence Motivation based on 96 cases (r = -.092, p = .185). The subscale of Attention/Persistence on the PLBS also was not found to have a relationship with parent involvement for the current sample (r = -.028, p = .393). No relationship was found between parent involvement and Attitude Toward Learning (r = -.062, p = .276). Overall, the simple linear regression models for each subscale of the PLBS indicated no relationship between parent involvement and preschool children's learning behaviors.

Q2. Does parent involvement predict social competence?

A simple linear regression model was used to determine if parent involvement predicted social competence. A relationship was not found based on the results of the analysis between parent involvement and social competence (r = .099, p = .169).

Given the surprising results of the simple linear regression, further analyses were conducted to rule out possible issues with the measures used. Item by item analysis was performed with the FIQ to determine what items had a high number of missing responses to see if particular items that were missing had a significant impact on the outcome. Item by item analysis indicated that item 26 on the FIQ had 21 cases in which the respondent did not answer the question. Question number 26 on the FIQ reads, "*I go on class trips"*. Some respondents indicated that there are not opportunities through their preschool program to go on class trips. Further investigation indicated that the district surveyed for this project does not permit class trips for their preschool classrooms. Therefore, parents are not offered the opportunity to attend class trips. Sixteen respondents did not respond to questions 28 and 35 on the FIQ. Question 28 reads, "*I hear teachers tell my child how much they love learning*". Question 35 reads, "*I talk with people at my child's school about training or career development opportunities for myself"*. Because the FIQ was normed on a Head Start population, it appeared that these three questions might not be appropriate for the current population, as these might not be given the same opportunities to participate in their child's education as families in Head Start Programs. Therefore, due to the large number of cases with missing data for these three items, these items were removed and then a new total raw score derived for parent involvement. Reliability analyses for the FIQ with these three items removed were completed. The Cronbach's alpha was .886, indicating the measure was reliable with these three items removed. When simple linear regression analyses were completed when the independent variable was altered to be a raw score of the FIQ when the items 26, 28, and 35 were removed,

significant results suggesting a relationship between parent involvement and preschool social competence or learning behaviors was not found.

Another method to rule out potential issues with the measures used in this study was also implemented with no significant finding. Instead of removing all items for which data were missing, new independent and dependent variables were created based on the rater having completed at least a certain number of items in the hopes of being able to use more cases in the regression analysis. Table 4 describes the total number of items for each measure along with the number of items required to run the analysis and *N*. As with previous analyses, the *n* for each measure and subscale different, as those questionnaires with missing data were not included in the analysis.

Table 4

Number of Items Required to Run Analyses for Each Measure

Measure/Subscales	Total Items	Number of Items Required to Be Completed to Run Analysis	*N*
FIQ	42	39	114
PIPPS-P	32	29	113
PIPPS-T	32	29	128
PLBS			
Attention/Persistence	9	7	127
Attitude Toward Learning	7	6	127
Competence Motivation	11	9	127

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

The independent variable of parent involvement was derived from the FIQ. At least 39 of the 42 items had to be completed for the case to be included in the analyses. The four dependent variables used were:

1. Competence Motivation in which at least nine items had been completed on the PLBS;
2. Attention/Persistence in which at least seven items had been completed on the PLBS;
3. Attitude Toward Learning in which at least six items had been completed on the PLBS;

4. Social competence in which at least 29 items had been completed on the PIPPS-P and PIPPS-P;

Four simple linear regression analyses were completed and no significant results were found that indicated a relationship between the independent variable of parent involvement and any of the four dependent variables listed.

Post Hoc

Post hoc analysis was completed to identify any impact the population for the current study had on the results of the FIQ designed to measure parent involvement. A t-test was conducted to look for a potential difference between the results of the FIQ for the subgroups of tuition-paying and students attending preschool to receive special education services that had an Individualized Education Program (IEP). This analysis was done to examine the possible effects that the sample had on the results of the FIQ. The subgroup of students identified as at-risk was not included in this analysis due to the small number of participants that fell in this category (n = 15). The results indicated no significant difference between the tuition-paying students and students on an IEP for the current sample. The means, standard deviations, and sample size for this analysis are reported in Table 5. The sample size for each analysis differed to account for those questionnaires that had missing data.

Table 5

Mean, Standard Deviation, and N for the FIQ, PIPPS-T and PIPPS-P and the Subscales of the PLBS Separated Out by Student Status

	Mean	SD	*N*
FIQ - Tuition	109.22	18.052*	73
FIQ-IEP	107.32	13.821*	31
PIPPS-Tuition	210.25	14.626	53
PIPPS-IEP	192.73	20.561	30
Competence Motivation-Tuition	21.88	9.281	73
Attention/Persistence-Tuition	18.68	10.281	73
Attitude Toward Learning-Tuition	12.72	1.862	74
Competence Motivation-IEP	16.32	3.721	38
Attention/Persistence-IEP	11.90	4.872	41
Attitude Toward Learning-IEP	10.28	3.508	40

Note. FIQ = *Family Involvement Questionnaire*; PIPPS = *Penn Interactive Peer Play Scale*; Tuition=*Tuition-Paying Student* IEP=*Student who Receives Special Education* ***t-test not significant*

Summary

The original research questions for this study had to be altered as result of the confirmatory factor analyses completed for the *Family Involvement Questionnaire*, the *Preschool Learning Behaviors Scale*, and the *Penn Interactive Peer Play Scale Teacher and Parent* versions. A one-factor model was created for the FIQ and PIPPS-P and PIPPS T. The three-factor model for the PLBS was maintained based on the results of the confirmatory factor analysis. Surprisingly, parent involvement did not predict preschool children's social competence or learning behaviors for the current sample. In

the next chapter, the results of the current study will be discussed along with potential reasons for the findings.

CHAPTER V

DISCUSSION

The purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. This chapter provides an overview of the study, the procedures used, a presentation of the results, and discussion of the findings. This chapter concludes with a discussion of the limitations and directions for future research.

Summary

A substantial body of research on school age children indicates that parent involvement is shown to predict academic achievement (Arnold et al., 2008; Fan & Chen, 2001; Grolnick & Slowiaczek, 1994; Izzo et al., 1999; Pomerantz, et al., 2007). Early childhood is a time when young children acquire the foundational skills for later school success (Fantuzzo et al., 2007). Parent involvement is believed to be important for preschool children as well and research is beginning to emerge regarding the relationship between parent involvement and preschool children's academic success. Parent involvement has been shown to have a positive relationship to preschool children's academic performance (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999).

Academic performance has been increasingly emphasized at the preschool level. However, research suggests that children's social, emotional, and behavioral adjustment is as important as academic readiness skills (Blandon et al., 2010; Coolhan et al., 2000;

Longoria et al., 2009; Rose-Krasnor, 1997; Webster-Stratton & Reid, 2004). Research indicates that social competence is related to academic success and also supports later learning (Blandon et al., 2010; Longoria et al., 2009). Social competence can be defined as the ability to be effective in social interactions with respect to achieving goals (Rose-Krasnor, 1997). In addition to social competence skills, preschool children will not be able to benefit from academic instruction unless they hold the necessary foundational skills for learning (Logue, 2007). In the research, these foundational skills are referred to as learning behaviors. Learning behaviors are "observable patterns of behavior that children display as they approach classroom learning tasks" (Fantuzzo et al., 2007, p. 46).

