Measuring Social Competence in Preschool-Aged Children

Through the Examination of Play Behaviors

by

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ABSTRACT

For young children, a primary component of social competence is establishing effective interactions with peers during play. To inform the development of practices that promote this competency starting in early childhood, quality assessment measures are needed. These instruments must have the capacity to establish linkages between the home and school as well as utilizing multiple informants. A promising early childhood assessment measure is the Penn Interactive Peer Play Scale (PIPPS), which is a rating scale created with parent and teacher versions. Previous research has established its validity for preschoolers from among various populations.

The purpose of this study was to examine the validity of the PIPPS system in a population of preschool children, by investigating: (1) the concurrent validity of parent and teacher versions of the PIPPS and a standardized assessment measure of social competence (PKBS-2 Social Skills Scale); (2) the relationship between teacher/parent ratings and child gender; (3) the relationships between the teacher and parent versions of
the PIPPS; and (4) the predictive validity of teacher and parent ratings on the PIPPS and PKBS-2 with level of communication between the two parties.

To meet inclusion criteria, teachers and parents had to have contact with preschool students ages 3-5 years enrolled in a preschool classroom for at least 4 months, and who were proficient in either English and/or Spanish. In total, across the three participating preschool centers, 50 students were found eligible to participate in this study and 32 students returned with completed packets parent rating scales (64%).

Results indicated some relationship between the parent and teacher versions of the PIPPS and PKBS-2 Social Skills rating systems as well as the influence of communication level. However, there were no statistically significant findings for the influence of gender on these ratings. There were several limitations to the external validity of the results of this study. Limitations included sample bias and the use of self-report questionnaires. Implications and future directions for research are discussed.
Chapter One
Introduction

Statement of the problem

Alarming national figures describe the extent to which young children are vulnerable to the experiences of facing negative consequences associated with academic and socially-related failure. Observational data on preschoolers indicate that between 4% and 6% of all young children have serious emotional and behavioral disorders, and between 16% and 30% pose on-going problems to classroom teachers (Raver & Knitze, 2002). Many of the problematic behaviors exhibited early on in life may be attributed to impaired social relationships, which are highly correlated with academic difficulties and negative social, emotional, psychological outcomes for children both with and without disabilities (Merrell, 1995). In addition, poor peer relationships established early on in life have been shown to be relatively stable over time and predictive of later adolescent and adult psychopathology (Shapiro & Kratchowill, 2000).

These data are important to address considering that four million children are entering kindergarten each year. Although some of these children bring to the transition to school the vital social, emotional, language and cognitive skills that are necessary to succeed, significant groups are at risk for early school failure (Raver & Knitze, 2002). There has been a strong emphasis on the importance of school readiness and preparing children for literacy. Pre-existing skills that contribute to, and are related to school
readiness are based on a foundation of strong socio-emotional skills. Children attending preschool classrooms that manifest close teacher-student relationships, low levels of problem behaviors, and opportunities for positive social interactions are noted to be more socially competent and fare better academically during the first two years of elementary schooling than do children who graduate from more disruptive classrooms (Raver & Knitze, 2002). While researchers, educators, and parents may differ on their interpretations of tasks that are most indicative of social and emotional health, there is general consensus in that children cannot thrive in isolation (Raver & Zigler, 1997).

Throughout a child’s life, each stage of development presents the acquisition of distinct social skills (Fantuzzo et al., 1995). Among these domains of development, the acquisitions of social competence results in successful interactions with peers and pose as a primary developmental task. Relatively little is known about dimensions within the social skills domain for young children. It has only been in the last decade that large-scale, national normative databases on children’s social skills have been developed (Merrell, 1996). Additionally, as early childhood programs strive to ensure educational and social success for young children, quality assessment measures are necessary in guiding the development of appropriate curricula and intervention strategies (Merrell, 1996).

*Developmental Framework*

There is a guided perspective which purports that as children develop, they acquire competences across many domains, including social, emotional, linguistic, cognitive, and physical functioning. Moreover, development in one domain has the potential to influence the development of other domains across various settings. Children
acquire these skills primarily through interactions with adults in the earlier years. It is pertinent for individuals working in and developing curricula for early childhood programs to recognize the competencies that emerge during this period in order to ensure that these skills are promoted and children receive appropriate assistance in these areas (Coolahan et al., 2000).

The understanding of the environmental influences on children’s development is also informative to quality early childhood programs. According to Bronfenbrenner’s developmental ecological model, the individual participates in various levels of “nested” social systems. During the early childhood years, the family, school, and peers make up the innermost level, called the **microsystem**. Within this system, the child experiences daily life and interacts with those that are closest to them. The next level describes the relationships that exists between individuals that are included in the child’s microsystem, and is called the **mesosystem**. The **exosystem** comprises the settings which have an indirect effect on the child’s development. An example of such a system may include school administrators who make decisions affecting the child’s daily school experiences. Lastly, the **macrosystem** describes the larger ideological and institutional patterns of a particular culture that provides a “blueprint” for the nature and structure of other social system levels. These systems may include educational, social, political, and economic systems that encompass distinct ideologies and practices that influence the micro-, meso-, and exosystems (Bronfenbrenner, 1979).