Though social competence skills and learning behaviors have been identified as key skills for preschool children, even fewer studies exist regarding the relationship between parent involvement and preschool children's social competence and learning behaviors. Research is emerging that suggests a positive relationship between parent involvement and preschool children's social competence. In particular, two studies found home involvement behaviors to relate significantly to children's peer play skills (Fantuzzo et al., 2004; Marcon, 1999).

The purpose of this study was to examine the relationship between parent involvement and preschool children's social competence and learning behaviors. The few research studies that have looked at the relationship between parent involvement and preschool children's academic and social functioning have focused on a Head Start population. This study expanded the research on the parent involvement and preschool children's achievement in a suburban preschool population that included tuition-paying

students, students receiving special education services in a preschool setting, and preschool children attending preschool described as being part of an at-risk population.

Interpretation

Surprisingly, the results of the current study did not support a significant relationship between parent involvement and preschool children's social competence and learning behaviors. The results also did not support a relationship between parent involvement and preschool children's learning behaviors. These results differed from some of the emerging research on Head Start populations suggesting a positive correlation between parent involvement and two skills; working until tasks are completed, and asking for when needed, that are each considered learning behaviors (Marcon, 1999).

The current study looked to expand the small body of research regarding parent involvement and preschool children's social competence and learning behaviors. Previous studies focused on Head Start populations and this study looked to explore populations outside of Head Start to determine the relationship between parent involvement and preschool children's social competence and learning behaviors.

A possible reason for the lack of significant findings relates to the measure for parent involvement used with the sample. Head Start programs are required to adhere to a set of standards regarding how to involve parents in their programs (Schumacher, 2003). These standards for parent involvement in the preschool program include creating ongoing opportunities for parent involvement, volunteer opportunities, job opportunities within the program, and involving parents in the development of program curricula. In addition to offering parent involvement opportunities at the Head Start locations, these

programs are also required to provide support to families outside of the classroom such as referrals to community resources, health care, and opportunities to enhance their parenting skills. While Head Start programs cannot require parents to actively participate, these opportunities must be offered to all parents whose children participate in a Head Start program (Schumacher, 2003).

Because the current sample is not from a Head Start program, opportunities for and types of parent involvement differ. Because the FIQ was designed to specifically measure parent involvement in a Head Start population based on the standards for offering parent involvement for these programs, the FIQ may not be a valid measure for the current sample. For example, the item analysis indicated that there were five questions from the FIQ that 15 or more of the 130 respondents did not answer or chose more than one response for the item. These questions were "*I take class trips with my child", "I hear teachers tell my child how much they love learning", "I talk with my child's teacher and school work he/she is expected to practice at home", "I pick my child up from school in the afternoon", and "I talk with people at my child's school about training or career development opportunities for myself"*. The question "*I pick my child up from school in the afternoon*" does not load into any of the three subscales of the FIQ. There are a total of six questions on the 42-item FIQ that do not load into any of the three subscales of Home-Based Involvement; School-Based Involvement, or Home-School Conferencing. One of these questions, *"I pick my child up from school in the afternoon"* had 15 respondents who did not respond to this question or marked more than one response for the current study. However, the question *"I go on class trips with my child"* was left blank or more than one answer was selected for 21 of the parent respondents. In

addition, the questions *"I hear my teacher tell my child how much they love learning"* and *"I talk with people at my child's school about training or career development opportunities for myself"* were left blank by a total of 16 respondents.

The items left unmarked by respondents may have been a result of the opportunities they are provided or not provided as a part of their child's preschool education. The particular school district in which the data were gathered did not provide opportunities for class trips as part of its program at the time the study was conducted. Similarly, the program from which the data was collected did not offer support for parents regarding training or career development opportunities. Therefore, this was not an option for parents to participate in their child's education. Those respondents who did answer the question regarding class trips may have answered based on the idea that if the program did offer class trips they would attend them or perhaps they have participated in class trips at previous programs or with their other children and responded according to this interpretation of the question. They may have also responded positively to this question so their involvement was viewed in a favorable light. The respondents who did answer the questions regarding career and training opportunities may have done so for similar reasons. The data analyses were conducted excluding these three questions but it did not impact the results of the study.

It appears that Head Start programs offer a wider variety of ways for parents to be involved in their child's education as far as school-based involvement is considered. In addition, Head Start is required to attempt to build relationships with their families in order to promote parent involvement. For this particular sample, the same opportunities were not provided. Perhaps a more narrow definition of parent involvement should have

been used for this study to more clearly define what opportunities parents have and measure their participation in these school-based opportunities. Or, the same definition could have been maintained but parent involvement could have been measured with an instrument that more accurately reflects the opportunities of the particular preschool program.

The FIQ was chosen as a measure of parent involvement for the current sample because it was the best available measure for a preschool population. It has empirical evidence and strong theoretical foundation to validate its use even though it was normed on a Head Start population made up primarily of African-American children. The PIPPS and PLBS used to measure social competence and learning behaviors, respectively, were chosen for similar reasons despite being validated on a Head Start population that was predominately African-American as well. Therefore, these measures may not be valid for the current population, and that may have also impacted the outcome of the study.

The results of the data analysis may also be a result of the sample. Parents may have chose to participate for a variety of reasons. Perhaps parents participated because they believed their responses would demonstrate their level of parent involvement, as well as their child's social competence skills and learning behaviors. Consequently, parents who chose not to participate may have done so because it would highlight low levels of parent participation and/or their child's social competence skills and learning behaviors. A parent's level of satisfaction with the preschool program may have also affected whether or not they chose to participate.

It is also possible that parents who were more involved were more likely to participate. Parents who enrolled their child in the preschool program and are paying

tuition may have been more likely to participate. These parents chose the particular preschool program and are not obligated to send their child to preschool, as it is not mandated by law. Therefore, parents opting to send their child to a preschool program may be more involved in their child's education and therefore more likely to participate in the current study. Similar to tuition-paying students, students who receive special education services in the preschool program may also be more involved in their child's education and therefore more likely to participate in the current study. For a preschool child to receive special education, the referral for a developmental evaluation is often parent-driven. Some young children do not attend preschool or daycare programs, and it may be a parent who recognizes that their child may have developmental delays that require special education. For those children who do attend a preschool or day care program, a teacher may have concerns, but the referral for an evaluation must be parent driven. Given the small number of children identified as at-risk who participated in the current study, this may indicate that parents from this population are less likely to be involved in their child's education when compared to other families. However, when the average score for parent involvement was calculated from the FIQ for the students who attend preschool as at-risk students, it was higher than the average for the tuition-paying and special education students. However, the average for the at-risk students was only based on ten participants. There were a total of 16 participants from the at-risk group but six of the questionnaires contained missing data so an accurate parent involvement score could not be calculated.

The homogeneity of the sample may have also impacted the results of the study. The sample came from a predominantly Caucasian, middle to upper middle class

population in a suburban area of the Rocky Mountain region. Though the sample demonstrated little diversity as far as ethnicity, family make-up, employment status, and marital status, the sample also appeared to have demonstrated little diversity in the results of the questionnaires. The characteristics of family involvement, social competence, and learning behaviors may have been very similar among the sample studied. When a sample has a restricted range of scores, the correlation will be reduced thus impacting the likelihood of reaching statistical significance.

The sample included three subpopulations of students that attended the preschool program used in the study, as it differed from a Head Start population. The sample included three groups: tuition-paying students, students identified as being at-risk, and students attending preschool to receive special education services as outlined in their Individualized Education Program (IEP). A t-test was conducted to see if significant differences in the FIQ were found for these three subgroups. The at-risk subgroup could not be included in this analysis due to the small number of participants in this category (n = 15). The results indicated no significant differences between the two subgroups and the mean FIQ score.

When using instruments validated for the specific populations studied, the emerging research suggests a positive relationship. Furthermore, there is a large body of research that supports a relationship between parent involvement and academic success for students in grades kindergarten through twelve. Given the significant impact research has shown that social competence and learning behaviors have on children's later learning, more research is necessary. It is possible that parent involvement only has an impact on those children identified as being at-risk. Perhaps for those children who are

typically developing and those children with special needs, parent involvement does not have a significant impact on their skill level.

Limitations

Limitations for this study are primarily a result of the measures used as well as the characteristics of the sample and sample size. The FIQ is likely not a valid measure of parent involvement given the characteristics of the preschool program that was targeted for this study. Furthermore, all measures used in the current study were self-report measures. Self-report measures may promote a tendency for the parents who participated to inflate reports of their level of parent involvement and/or their child's social competence skills and learning behaviors. Similarly, the teachers who rated children's skills may have completed them in a favorable way so as to suggest they are effective at teaching children social competence skills and learning behaviors.

The sample included preschool students that fell in one of three categories: those attending preschool as tuition-paying students, those attending preschool in order to receive special education services, and those attending preschool because of being identified as falling in an at-risk population for one reason or another. Of the students who participated, 56.2% attended as tuition paying students and 30.8% attended preschool as students on an IEP. Only 13.1% of the sample reported to be attending preschool as a CPP student, resulting in unequal distribution of the types of students that participated. Furthermore, this study was limited by the ethnic makeup of the sample. Eighty percent of the sample of preschool children was reported to be White/Caucasian. Only 5.4% were described as Asian and 5.4% described as Hispanic/Latino. A total of 9.3% were described to be other or more than one ethnicity category was marked.

Future Research

This study expanded on the research regarding parent involvement and preschool children's social competence and learning behaviors. In particular, this study aimed to expand previous research on Head Start populations that found a positive relationship between parent involvement and preschool children's social competence and learning behaviors to a suburban population. Future research should continue to focus on populations that include Head Start programs as well as a variety of other preschool programs regarding parent involvement and preschool children's social competence and learning behaviors.

Future studies should consider alternate tools to measure parent involvement, learning behaviors, and social competence. This research may include the development of tools to use outside of a Head Start population as well as tools that go beyond self-report measures. Measures of parent involvement should be developed that more accurately portray the opportunities parents are offered within the specific preschool program. Similarly, tools validated for populations outside of Head Start programs should be developed to measure social competence and learning behaviors.

Parent involvement should not be measured solely by parent report. In addition to having parents complete a measure regarding parent involvement, it would be useful to have teachers also report on a parent's involvement to verify reports made by the parent. Likewise, social competence skills and learning behaviors should be measured with other tools solely than by just parent or teacher report. Additional tools that measure these skills though direct observation should be explored for use in future research in this area.

As more research is conducted regarding the relationship between parent involvement and preschool children's social competence and learning behaviors, other opportunities for research will emerge. Continued research in the areas of ways to effectively involve parents in their preschool child's education that can lead to policy changes from the classroom level to the national level can be achieved.

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APPENDIX A

DISSERTATION IN JOURNAL FORMAT

The Relationship Between Parent Involvement and Preschool Children's Social Competence and Learning Behaviors

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Abstract

The purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. Research is emerging to suggest a positive relationship between parent involvement and preschool children's social competence and learning behaviors among Head Start populations. The participants in this study were a volunteer sample of parents and teachers of 130 preschool students. These preschool students attended preschool as tuition-paying students, students who attended preschool in order to receive special education, or students who attended preschool at no cost through a program that identified them as being at-risk. Parent involvement was measured using the *Family Involvement Questionnaire*. Social competence was measured using the *Penn Interactive Peer Play Scale* and learning behaviors were measured using the *Preschool Learning Behaviors Scale*. The results of the current study did not support a relationship between parent involvement and preschool children's social competence and learning behaviors. Implications for future research are discussed.

The Relationship Between Parent Involvement and Preschool Children's Social Competence and Learning Behaviors

A substantial body of research on school age children indicates that parent involvement is shown to predict academic achievement (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Fan & Chen, 2001; Grolnick & Slowiaczek, 1994; Izzo, Weissberg, Kasprow, & Fendrich, 1999; Pomerantz, Moorman, & Litwack, 2007). This connection has been demonstrated consistently in the literature from kindergarten through high school. Longitudinal research demonstrates the long lasting positive effects of parent involvement as well (Arnold et al., 2008).

A large body of research supports the importance of early childhood education and its link to school performance and learning (Arnold et al., 2008; Fantuzzo, McWayne, Perry, & Childs, 2004; Fantuzzo et al., 2007; Marcon, 1999). Early childhood is the time in which children acquire the foundational skills for learning and development in the school-age years (Fantuzzo et al., 2007). Parent involvement is believed to be important to children's early academic achievement as well (Arnold et al., 2008; Marcon, 1999).

While children's academic development is a priority within early childhood programs, other skills have been identified in the literature as contributing to preschool children's school success. The literature indicates that children's social, emotional, and behavioral adjustment is as important as academic readiness skills (Blandon, Calkins, & Keane, 2010; Coolhan, Fantuzzo, Mendez, & McDermott, 2000; Longoria, Page, Hubbs-Tait, & Kennison, 2009; Rose-Krasnor, 1997). Learning behaviors are foundational skills that young children need to enhance their school success. McDermott and

colleagues defined learning behaviors as, "observable patterns of behavior that children display as they approach classroom learning tasks" (Fantuzzo et al., 2007, p. 46). Coolhan, Fantuzzo, Mendez, and McDermott (2000) identified specific skills that constitute learning behaviors. The skills identified included motivation, task persistence, attention, taking initiative with tasks, and being open to new challenges. Other research has identified specific learning behaviors to include curiosity, cooperativeness, and engagement as well as the skills previously mentioned above (McDermott, 1999).