The developmental ecological model depicts the information that can be gathered and emphasized through focus on the importance of social systems in which a child develops. Families and schools are the primary systems that influence children early on.
Although the family and school microsystems individually affect children’s development, the connection that exists between these two systems is also important. The issues of skill development as they are influenced and enhanced by these systems is worthy of examination.

*Social Skills Theory*

Over the past two decades, there has been increased focus and attention in the area of social skills, mainly in regards to children (Hatch, 1987; Merrell, 1995). This increasing emphasis and presence is evidenced by the emergence of new social skills assessment tools, and developments in the field of study as introduced in the literature and presented at professional conferences (Merrell, 1995). Social skills have been explained and defined in numerous ways. A discussion of social skills and social competence must address a definition of the terms. To date, a single definition of social skills does not exist. However, research seeks to link the outcomes of engaging in specific social behaviors to producing positive social outcomes as a general description of social competence (Merrell, 1995, 1999; Merrell & Wolfe, 1998).

The initiation of appropriate social skills in a given situation is predicted to increase the likelihood of reinforcement and decrease the probability of punishment in response to an individual’s behavior (Merrell, 1999). Although social skills and social competence have commonly been used interchangeably in the literature to convey the same meaning, efforts have been made to differentiate the two domains. *Social skills* refer to discrete, learned behaviors that are exhibited by an individual for the purposes of interacting with others and for performing tasks (Shapiro & Kratchowill, 2000). In earlier stages of research, *social competence* was broadly defined to reflect individuals’
“personal and social maturity” in multiple domains (Raver & Zigler, 1997). Since then, efforts to refine the definition of social competence have included the capacity to effectively manage one’s emotions, as demonstrated in verbal and nonverbal communicative behavior in the context of peer interaction. Many have proposed commonly identified developmental tasks such as peer acceptance, academic achievement, and compliance with standard, societal rules of conduct to be included as indices of competence as well (Raver & Zigler, 1997). Presented definitions are neither age, situation, nor skill specific. However, there are hallmarks of social competence for different developmental periods and the integrity of distinguishing these periods is highlighted (Bracken, 2000). The benefits of utilizing a broader definition include allowing a more holistic evaluation of a child. This focus defers researchers from solely examining the cognitive outcomes of young children which are incomprehensive of a young child’s development. Examiners cannot simply focus on specific factors to evaluate social competence of a child (Bracken, 2000).

Concrete measures of social competence are generally composed by the evaluative judgments and descriptions that are used by others to describe the behaviors and social interactions of a child (Shapiro & Kratchowill, 2000). Teachers and caregivers of younger children commonly assess social competence through rating scales of social skills. Children who demonstrate social skills deficits either may not have the necessary skills in their repertoire, or may not have learned the steps for successfully engaging in a behavior (Shapiro & Kratchowill, 2000). Targeting social skills may improve outcomes in related areas for young children.
Gender Stereotypes

Evidence in the literature suggests that the adoption of sex-stereotypic behaviors may also be related to the development of social competence. Gender differences in the styles of social interactions are striking and further assume an important role in the development of children in the playroom (Cramer & Skidd, 1992). Gender-stereotyped styles of social interactions are apparent in the preschool years and the interpretation and use of these gender-stereotyped behaviors are associated with the child’s perceived social competence. In previous research, evidence shows that there have been consistent patterns of sex differences paralleling sex stereotypes in older children (Cramer & Skidd, 1992).

Boys have higher self-concepts when assessed in areas related to their ability in sports and athletic qualities, whereas girls are more confident in abilities that are related to academics and peer interactions. While girls are generally expected to respond more prosocially to their peers, (Farver & Branstetter, 1994) boys are more likely to engage in “rough and tumble” active play (Fabes, Shepard, Guthrie, & Martin, 1997). These statistics are supported by the bias in the prevalence of disruptive behavior disorders diagnosed in younger children. Boys show a greater likeliness than girls to be referred for externalizing behaviors whereas girls are more likely to be referred for internalizing behaviors earlier on.

Assessment of Social Skills

Evaluation of preschoolers constitutes a fundamentally distinct task than assessing school-age children for a number of reasons. The behaviors of these children within testing situations can affect the accuracy of results as their abilities and behaviors do not
remain static until later developmental stages. Because preschoolers’ cognitive abilities depend to such an extent on other skills, it is pertinent to examine various domains of functioning, including social competence, emotional expression, self-regulation, coping with new situations and challenges, and play behavior, rather than focusing solely on cognitive development as may be the case with school-aged children (Gagnon & Nagle, 2004). Assessment in this way is convergent, and allows the involvement of formal and informal measurement tools to enhance social and treatment validity by providing the most valid estimate of developmental functioning at specific age ranges (Fisher, 1992; Gagnon & Nagle, 2004). Researchers have attempted to measure social competence for a number of years through the use of rating scales completed by teachers, parents and students in addition to direct observations and sociometric assessments. Despite the source of data, it is important to define the construct of social competence as reflecting the integrity of children in different developmental periods (Pellegrini, 2000).