Social competence has also been identified as a foundational skill important for school readiness and later learning. It has been defined as "…children's ability to be effective in their social interactions with respect to achieving their goals" (Rose-Krasnor, 1997, p. 112). Social competence has been linked to school adjustment and learning in preschool age children (Blandon et al., 2010). Positive adjustment and academic success in elementary through high school students are associated with positive peer relationships. Self-regulation has also been connected to children's future school success and long-term development (Fantuzzo et al., 2007; Rose-Krasnor, Rubin, Booth, & Coplan, 1996).

A preschool child's development is primarily affected by parents as well as teachers based on a developmental-ecological perspective (Bronfenbrenner, 1979; Fantuzzo et al., 2004). There is a vast amount of research that identifies the connection between parent involvement and academic achievement in school age children. However, these results cannot be generalized to preschool children. Research suggests that the effects of parent involvement on preschool children's development and academic

achievement could be even more pronounced during these early years (Arnold et al., 2008).

Research is emerging that suggests parent involvement is positively related to preschool children's academic performance (Arnold et al., 2008; Fantuzzo et al., 2004; Marcon, 1999). Marcon (1999) found that more active parent involvement, like volunteering in the classroom, correlated more strongly to academic performance than more passive types of involvement like attending parent-teacher conferences. Fantuzzo (2004) found home-based parent involvement activities like reading to children and asking children about school showed a stronger relationship to academic performance than school-based parent involvement such as volunteering or home-school conferencing. These two parent involvement activities were also identified to contribute to greater academic performance.

Even fewer research studies have looked at the relationship between parent involvement and preschool children's social competence and learning behaviors despite their importance for learning. A study by Marcon (1999) examined the impact of parent involvement on a variety of skill areas in preschool in an urban, Head Start population that was predominantly African-American. Among those studied, a child's ability to work until tasks are completed and their ability to seek help when needed, two skills that fall in the category of learning behaviors, were found to be positively correlated with parental involvement.

Research to suggest a positive relationship between parent involvement and preschool children's social competence is also emerging (Fantuzzo et al., 2004; Marcon, 1999). Home involvement behavior was related significantly to children's peer play

competencies (Fantuzzo et al., 2004; Marcon, 1999). In one study, more active types of parent involvement at school were related to increased levels of social competence in preschoolers. These active types of parent involvement fell in the category of volunteering (Marcon, 1999).

The purpose of this study was to determine the relationship between parent involvement and preschool children's social competence and learning behaviors. Although there is a large body of research addressing the phenomenon of parent involvement and its role in academic achievement with school age children, these results should not be generalized to preschool age children (Arnold et al., 2008). This study aimed to fill a gap in the research with parent involvement and two key skills areas, social competence and learning behaviors, that have been identified as foundational skills for preschool children's learning and school success (Blandon et al., 2010; Coolhan et al., 2000; Fantuzzo et al., 2007; Marcon, 1999; McDermott, 1999; McDermott et al., 2002). It was hypothesized that parent involvement would have a positive relationship with preschool children's social competence and learning behaviors.

Method

Participants

The participants in this study were a parent and teacher of 130 preschool students from a suburban public school district in the Rocky Mountain region. Cluster sampling was used with volunteer selection. Teachers from all preschool classrooms were invited to participate first. In the classrooms with consenting teachers, parent participation was solicited.

The preschool student was not required to directly participate in any way in the study. Students in the classrooms represent one of three groups. The first group consisted of students who pay tuition to attend preschool. The second group included children who received special education services within the classroom. The third group was students who attended preschool at no cost who participated in the Colorado Preschool Project (CPP). CPP was designed to provide preschool experiences for children who demonstrated a variety of at-risk characteristics. These at-risk characteristics could have included a parent who is unemployed, a sibling with a disability, frequent moves, or financial need. For 3 year-olds to qualify for the CPP program, they have to demonstrate at least three at-risk characteristics. For 4 year-olds to qualify for CPP, they have to demonstrate at least one at-risk characteristic.

Instrumentation

Parent Involvement. Family members' involvement in their child's education was measured using the *Family Involvement Questionnaire*, or FIQ (Fantuzzo et al., 2004). This questionnaire is a multidimensional rating scale that parents complete to measure the type of and extent of their involvement in their child's education. The questionnaire contains 42 items that are answered using a Likert scale (*Rarely, Sometimes, Often, and Always*). These items fall within three parent involvement dimensions on the FIQ: Home-Based Involvement, School-based Involvement, and Home-School Conferencing (r = 85, .85, and .81, respectively). Items within the School-Based Involvement category included *"I volunteer in my child's classroom"* and *"I participate in planning school trips for my child"*. Items in the Home-Based Involvement dimension included *"I bring home learning materials for my child"* and *"I*

spend time working on my child's number skills". The Home-School Conferencing area included items like *"I talk to my child's teacher about classroom rules"* and *"I talk to my child's teacher about my child's accomplishments".* Concurrent validity has been established through significant correlations between each of the three dimensions and parent volunteer experiences in early childhood programs for economically disadvantaged children (Fantuzzo, Tighe, & Childs, 2000).

Each parent who elected to participate completed a brief questionnaire regarding demographic data. This questionnaire included questions about marital status, socioeconomic status, ethnicity, age of parents, and employment status. It also included a question to gather information whether the student attends preschool as a tuition-paying student, a CPP student, or a student who attend preschool to receive special education services.

Learning Behaviors. The *Preschool Learning Behaviors Scale* (PLBS) was developed from the *Learning Behaviors Scale* for children ages 5 to 17 (McDermott, et al., 2002). The PLBS is designed for children ages 3 to 5 ½ and is completed by teachers. The PLBS consists of 29 items each representing a specific learning-related behavior. Construct validity for the PLBS has been established with two national samples that both revealed three reliable dimensions: Competence Motivation, Attention/Persistence, and Attitude Toward Learning. The Competence Motivation dimension explores a child's curiosity and motivation to understand and succeed in learning activities. Statements within this dimension include things such as *"Easily gives up activities"* and *"Tears when faced with difficulty".* A child's ability to attend to relevant information and persist with difficult tasks is measured by the Attention/Persistence dimension. Items in this

dimension include *"Cannot settle into an activity''* and *"Uncooperative in group activities"*. The Attitude Toward Learning dimension reflects a child's demeanor during learning activities as well as how they interact with peers and adults during these learning activities. *"Aggressive or hostile when frustrated"* and *"Shows little desire to please teacher/aide"* are examples of items within this dimension (Perry, McDermott, Cohen, & Fantuzzo, 2000).

Cronbach's alpha coefficients were .87 for Competence Motivation, .88 for Attention/Persistence, and .78 for Attitude Toward Learning from the national validation sample of 170 children ages 3.6 to 5.5 years (McDermott et al., 2002). Convergent and divergent validity has also been established with a sample of 170 low-income urban preschool children (Fantuzzo et. al, 2007).