The Preschool and Kindergarten Behavior Scales-Second Edition (PKBS-2) is an example of a commonly used norm-referenced, standardized behavior rating instrument that was developed for use in a variety of settings across multiple informants. Although it is useful for multiple purposes, the PKBS-2 specifically can be used as a research instrument for studying the social, and emotional characteristics and patterns of young children (Merrell, 2002). The Social Cooperation subscale includes items that reflect behavioral characteristics that are important in following directions from adults, cooperating and compromising with peers, and showing appropriate self-restraint. The items in this subscale are linked to both peer-related and adult-related forms of social adjustment and involve the assessment of appropriate compliance with types of structure
and regulation that are typically imposed by parents and preschool teachers (Merrell, 2002).

*Play Behavior*

An alternative option may be assessments conducted through play behavior by which researchers are able to examine natural social interactions taking place among young children. During early childhood, the primary context for establishing positive interactions with peers is through play. Through play interactions researchers are able to acquire information relating to a child’s language development, cognitive development, socio-emotional growth, general maturation, in addition to observation of a wide variety of individual traits (Fantuzzo, Mendez, & Tighe, 1998; Gagnon & Nagle, 2004).

Teachers and caregivers alike encourage play behavior in their children to model and teach positive social behaviors through the interactions with others. Play is an activity which provides an important window through which to view development and progress since it proceeds through a regular developmental sequence during childhood (Gagnon & Nagle, 2004). For the purposes of reducing ambiguity in the research of play behavior, it has been broadly defined as “self-generated, intrinsically driven, hedonic activity that is characterized by variable behavior and pretense” (Fisher, 1992). Young children naturally enjoy play and are motivated to engage in it while expending substantial social and cognitive energy toward its engagement (Gagnon & Nagle, 2004).

Widely known developmental theorists such as Piaget (1952, 1962), Vygotsky (1976) and Erikson (1968) supported views that play was fostered social development and provided major opportunities for interaction in the preschool years. They identified children’s peer play as a primary context for the acquisition of important social
competencies (Fantuzzo & McWayne, 2002; Fisher, 1992). Piaget believed that play was often the medium through which children were enabled to build social collaboration skills and learn to coordinate multiple points of view (perspective-taking). Through interaction with peers in play, children are encouraged to move away from egocentric perspectives and progress towards acknowledging realities that are outside of their own views (Fisher, 1992). Specifically related to this belief, play interactions within the peer group are seen to be critical in the provision of feedback that is necessary for responses to be acquired in the establishment of socialization. Peers may effectively demand that young children inhibit aggressive behaviors to avoid ostracism and simultaneously serve as “coaches” in supporting and promoting prosocial behaviors (Fisher, 1992; Raver & Zigler, 1997).

Research has revealed significant correlations among preschoolers’ levels of socio-dramatic play, measures of social competence, and peer acceptance (Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning, & Debnam, 1995). Domains that tend to be emphasized in the preschool curricula include cognitive, language, social-emotional, and academic skills. Progresses made in these areas are readily observable and open to intervention in play behaviors (Fantuzzo et al., 1995, Fisher, 1992; Gagnon & Nagle, 2004).

An example of a play assessment tool that continues to expand its utility in the literature is the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning & Debnam, 1995). The PIPPS was designed as a behavioral rating instrument useful for understanding peer play behaviors that are evaluated by both parents and teachers across settings during early childhood (Fantuzz & McWayne, 2002). Results from the PIPPS may be used to: (a) assess children’s play behaviors in free play
contexts in the home and school; (b) create a method of communication between teachers and parents; and (c) inform an early childhood curriculum (McWayne, Sekino, Hampton & Fantuzzo, 2002).

In conclusion, it is important to conduct further research in the area of social skills with preschool aged children. Currently social skills are perceived and interpreted by others as a way to encourage prosocial behaviors and promote skills that will assist children in developing positive interactions with others. It is during these years that children begin to form peer groups and stable friendships. Although research has shown that friendship formations may readily change in preschool/kindergarten years, soon after, children appear to establish more stable reputations within peer groups (Denham & Holt, 1993). In addition, observing play behavior may allow educators/families to obtain additional sources indicating measurements of social-emotional development in preschool-age children.

Many of the social-emotional behavior rating scales available for use with very young children are downward extensions of rating scales originally designed for use with older children. Thus, such rating scales may not adequately address the unique developmental characteristics of this population. There is a continuing need for the development of useful behavioral assessment instruments focused exclusively on the early childhood/preschool age range (Merrell, 1996).

Research questions

In order to contribute to the research in this area, specific research questions were developed for this study and are presented:
1) Does the preschool version of the PIPPS demonstrate concurrent validity with the Social Skills scale of the PKBS-2?

2) Do teacher and parent ratings for preschoolers' social competence vary based upon a child’s gender?

3) Are PIPPS-Teacher and the PIPPS-Parent versions congruent and significantly related to one another?

4) Do parent and teacher ratings on the PIPPS and PKBS-2 vary as a function of the frequency of communications that are reported as occurring between parties?

Hypotheses

Convergent validity indicates that an instrument correlates positively with other variables with which it would be expected to correlate. It was hypothesized in this study that convergent validity would be acquired between the PIPPS Play Interaction factor and the PKBS-2 Social Skills scale by producing positive correlations. Utilizing a play behavior assessment tool is beneficial for the purposes of deriving interventions that teachers and parents may easily implement across settings.

Although not a central focus of the present investigation, the obtained data provided an opportunity to evaluate sex effects in the study of social competence in children who are typically younger than previously studied. It was speculated that boys who show a greater use of male-stereotyped styles of intrusion, (i.e. pushing out into space, joining a group without permission) and domination (i.e. physical/verbal aggression, challenging, assertion, interference, and criticism) would be directly related to ratings of perceived social competence. Girls on the other hand, were evaluated on
greater use of female-stereotyped styles of inclusion, and affiliation (i.e. questioning, requesting, inviting, and joining in play) to determine ratings of perceived social competence. This hypothesis is based on theory and research stating children whose styles of interaction which are characteristically sex-stereotyped will receive more positive feedback from their peers, and as a result will be perceived as having greater social skill capabilities than children whose styles of interaction deviate from sex-stereotyped expectations (Cramer & Skidd, 1992). Same-sex peers are noted to reinforce each other more than they reinforce opposite-sex peers while this is also the case in reinforcing socially expected behavior that is same-sex typed, and punishing or ignoring deviant behavior.

Generally, in studies that have been conducted on the younger population, boys have been shown to be rated substantially higher on measures of anger-aggression and lower on social competence than girls. However, studies that have shown this relationship have used traditional measures of behaviorally inferred ratings of social competence rather than observations of play behavior. It was hypothesized that boys would be rated lower overall in social competence through observations of play behavior as compared to girls (Cramer & Skidd, 1992).

Lastly, teacher ratings and parent ratings of a child’s social competence and play behavior were hypothesized to differ on various aspects of the scales. This is due in large part to the relative objectivity of teachers, as compared to parents. Other children in the classroom in addition to those children that teachers may have seen throughout their careers act as references to norms which allow them to make objective comparisons. Furthermore, teachers have frequent contact with the child and are able to base their
judgments on numerous observations of the child’s behavior in the natural environment on a consistent basis, once a child starts attending preschool. Parents on the other hand may see a child interact in other settings including extracurricular activities and in interactions with their siblings and other adults to obtain differing judgments about a child (Aktins & Pelham, 1991).

Parent and teacher perceived social competencies are likely to influence their interactions with children also making it more or less likely to provide opportunities to learn and stimulate children in the respective environments. Related to this hypothesis, it was speculated that the greater amounts of communication occurring between teachers and parents would increase the likelihood of obtaining higher correlations between the beliefs of social competence across informants. Clearly, increased access to parental input is essential to obtain an accurate picture of peer play interactions. Furthermore, joint involvement on behalf of the teacher and parents toward a common goal may be beneficial toward progress and consistently promoting specific areas for success.

As children transition from preschool to kindergarten, they experience a sense of continuity or discontinuity. Familiarity with the expectations of the two environments may ease the adjustment to new settings. However, if children encounter unexpected demands and practices in the new environment, they may have more difficulty adjusting and making the smooth transition. Early childhood programs should target ways to enhance the continuity between the home and school environments in order to facilitate successful school experiences.
Significance of the study

Relationships between children’s popularity and school adjustment with socially competent children have shown that in addition to being well-liked by peers they will have a higher tendency to develop positive perceptions of school. Social competency is an important predictor of self-worth in young adolescents, and it is important to examine and understand how these aspects of personality develop earlier in life (Cramer & Skidd, 1992). Although the construct of social competence has been demonstrated in measures of play there is a paucity of research conducted in the younger population in social aspects in general. Recent studies indicate that social competence may assist in decreasing the degree of exhibited negative externalizing behaviors (Ladd, Price & Hart, 1988). Identifying the degree of the relationship between these constructs in the younger population enables educators and professionals to target skills and behaviors in order to promote normal skill development in peer relationships.

In the younger population, the observation of social competence may enhance prediction of later outcomes. Researchers have reported better prediction from indexes of social competence and ego maturity than from the absence of problem behaviors and symptoms (LaFreniere & Dumas, 1996). This investigation contributes useful information to the research available on social skills in young children, in addition to further supporting and expanding on existing literature related to the use of play behavior as an accurate method of obtaining social-emotional developmental characteristics of young children.

It is also important to examine newer third-party rating scales which are generally demonstrated to have the best technical characteristics and should therefore replace older
rating scales (Bracken, 2000). Therefore, this study further validated the use of a play behavior assessment tool derived by Fantuzzo et al., (1995) which appears to be promising in the examination of social competence in young children. The current study lastly replicated findings of obtained high correlations of parent and teacher ratings as compared to traditional social skills assessment tools. The examination of the effects of gender on parent and teacher ratings, and the number of communications between informants highlights the importance of assessing these factors and their influence on the ratings on this play behavior scale. This information may be considered in the future when examining the existing literature on the PIPPS.
Chapter Two

Literature Review

Introduction

The development of children’s social competence is critical as maladaptive patterns of childhood are predictive of problems with peers and adults in school as well as society at large. Children’s social competence may be perceived as being guided by a developmental perspective (Pellegrini, 2000). Developmental models of social competence suggest that children face a set of stage-relevant tasks that are influenced through their interactions with networks of family, peers, and community systems (Bronfenbrenner, 1979). The capability to feel positively about oneself and to successfully engage in positive relationships with family and peers is defined as a component of “social competence” (Raver & Zigler, 1997). Among many factors that encompass social competence is the ability to manage one’s emotions and the capability to engage positively through verbal and nonverbal communicative behavior in the context of peer interactions (Raver & Zigler, 1997).