Social Competence. The *Penn Interactive Peer Play Scale* (PIPPS) was used to measure children's social competence (Coolhan et al., 2000). The PIPPS is both a teacher and parent rating comprised of 32 items that look at preschool children's interactive peer play skills. Teachers and parents each report on how often they observe certain interactive behaviors during a child's free play. Validity and reliability investigations reveal three reliable dimensions of the PIPPS: Play Interaction, Play Disruption, and Play Disconnection. Within the Play Interaction component, items included describe prosocial behaviors like encouraging others and helping settle peer conflict. Items in this dimension include things such as *"Helps other children"* and *"Encourages others to join play"*. The Play Disruption dimension describes negative behaviors like disrupting play and not being able to wait a turn. Specific items on this dimension include *"Starts fights and arguments"* and *"Is physically aggressive"*. Items in the Play Disconnection

dimension include *"Is ignored by others"* and *"Refuses to play when invited"* (Hampton & Fantuzzo, 2003). Concurrent validity for the teacher and parent version of the PIPPS was established using the Social Skills Rating Scale (SSRS), peer sociometrics, and data from direct observation of play. Reliability coefficients for the PIPPS-T and PIPPS-P were found to be acceptable as well (Coolhan, et al., 2000).

Procedures

Recruitment of participants involved two steps. First, teacher participation was solicited. Emails were dispersed to share information about the study with classroom teachers. The school district provided permission for the researcher to obtain the email address for each classroom teacher prior to soliciting participation. An email was sent to each preschool classroom teacher in the school district describing the nature of the study, as well as issues of confidentiality directions for how to express interest to participate. The researcher's phone number and email address was provided for teachers to ask questions. Permission from the teachers was obtained by the researcher though email for all participants. Issues of confidentiality and the nature of the research study were clarified as necessary before gaining written permission. Teachers provided the address of the preschool on the consent form. Surveys for the teachers who volunteered to participate were delivered to their classroom with a specific deadline date included with the surveys. Surveys for the teachers were delivered to their classroom with a specific deadline date included with the surveys. All teachers who chose to participate received a $20 gift card to a teacher supply store after signing the consent form. Once the completed the checklists for each student who chooses to participate by the deadline, she received an additional $20 gift card to the same store. Additionally, all teachers who

participated and complete checklists for each child who was participating by the deadline were entered into a drawing for a $50 gift card to a coffee shop.

Parent participation was solicited from the classrooms in which teachers had agreed to participate. All families in these classrooms were invited to participate. Classroom teachers were given a flyer to post in their classroom or the sign-in area to share information with parents who may be interested in participating. In addition, each family in the classroom was given an envelope containing the FIQ, PIPPS-P, demographic questionnaire, and letter describing the study, along with the researcher's contact information. Issues of confidentiality and the nature of the research study were clarified as necessary. Written permission for parent participation was not obtained as their permission was implied if they completed and returned the surveys to the researcher. The parent was asked to return the surveys to the classroom teacher by a certain date. On this date, the researcher picked up the questionnaires that had been completed by the parent. A packet containing the PLBS and PIPPS-T was given to the teacher on this date for each parent who turned in their packet with the FIQ, PIPPS-P, and demographic questionnaire. Teachers were given a date by which their questionnaires had to be completed. The teacher was notified of this date in writing and was told that the researcher would pick up the questionnaires on that date.

Teachers completed the PLBS and the PIPPS-T. These scales could have been completed during direct observation of children or based on previous observations. Parents of the preschool children completed the demographic questionnaire as well as the FIQ and PIPPS-P. The FIQ, PIPPS-P, and demographic questionnaire could have been completed in one sitting or over time. These questionnaires were delivered to the parents

and preschool teachers during the spring semester of the school year. The spring semester of the school year was chosen as parents would have had a number of opportunities to participate in their child's education by that time. Additionally, the teachers would be able to comment on children's behaviors more accurately at this time during the school year.

A specific date was provided in the questionnaire packet that was given to each parent and teacher who participated as a deadline for completing the surveys. Parents and teachers were offered gift certificate rewards for completing surveys and returning them by the deadline.

Results

Sample Demographics

The sample consisted of 130 preschool students. The students were not required to directly participate in any way in the study. Rather, the child's parent(s) and preschool teacher provided information by completed questionnaires. The sample included 78 male preschool students (60%) and 52 female preschool students (40%). Of the 130 preschool students, 73 (56.2%) were attending preschool as tuition-paying students. Forty (30.8%) of the 130 students attended preschool in order to receive special education services, and 17 (13.1%) attended preschool as part of the Colorado Preschool Project. In the total sample, 122 (93.8%) of the students came from two-parent families, and 8 (6.2%) came from single-parent families. One hundred four (80%) of the students were described by their parent as White/Caucasian. Seven (5.4%) of the students were described as Hispanic/Latino, and seven others (5.4%) were described as Asian. One student's (.8%)

ethnicity was described as Other. Eleven (8.5%) of the preschool students' parents marked more than one ethnicity category.

A parent or guardian completed a demographic questionnaire, the FIQ, and the PIPPS-P for their child. One hundred twenty-two (93.8%) of the questionnaires were completed by the child's mother. The child's father reported to complete five of the questionnaires (3.8%), and 3 (2.3%) of the questionnaires were completed by both the child's mother and father. Within this group of parents and guardians, 61 (46.9%) reported being unemployed or stay-at-home parents. Thirty-six (27.7%) reported being employed full time, and 32 (24.6%) reported part-time employment. One parent marked more than one employment status. Ninety (69.2%) of the parents fell between the ages of 31 and 40. Twenty (15.4%) fell between the ages of 21 and 30, and 19 (14.6%) fell between the ages of 41 and 50. One (.8%) respondent reported being below 20 years of age.

The children's preschool teacher completed the PLBS and the PIPPS-T. The number of years that the teacher had been teaching in the specific program surveyed ranged from one year to eleven years. Many of the teachers who participated had prior experience teaching in other programs or having a different role (e.g. teacher assistant) in the current program surveyed.

Data Analysis and Results

Means, standard deviations, and the number of cases for each measure in the sample are included in Table 1. The total possible points for each measure are listed in the table as well as a comparison between the mean score and total possible score. The number of cases for each analysis differs for each measure, as those questionnaires that

had missing responses were not included in the analysis. This resulted in a varying *n* for each measure. As a comparison, a previous study using the FIQ as a measure of parent involvement found the average score to be 113.7 with a standard deviation of 23.29 for a Head Start population in southern Colorado (Makosfke, 2010). Scores on each of the measures suggest that the higher the score, the higher the behavior.

The correlation matrix can be found in Table 2. A weak but significant correlation between the PIPPS-T and PIPPS-P was identified. These measures include the same items but are completed by either the child's parent or teacher. No other significant correlations were identified among the measures.

Reliability analyses were completed for the FIQ, PLBS, PIPPS-P and PIPPS-T. A Cronbach's alpha from .6 to .7 is considered acceptable for research purposes, and a Cronbach's alpha of .8 or higher is considered good (Nunnally & Bernstein, 1994). Reliability coefficients were found to be acceptable to good for the PIPPS-T, FIQ and their subscales. Reliability coefficients for the PIPPS-P and PLBS were found to be good for the overall measures as well as their subscales. The reliability coefficients for each measure and subscales are reported in Table 3. The *n* was reported for each measure and subscale as well. The *n* differed for each measure and subscale as questionnaires and their subscales that had items missing were not included in the analysis.

Once reliability analyses were completed for all measures, a confirmatory factor analysis was completed for each measure. Multiple approaches were used to estimate the number of factors present for each measure. Gorsuch (1997) suggests using common factor extraction methods such as principal axis or maximum likelihood factoring and oblique rotation such as promax. Ford, MacCallum, and Tait (1986) suggest that of the

criteria that have been used to identify the estimated number of factors, parallel analysis (PA) and scree plots have the most support. For the current study, maximum likelihood factoring was used with promax rotation. Parallel analysis and scree plots were examined to estimate the number of factors present, and when two models were plausible the clarity of the factor pattern was used to select the most appropriate model.

This analysis revealed a three-factor solution was present in the data for the PLBS. Confirmatory factor analysis revealed a three-factor solution did not exist for the FIQ, PIPPS-T or PIPPS-P.

Because the three-factor solution for the independent variables of Home-Based Involvement, School-Based Involvement, and Home-School Conferencing measured by the FIQ did not appear in the data, a one-factor solution was created. To create the independent variable of "Parent Involvement", an overall parent involvement raw score was calculated for each participant in order to measure parent involvement. This method has been used in previous research to measure parent involvement (Makofske, 2010). Responses to the questions on the FIQ were reported on a Likert scale. A response of *rarely* corresponded to 1 point, a response of *sometimes* was 2 points, a response of *often* was 3 points, and *always* was 4 points. Out of a total of 168 possible points on the FIQ, the mean score on the FIQ was 110.24 for 96 cases with a standard deviation of 15.614, resulting in an average rating of 2.62 on the 4-point Likert scale. Therefore, the average response fell between *sometimes* and *often* for this sample.

The three-factor solution for the dependent variables of Play Interaction, Play Disruption, and Play Disconnection also did not appear in the factor analysis for the PIPPS-P or PIPPS-T. A one-factor solution called "Social Competence" was created and

an overall raw score was calculated. The total raw score for the PIPPS-P was added to the total raw score for the PIPPS-T to create a "Social Competence" score. Items that were negatively worded were reverse-scored. Therefore, the higher the score, the higher the level of social competence. The mean raw score for 96 cases was 194.56 with a standard deviation of 26.799. The total possible score for this Social Competence variable was 256.

Simple linear regression models were used to determine if parent involvement predicted learning behaviors. The three subscales of the PLBS were analyzed separately given the results of the confirmatory factor analysis that the three subscales existed in the data. Competence Motivation was one of the three factors measured from the PLBS. The results of the regression analysis indicated no relationship between parent involvement and Competence Motivation based on 96 cases (r = -.092, p = .185). The subscale of Attention/Persistence on the PLBS was also not found to have a relationship with parent involvement for the current sample (r = -.028, p = .393). No relationship was found between parent involvement and Attitude Toward Learning (r = -.062, p = .276). Overall, the simple linear regression models for each subscale of the PLBS indicated no relationship between parent involvement and preschool children's learning behaviors.

A simple linear regression model was used to determine if parent involvement predicted social competence. A relationship was not found based on the results of the analysis between parent involvement and social competence (r = .099, p = .169).

Given the surprising results of the regression models, further analyses were conducted to rule out possible issues with the measures used. Item by item analysis with the *Family Involvement Questionnaire* (FIQ) to determine what items had a high number

of missing responses to see if particular items that were missing had a significant impact on the outcome. Item by item analysis indicated that item 26 on the FIQ had 21 cases in which the respondent did not answer the question. Question number 26 on the FIQ reads, "*I go on class trips"*. Some respondents indicated that there are not opportunities through their preschool program to go on class trips. Further investigation indicated that the district surveyed for this project does not permit class trips for their preschool classrooms. Therefore, parents are not offered the opportunity to attend class trips. Sixteen respondents did not respond to questions 28 and 35 on the FIQ. Question 28 reads, "*I hear teachers tell my child how much they love learning*". Question 35 reads, "*I talk with people at my child's school about training or career development opportunities for myself"*. Because the FIQ was normed on a Head Start population, it appeared that these three questions may not be appropriate for the current population, as they might not be given the same opportunities to participate in their child's education as families in Head Start Programs do. Therefore, due to the large number of cases with missing data for these three items, these items were removed and then a new total raw score derived for parent involvement. Reliability analysis for the FIQ with these three items removed was completed. The Cronbach's alpha was .886, indicating the measure was reliable with these three items removed. When simple linear regression analyses were completed when the independent variable was altered to be a raw score of the FIQ when the items 26, 28, and 35 were removed, significant results establishing a relationship between parent involvement and preschool social competence or learning behaviors were not found.

Another method to rule out potential issues with the measures used in this study was also implemented with no success. Instead of removing all items for which data were missing, new independent and dependent variables were created based on the rater having completed at least a certain number of items in the hopes of being able to use more cases in the regression analysis. Table 4 describes the total number items for each measure and its subscales along with the number of items required to run the analysis. Four simple linear regression analyses were completed based on the completion of a certain number of items on a measure and no significant results were found that indicated a relationship between the independent variable of parent involvement and social competence or learning behaviors.

Post hoc analysis was completed to identify possible effects of the current sample on the results of the FIQ. There were no significant differences between the result of the FIQ for the subpopulation of children attending preschool as tuition-paying students and those attending preschool as students who receive special education services. The subgroup of students identified as at-risk in this sample was not included in this analysis given the small number of cases (n=16). The means, standard deviations, and sample size for this analysis are reported in Table 5.

Surprisingly, the results of the current study did not support a significant relationship between parent involvement and preschool children's social competence and learning behaviors. The results also did not support a relationship between parent involvement and preschool children's learning behaviors. These results differed from some of the emerging research on Head Start populations suggesting a positive correlation between parent involvement and two skills; working until tasks are

completed, and asking for when needed, that are each considered learning behaviors (Marcon, 1999).

The current study looked to expand the small body of research regarding parent involvement and preschool children's social competence and learning behaviors. Previous studies focused on Head Start populations and this study looked to explore populations outside of Head Start to determine the relationship between parent involvement and preschool children's social competence and learning behaviors.

A possible reason for the lack of significant findings relates to the measure for parent involvement used with the sample. Head Start programs are required to adhere to a set of standards regarding how to involve parents in their programs (Schumacher, 2003). These standards for parent involvement in the preschool program include creating ongoing opportunities for parent involvement, volunteer opportunities, job opportunities within the program, and involving parents in the development of program curricula. In addition to offering parent involvement opportunities at the Head Start locations, these programs are also required to provide support to families outside of the classroom such as referrals to community resources, health care, and opportunities to enhance their parenting skills. While Head Start programs cannot require parents to actively participate, these opportunities must be offered to all parents whose children participate in a Head Start program (Schumacher, 2003).