There is recognition that acquisition of prosocial behaviors during childhood has been found to enforce positive peer relationships and academic success. These behaviors may be influenced by social, emotional, linguistic, cognitive, and physical domains of functioning across environments (Hampton & Fantuzzo, 2003). Failure to develop prosocial behaviors or development of antisocial behaviors has been associated with a
number of negative outcomes, including acquisition of problematic behavioral patterns, juvenile delinquency, and retention (Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning, & Debnam, 1995; Merrell, 1995; Raver & Zigler, 1997). While the majority of the existing studies on the development of these positive social behaviors have focused on the school-aged population, there is much evidence suggesting that acquisition of positive social behaviors is an important milestone in the development of behavioral adjustment for children as young as two or three years of age (Fantuzzo et al., 1995; Odom, McConnell, & McEnvoy; 1992). For the purpose of this study, the positive social behaviors including emotional regulatory skills, social cognition skills, and communicative behaviors that young children have found to demonstrate which are viewed by teachers, parents and peers as socially competent will be referred to as “social skills” (Raver & Zigler, 1997).

Much of the attention that has been given to the area of social skills has been invested in the provision of psychological and educational services to early childhood/preschool-aged children with social-emotional problems (Merrell, 1996). The reasons for the increased emphasis are mainly two-fold. The original age range was expanded under federal law for the education of children with disabilities in 1986, as required by Public Law 97-142, toward the inclusion of children between the ages of birth to three. This act was reauthorized in 1990 (Public Law 101-476, referred to as the Individuals with Disabilities Education Act) to further highlight the importance and necessity of service provision to the early childhood population (Merrell, 1996). In addition, the Children’s Defense Fund continues to highlight and present the changing social and economic conditions in publications depicting the desolate reality of
increasing poverty rates of young children across the nation (Children’s Defense Fund, 1997; Fantuzzo & McWayne, 2002). There are 4 million children today under the age of 6 in the country that engage in a life of poverty. Although poverty rates overall have been reduced since the 1960s, it has continued to rise solely within this age group. These children are vulnerable to deprivation of mental health care, increased exposure to violence, abuse, and are at increased rates of being diagnosed with a psychological disorder (Merrell, 1996). However, the current movement towards greater assistance and research focusing on the early childhood/preschool population is noteworthy in its attempt to service this neglected group in the provision of mental health services.

This literature review will examine different attributes of social skills and the evidence of development through examination of play behaviors in preschool-aged children and their implications on this population. Additionally, the understanding of the importance of environmental influences on children’s development in informing quality early childhood programs will be discussed. Important concepts such as the definition of social skills in younger children will encompass how such skills are to be developed, in addition to the outcome of children who fail to acquire these skills early on in life. These children are believed to be at a much greater risk for the development of disruptive behavior disorders and diagnoses of behavioral problems later on in their careers.

Subsequently, important predictors of social skills as examined through play behavior will be discussed by incorporating aspects of children’s emotionality and understanding. Topics will also cover areas examining the influence of social skills development of younger children, and the difference in ratings made by teachers.
compared to those obtained from parents. Limitations of the studies will be discussed in an attempt to direct future research needs.

Social Competence in Early Childhood

For young children, positive interactions with peers provide support, nurturance, and acceptance. Engaging in socially competent interactions also teach important skills such as helping and sharing which allow facilitation of later school success and motivation toward academics and achievement (Hampton & Fantuzzo, 2003). The formation of effective peer relations in the preschool years has been associated with positive adjustment in kindergarten as well as academic success in the elementary grades and high school and is considered an indicator of healthy adjustment (Coolhan et al., 2000; Fantuzzo et al., 1995). Longitudinal research has linked children who possess social skills deficits with detrimental consequences during later developmental periods, including numerous academic and behavioral problems as evidenced in learning difficulties, academic underachievement, adjustment problems, conduct problems, and delinquent behavior (Fantuzzo & McWayne, 2002; Hartup & Moore, 1990). These children are at a general increased risk of being diagnosed with a psychiatric disorder over the course of their lifetime (Merrell & Wolfe, 1998).

Preschool-aged children begin to experience the peer group and its importance in their lives in beginning social interactions. Peer reputations and the foundations required for stable social behavior patterns are learned and created through interactions in the home environment and at preschools and daycares. It is important to be cognizant of the fluctuations in social behavior according to the context in which they are observed. Peer and adult interactions elicit and support social competence on very different levels. When
children and adults interact, adults often engage in the initiating and maintaining of social interactions. Perhaps this is why children with low levels of social competence choose to spend time with a teacher during recess rather than with their own peers (Pellegrini, 2000). Only in interactions with peers, however, are children able to experiment with and practice social strategies among others of relatively equal status to themselves (Hartup & Moore; 1990, Hatch, 1987). Children are free to imitate successful social strategies used by other children and to learn from their own, and of others’ unsuccessful attempts (Hatch, 1987). This suggests that children take their cues from the most natural competent role models available to them (Hartup & Moore, 1990).