The items left unmarked by respondents may have been a result of the opportunities they are provided or not provided as a part of their child's preschool education. The particular school district in which the data was gathered did not provide opportunities for class trips as part of its program at the time the study was conducted.

Similarly, the program from which the data was collected did not offer support for parents regarding training or career development opportunities. Therefore, this was not an option for parents to participate in their child's education. Those respondents who did answer the question regarding class trips may have answered based on the idea that if the program did offer class trips they would attend them or perhaps they have participated in class trips at previous programs or with their other children and responded according to this interpretation of the question. They may have also responded positively to this question so their involvement was viewed in a favorable light. The respondents who did answer the questions regarding career and training opportunities may have done so for similar reasons. The data analyses were conducted excluding these three questions but it did not impact the results of the study.

It appears that Head Start programs offer a wider variety of ways for parents to be involved in their child's education as far as school-based involvement is considered. In addition, Head Start is required to attempt to build relationships with their families in order to promote parent involvement. For this particular sample, the same opportunities were not provided. Perhaps a more narrow definition of parent involvement should have been used for this study to more clearly define what opportunities parents have and measure their participation in these school-based opportunities. Or, the same definition could have been maintained but parent involvement could have been measured with an instrument that more accurately reflects the opportunities of the particular preschool program.

The FIQ was chosen as a measure of parent involvement for the current sample because it was the best available measure for a preschool population. It has empirical

evidence and strong theoretical foundation to validate its use even though it was normed on a Head Start population made up primarily of African-American children. The PIPPS and PLBS used to measure social competence and learning behaviors, respectively, were chosen for similar reasons despite being validated on a Head Start population that was predominately African-American as well. Therefore, these measures may not be valid for the current population, and that may have also impacted the outcome of the study.

The results of the data analysis may also be a result of the sample. Parents may have chose to participate for a variety of reasons. Perhaps parents participated because they believed their responses would demonstrate their level of parent involvement, as well as their child's social competence skills and learning behaviors. Consequently, parents who chose not to participate may have done so because it would highlight low levels of parent participation and/or their child's social competence skills and learning behaviors. A parent's level of satisfaction with the preschool program may have also affected whether or not they chose to participate.

It is also possible that parents who were more involved were more likely to participate. Parents who enrolled their child in the preschool program and are paying tuition may have been more likely to participate. These parents chose the particular preschool program and are not obligated to send their child to preschool, as it is not mandated by law. Therefore, parents opting to send their child to a preschool program may be more involved in their child's education and therefore more likely to participate in the current study. Similar to tuition-paying students, students who receive special education services in the preschool program may also be more involved in their child's education and therefore more likely to participate in the current study. For a preschool

child to receive special education, the referral for a developmental evaluation is often parent-driven. Some young children do not attend preschool or daycare programs, and it may be a parent who recognizes that their child may have developmental delays that require special education. For those children who do attend a preschool or day care program, a teacher may have concerns, but the referral for an evaluation must be parent driven. Given the small number of children identified as at-risk who participated in the current study, this may indicate that parents from this population are less likely to be involved in their child's education when compared to other families. However, when the average score for parent involvement was calculated from the FIQ for the students who attend preschool as at-risk students, it was higher than the average for the tuition-paying and special education students. However, the average for the at-risk students was only based on ten participants. There were a total of 16 participants from the at-risk group but six of the questionnaires contained missing data so an accurate parent involvement score could not be calculated.

The homogeneity of the sample may have also impacted the results of the study. The sample came from a predominantly Caucasian, middle to upper middle class population in a suburban area of the Rocky Mountain region. Though the sample demonstrated little diversity as far as ethnicity, family make-up, employment status, and marital status, the sample also appeared to have demonstrated little diversity in the results of the questionnaires. The characteristics of family involvement, social competence, and learning behaviors may have been very similar among the sample studied. When a sample has a restricted range of scores, the correlation will be reduced, thus impacting the likelihood of reaching statistical significance.

The sample included three subpopulations of students that attended the preschool program used in the study, as it differed from a Head Start population. The sample included three groups: tuition-paying students, students identified as being at-risk, and students attending preschool to receive special education services as outlined in their Individualized Education Program (IEP). A t-test was conducted to see if significant differences in the FIQ were found for these three subgroups. The at-risk subgroup could not be included in this analysis due to the small number of participants in this category (n = 15). The results indicated no significant differences between the two subgroups and the mean FIQ score.

When using instruments validated for the specific populations studied, the emerging research suggests a positive relationship. Furthermore, there is a large body of research that supports a relationship between parent involvement and academic success for students in grades kindergarten through twelve. Given the significant impact research has shown that social competence and learning behaviors have on children's later learning, more research is necessary. It is possible that parent involvement only has an impact on those children identified as being at-risk. Perhaps for those children who are typically developing and those children with special needs, parent involvement does not have a significant impact on their skill level.

Limitations

Limitations for this study are primarily a result of the measures used as well as the characteristics of the sample and sample size. The FIQ is likely not a valid measure of parent involvement given the characteristics of the preschool program that was targeted for this study. Furthermore, all measures used in the current study were self-report

measures. Self-report measures may promote a tendency for the parents who participated to inflate reports of their level of parent involvement and/or their child's social competence skills and learning behaviors. Similarly, the teachers who rated children's skills may have completed them in a favorable way so as to suggest they are effective at teaching children social competence skills and learning behaviors.

The sample included preschool students that fell in one of three categories: those attending preschool as tuition-paying students, those attending preschool in order to receive special education services, and those attending preschool because of being identified as falling in an at-risk population for one reason or another. Of the students who participated, 56.2% attended as tuition paying students and 30.8% attended preschool as students on an IEP. Only 13.1% of the sample reported to be attending preschool as a CPP student, resulting in unequal distribution of the types of students that participated. Furthermore, this study was limited by the ethnic makeup of the sample. Eighty percent of the sample of preschool children was reported to be White/Caucasian. Only 5.4% were described as Asian and 5.4% described as Hispanic/Latino. A total of 9.3% were described to be other or more than one ethnicity category was marked.

Future Research

This study expanded on the research regarding parent involvement and preschool children's social competence and learning behaviors. In particular, this study aimed to expand previous research on Head Start populations that found a positive relationship between parent involvement and preschool children's social competence and learning behaviors to a suburban population. Future research should continue to focus on populations that include Head Start programs as well as a variety of other preschool

programs regarding parent involvement and preschool children's social competence and learning behaviors.

Future studies should consider alternate tools to measure parent involvement, learning behaviors, and social competence. This research may include the development of tools to use outside of a Head Start population as well as tools that go beyond self-report measures. Measures of parent involvement should be developed that more accurately portray the opportunities parents are offered within the specific preschool program. Similarly, tools validated for populations outside of Head Start programs should be developed to measure social competence and learning behaviors.