The notion of peer similarity and mutual reinforcement appear to be a powerful determining factor in the future development of children’s behavior (Pellegrini, 2000). In peer contexts, children experience views that are discrepant from their own and often must compromise their views. Sensorimotor and preoperational stage children are socially egocentric according to Piaget (1970) to the extent that they are neither willing nor able to consider the perspective of others. The accommodation of one’s own point of view to another’s is said to result in conceptual growth that is necessary to move through the developmental phases of social competence acquisition. Although it is important for adults to be available in situations necessary to discourage aggressive behaviors, their presence may not be necessary in forming and directing children’s play groups in natural settings (Pellegrini, 2000).

Children who develop a positive peer status may behave increasingly positive as a result of others’ approval and the social opportunities that are afforded to them in response to their social behaviors. Conversely, children who fail to acquire positive
social behavior may become even more socially deficient due to a lack of opportunity to learn positive behaviors. This cycle may ultimately lead to frustration as a result of their low social standing (Denham & Holt, 1993; Gagnon & Nagle; 2004; Hartup & Moore, 1990; Hatch, 1987). These children are prone to continue to engage in maladaptive peer interactions, which tend to exacerbate the negative behaviors associated with social skills deficits (Alessandri, 1992; Hatch, 1987).

The social order in preschool classrooms has initially been perceived to be dynamic and transient. Preschoolers appear to engage in renegotiating peer status over and over again. Although it has been established that children are capable of, and do indeed generate social strategies, some children appear to have difficulty acquiring the knowledge and developing the necessary communicative and social skills that are required for effective movement in and out of peer groups. Research provides evidence that children who are popular and have well developed interactional skills operate effectively within a self-perpetuating social circle. They are reinforced through their competence thus stimulating further growth (Hatch, 1987).

Findings of studies in this area of research have characterized popular children as cooperative and exhibiting prosocial behaviors toward peers while depicting unpopular children as aggressive and disruptive. Counter to this view is the proposition that prior peer reputations influence how they respond to peers and how peers perceive and respond to them (Ladd, Price, & Hart, 1988). Support for these propositions can be found in studies suggesting that children’s reputations may affect subsequent peer behavior. However, the design of previous studies has failed to address the question of whether children’s behavior is the cause or consequence of their peer status.
In an attempt to clarify the source of this controversy, Ladd and colleagues (1988) investigated the concept of alternate hypotheses concerning the antecedents of children’s peer status and playground behaviors in a school setting. Participants consisted of 28 White preschoolers (aged 3.5 to 4.5 years) from middle-class families who were attending a university-based preschool. Researchers hypothesized that whereas prosocial behaviors would predict increases in peer acceptance, antisocial behaviors would forecast increases in peer rejection. In addition, peer acceptance was anticipated to inspire preschoolers to engage in friendly behaviors while children subject to rejection were bound to increase behaviors of withdrawal and aggression towards peers. Children interactions were observed on a common playground over the course of three, 6-week intervals, scheduled at the beginning, middle, and end of the school year. Sociometric measures were derived in each classroom to obtain information about children’s peer status at each time of assessment. Codes for peer interaction and nonsocial behavior measured skills in the following areas: cooperative play, social conversation, argumentation, rough play, parallel play, solitary play, on-looking, unoccupied, and transition.

Correlational analyses were used to explore the stability of children’s playground behaviors and peer status and to examine concurrent relations between the behavioral observations and status measures at each assessment. In addition, a series of hierarchical regression analyses were employed to determine the extent to which earlier displayed behaviors could predict changes in peer status and behavior. Children who played cooperatively with peers at the outset of the school year were found to do so at later points in time and appeared to contribute to long-term gains in peer acceptance. In
contrast, early arguing behaviors exhibited by children, although less stable over time, predicted increases in peer rejection throughout the year. This finding supports the initial hypothesis posed by researchers suggesting that negative reputations of disagreeable preschoolers persist even after behavior may have changed. Peers appeared to develop lasting negative attitudes towards those who had a tendency to be argumentative despite the changing peer status composition in the classroom. However, initially disliked children did not tend to become more withdrawn or off-task, nor did they engage in more arguing behavior over time relative to other children.

Moreover, being well liked at the beginning of the school year did not seem to contribute to gains in children’s prosocial behaviors. Thus, the results of this investigation failed to support the second hypothesis that children’s early peer reputations would affect subsequent behavior toward peers. These findings are interpreted in light of past research on children’s peer behavior and status. Future studies must employ a broader range of social and non-social behaviors to explore this concept with use of a larger and more diverse population sample before findings may be readily generalizable.

Preschoolers’ likeability by other peers was further examined in a study conducted by Denham and Holt (1993). The study attempted to extend the findings from Ladd et al. (1988), suggesting that behaviors were the driving force of acquired status. Teacher ratings of positive and negative social behavior, as well as peer-rated sociometric measures were used to assess 43, 3-4 year old preschoolers over a 12-month longitudinal period. This study was replicated and extended over the next following year. Aligned with previous research, findings indicated that the level of prosocial behavior exhibited was positively related to likeability, although the characteristic of assertiveness was
unrelated. Being a purposeful, dominant leader was not as salient or necessary at this young age in the ability to interact while maintaining positive affect in oneself and others, as may be the case in older age groups.