Parent involvement should not be measured solely by parent report. In addition to having parents complete a measure regarding parent involvement, it would be useful to have teachers also report on a parent's involvement to verify reports made by the parent. Likewise, social competence skills and learning behaviors should be measured with other tools solely than by just parent or teacher report. Additional tools that measure these skills though direct observation should be explored for use in future research in this area.

As more research is conducted regarding the relationship between parent involvement and preschool children's social competence and learning behaviors, other opportunities for research will emerge. Continued research in the areas of ways to effectively involve parents in their preschool child's education that can lead to policy changes from the classroom level to the national level can be achieved.

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Table 1

Means and Standard Deviations for the FIQ, PIPPS-P, PIPPS-T, and the PLBS

	Mean	Total	SD	*N*
FIQ	110.24	168	15.614	96
PIPPS-P	97.28	128	9.393	103
PIPPS-T	106.32	128	14.373	97
PLBS	48.77	58	8.762	97

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

Table 2

Correlations Among the FIQ, PIPPS-P, PIPPS-T, and the PLBS

	FIQ	PIPPS-P	PIPPS-T	PLBS
FIQ	___	-.144	-.093	-.119
PIPPS-P		___	.265**	.017
PIPPS-T			___	-.047
PLBS				___

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*
***significant at the .01 level (2-tailed)*

Table 3

Reliability Coefficients for Each Measure and Subscales

Measure/Subscales	Reliability Coefficient	Number of Cases
FIQ	.892	96
Home-Based Involvement	.793	111
School-Based Involvement	.712	104
Home-School Conferencing	.851	109
PIPPS-P	.811	121
Play Interaction	.914	127
Play Disruption	.934	123
Play Disconnection	.898	126
PIPPS-T	.700	103
Play Interaction	.668	108
Play Disruption	.778	108
Play Disconnection	.824	110
PLBS	.924	126
Attention/Persistence	.920	126
Attitude Toward Learning	.842	126
Competence Motivation	.816	124

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

Table 4

Number of Items Required to Run Analyses for Each Measure

Measure/Subscales	Total Items	Number of Items Required to Be Completed to Run Analysis	*N*
FIQ	42	39	114
PIPPS-P	32	29	113
PIPPS-T	32	29	128
PLBS			
Attention/Persistence	9	7	127
Attitude Toward Learning	7	6	127
Competence Motivation	11	9	127

Note. FIQ = *Family Involvement Questionnaire*; PIPPS-P = *Penn Interactive Peer Play Scale Parent Report*; PIPPS-T = *Penn Interactive Peer Play Scale Teacher Report*; PLBS=*Preschool Learning Behaviors Scale*

Table 5

Mean, Standard Deviation, and N for the FIQ, PIPPS-T and PIPPS-P and the Subscales of the PLBS Separated Out by Student Status

	Mean	SD	*N*
FIQ - Tuition	109.22	18.052*	73
FIQ-IEP	107.32	13.821*	31
PIPPS-Tuition	210.25	14.626	53
PIPPS-IEP	192.73	20.561	30
Competence Motivation-Tuition	21.88	9.281	73
Attention/Persistence-Tuition	18.68	10.281	73
Attitude Toward Learning-Tuition	12.72	1.862	74
Competence Motivation-IEP	16.32	3.721	38
Attention/Persistence-IEP	11.90	4.872	41
Attitude Toward Learning-IEP	10.28	3.508	40

Note. FIQ = *Family Involvement Questionnaire*; PIPPS = *Penn Interactive Peer Play Scale*; Tuition=*Tuition-Paying Student* IEP=*Student who Receives Special Education*
**t-test not significant*

APPENDIX B

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH

UNIVERSITY of NORTHERN COLORADO

Consent Form for Human Participants in Research
University of Northern Colorado

Project Title: Relationship Between Parent Involvement and Preschool Children's Social Competence and Learning Behaviors

Researchers: Amanda DeWar
Michelle Athanasiou, Ph.D. Phone: (970) 351-2356
Email: michelle.athanasiou@unco.edu
Department of Applied Psychology & Counseling Education

I am a doctoral student in school psychology at the University of Northern Colorado. As part of my studies, I am conducting research with parents and teachers of preschool children. I am interested in learning more about what the relationship is between parent involvement and preschool children's social competence and learning behaviors. If you choose to participate in this research study, I would ask you to complete two checklists for each student whose parent chooses to participate in this project. One checklist will ask questions about the student's learning behaviors in the classroom. The other checklist will ask questions about the student's social competency skills. If you choose to participate, the checklists for each student whose parent or guardian agrees to participate will be mailed or delivered to you by the lead researcher.

In order to maintain confidentiality, I will assign a participant number to your surveys. Only the lead researcher will know the name that is associated with the participant number. When the data is reported, your name will not be used. The checklists will be kept in a filing cabinet that will only be accessible by the researcher.

I anticipate no risks in your participation in this research project. The time commitment will be approximately 20 minutes to complete the checklists for each child. The checklists do no have to be completed during direct observation of children so it will not impact your time with your students.

If you choose to participate in this research project, you will be given a $20 gift card to Lakeshore®. When you have completed the two checklists for each student who chooses to participate by the deadline, you will receive another $20 Lakeshore® gift card. Finally, all teachers who participate and complete checklists for each student participating by the deadline can be entered into a drawing for a $50 Starbucks® gift card if you choose. The coupon you send in will be kept in a filing cabinet separate from the checklists you send in to maintain confidentiality.

Participation in this study is voluntary. You may decide at any time that you no longer want to participate in this research study. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. Please do not hesitate to contact Amanda DeWar by phone or email if you have any questions during any point of your participation. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

Printed Name_____

Signature_____

Date_____

School Name/Mailing Address

_____

_____

Researcher_____

Date_____

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

Child's Name:_____

Demographic Questionnaire

Please indicate which of the following best describes you and your preschool child:

1. Respondent's relationship to the child
   - ☐ Father
   - ☐ Mother
   - ☐ Other
2. Family Type
   - ☐ Single Parent Family
   - ☐ Two Parent Family
   - ☐ Other
3. Ethnicity of Preschool Child:
   - ☐ White/Caucasian
   - ☐ Hispanic/Latino
   - ☐ African American
   - ☐ Asian
   - ☐ Other
4. Respondent's age
   - ☐ 20 or under
   - ☐ 21-30
   - ☐ 31-40
   - ☐ 41-50
   - ☐ >50
5. Respondent's employment status
   - ☐ Employed Full Time
   - ☐ Employed Part Time
   - ☐ Unemployed/Stay at home
6. Gender of preschool child
   - ☐ Male
   - ☐ Female
7. Is your child attending preschool as…
   - ☐ A tuition-paying student
   - ☐ A Colorado Preschool Project (CPP) student or
   - ☐ A student on an IEP