Findings from the study indicated that early on in the formation of peer reputation, likeability was associated with child social behavior. In Year 1, friendlier, more cooperative, tractable, less aggressive and less difficult children were more well-liked. However, Year 1 likeability, not prosocial behavior, predicted Year 2 likeability ratings. Thus, findings suggest that early on, behavior is important but then reputation based on peer sociometric ratings becomes more prominent in determining an individual’s likeability and status among peers. The outcomes further emphasize the importance of the early development of social skills in acquiring positive peer interactions and establishing grounds for higher peer status. Children entering school with friends, are more likely to be well liked and able to make and sustain new friendships. They are also able to initiate positive relationships with their teachers in addition to feeling more positive about school (Denham et al., 2003). These children may be able to transition into a school setting and engage in peer interactions more easily as a result of their previous exposure with peers and possibly siblings.

It would be interesting to group the data according to children who have siblings at home compared to those who do not. Future research may also wish to expose reasons as to why certain peers are well liked compared to others and whether they are purely individual characteristics and temperament issues versus history of previous peer interaction exposure.
Along with the notion of the importance of peer likeability, friendships can also be seen as having a general role in a child’s self-image. This theory is based on the concept that children develop a general idea of themselves through interactions with significant others, including friends. A child may construct a self-image on the basis of feedback from those with whom they consider to identify with. The peer group and friends can provide information to influence how a child views themselves. For this reason emphasis is placed on the importance of fostering peer groups and positive social interactions (Pellegrini, 2000). Although there was detection of a causal link from sociometric status to concurrent, stable social behavior in this study, further research must be generated with extended longitudinal periods and a greater sample size to examine this pathway from likability to prosocial behavior in this age range before conclusions may be validated.

Social Competence and Academic Outcomes

The importance of social competence outcomes extend into areas concerning academic achievement. Social competence is increasingly recognized as vital to the development of school readiness. Research has demonstrated that social and academic competences are very much inter-related (DuPaul, McGoe, Eckert, & VanBrackel, 2001; Merrell & Wolfe, 1998; Welsh, Parke, Widaman, & O’Neil, 2001). Although previous research has suggested that children classified by their peers as popular in kindergarten received significantly higher scores in their academic achievement and teacher-rated classroom adjustment in subsequent grades (Gagnon & Nagle, 2004), there has been controversy as to whether it is social competence that influences later academic competence or academic competence that influences later social competence. The nature
of this relation was examined in a longitudinal study conducted by Welsh et al. (2001). The primary aim of the study was to test a reciprocal model hypothesizing the relation between social and academic competence as a bidirectional influence, reciprocal over time. Researchers followed a moderately large sample over the duration of a 3-year period. During the first year of data collection, 163 kindergarteners (75 males and 88 females) and their families were targeted. Academic and sociometric information was gathered each year of the ongoing study. Measurements of social competence included peer ratings from all of the children in the class of the targeted child each year. Children’s behavioral characteristics were also assessed by having children nominate their classmates in different categories classified as those three children having the most prosocial (i.e., helping, sharing, taking turns) and aggressive (i.e., fighting, saying mean things) characteristics. Teachers completed social competence and behavioral rating scales each year assessing child likeability by his/her peers, as well as behavioral characteristics.

Measures of academic competence were derived from report cards depicting student achievement and effort levels. Findings indicated that academic competence consistently led to social competence over time in a bidirectional pattern of influence. Academic competence in first grade was shown to influence second-grade social competence, with academic competence being positively related to positive social competence. Lower academic competence in the first grade also influenced social competence in second grade, with academic competence being negatively related to negative social competence. This relational pattern was replicated in the following years as well. The overall findings indicate that academic competence exerts a significant
influence over social competence consistently over at least a 2-year period of time. Results must be interpreted with caution and several limitations should be noted. Due to the sample size of the study, definitive analyses by gender and ethnicity were not possible. More participants are needed to examine the relation between social and academic competence in regard to ethnicity and SES. Therefore, generalizability issues arise in regard to these factors. Secondly, although valid and reliable measures were used, the inclusion of measures which tap a wider range of social and academic functioning would be desirable in future studies in order to yield a more comprehensive approach to assessing social competence (Welsh et al., 2001). It may be difficult to assess whether or not self-concept and increased perception of academic competence factored into a child’s social competence. However, it should be noted that these domains must be examined before concluding a direct effect between social competence and academic abilities. Additionally, future studies are warranted to focus beyond third grade to further validate the findings from this study.

It would also be interesting to examine, in collaboration with current findings and suggested future research, whether social competence could act as a protective factor for children who were achieving at a lower academic level. Although students may not be motivated by their performance in school, social support may prove to be a pertinent factor in children’s perspective of school and academics in general.

Relating Social competence and Emotional Competence

Another area of interest that has transpired in recent years addresses identifying the roles of emotionality and its contribution to children’s social competence (Fabes et al., 1999). Because of the ever-present nature of emotion at the core of social interaction
and well-being, discerning the nature of the linkages from emotional to social competence is a vital area for educators to explore (Denham et al., 2003). Socially competent children display emotions that are appropriately responsive to group norms and are in balance between their own desires and interests while keeping those of others’ in mind. Furthermore, children’s social competence is related to their ability to distinguish and express emotions and emotional intentions (Fabes et al., 1999). Control and regulation of emotions are considered an important underpinning of children’s developing cognitions and internalizations of socially appropriate behaviors that are aligned with societal norms (Roberts & Strayer, 1996). Elements of emotional competence influence social competence in young children from 2 to 5 years of age in the development of successful initiation and promotion of peer relationships (Denham et al., 2003). This positive affectivity is generally associated with enhanced social status and popularity which render one more likeable, whereas emotionally negative children are faced with an increase in peer rejection (Fabes et al., 1999; Hatch, 1987). Children who are socially unskilled and/or socially rejected have been shown to access fewer competent solutions in the face of difficulties and tend to turn to aggressive and inept ways of solving social problems compared to children who are better accepted (Coy, Speltz, DeKlyen, & Jones, 2001). Popular children are adept at discerning emotional reactions of peers during interactions, and thus are better able to respond to them, while less popular children have a greater tendency to misinterpret emotional states and react inappropriately (Gagnon & Nagle, 2004).

A study conducted by Fabes et al. (1999) was designed to explore the relation of regulatory and emotional processes evidenced by children’s social competence in
responding during interactions with peers. Based on the previous literature, researchers hypothesized that regulatory control would be positively correlated with observed social competence. Participants were 135 children enrolled in six preschool or kindergarten classes. This particular age group was chosen based on previous literature indicating that the preschool period was a developmentally critical time in the formation of an active regulatory control system. The type of responses could further attribute to the probability of a child acquiring higher peer status and popularity through interactions among their peers. Data collection incorporated three months of brief scanning observations of children’s free-play indoors and outdoors during snack period and free times. Observers rated children on the intensity of the peer interaction based on the amount of energy and activity displayed by the participants involved in the interaction. Other general behaviors that were observed included the degree to which negative emotions were displayed by the target child during an interaction and the degree to which the target child’s actions contributed to positive or constructive social interactions. In addition, two teachers completed the Children’s Behavior Questionnaire in order to assess temperament. Four items from Harter’s Perceived Social Competence Scale for Children (1979) also were administered to examine acquisitions of social competence.

Hierarchical linear modeling analyses were conducted to effectively analyze both within-subject participants (observations) and between- subject participants (effortful control) data simultaneously. Results of the study supported previous beliefs that as peer interaction increased in intensity, children with relatively high levels of effortful control (EC), or appropriate control of their emotions, were less likely to experience negative emotional arousal as compared to children who possessed lower levels of EC. Results of
the study supported previous beliefs that as peer interaction increased in intensity, children with relatively high levels of effortful control (EC) were less likely to experience negative emotional arousal as compared to children who possessed lower levels of EC.

Findings suggest that increased negative arousal appears to inhibit the ability to respond to intense interactions in socially competent ways for those individuals who are less skilled, and therefore retain lower levels of EC. High levels of negative emotions that are not appropriately controlled can disrupt behavior including empathetic responses and prosocial behaviors (Roberts & Strayer, 1996). The data comprised in this study confirms the view that regulatory and emotional processes make significant contributions to the quality of young children’s interactions with peers and influence their response outcomes. Although the age range of the participants was relatively narrow it may be considered in future research examining emotional expressiveness. Substantial gains in understanding emotions occur in periods of toddlerhood and preschool due to increasing exposure to peers and socialization. However increasing cognitive abilities may allow children to withhold more intense negative emotions thus allowing results to be consistent with socialization models in which school-age children face increasing pressure to regulate or moderate their expressions of negative affect, particularly anger (Roberts & Strayer, 1996). If this notion were true then the kindergartners may be found to have higher levels of EC. In addition, it was not stated whether there were any differences in gender which may also be useful to examine in future studies of this type.

Denham et al. (2003) studied a model of the prediction of social competence by young children’s emotional competence to replicate and extend previous research. Patterns of emotional expressiveness, emotion situation knowledge, and emotion
regulatory coping were used to predict indices of social competence. Researchers scrutinized each of the elements composing overall emotional competence and defined each subset as equally pertinent and influential in further enhancing social competence. First, children’s emotional expressiveness was deemed a central aspect of their emotional competence. Positive affect is important in the initiation and regulation of social exchanges. Children adept in this area have a higher probability of responding prosocially to peers’ emotions and are seen as more likable. Emotional knowledge, a second key component of young children’s emotional competence was described as understanding and allowing children to react appropriately to others, thus bolstering their interactions and relationships. The last vital aspect of emotional competence is the ability to appropriately regulate emotion. During the preschool period emotional regulation becomes necessary when children’s emotionality and demands of their social worlds become more complex. In addition to their ability to further comprehend emotions there are increased opportunities that deem it necessary to control their emotionality. Both concurrent prediction of social competence at age 3 to 4 and longitudinal prediction of social competence in kindergarten were assessed, using emotional competence components as predictors.

Participants were 143 predominantly Caucasian, middle-income 3-4 year olds (mean age = 46 months, SD= 4.8 months). Data was collected at two points in time, during preschool and kindergarten. Children were observed in their classroom settings during free play by coders over twelve sessions of two, 5-minute trials over a 6-week period. Observational methodologies were used to examine (a) emotions expressed by children during free play, and (b) their reactions to peers’ emotions. Semi-structured
interviews were used to assess children’s knowledge about their own emotions. The use of a puppeteer was utilized in the enactment of an emotion-laden story to identify children’s understanding of emotion. This included children’s responses to the identification of emotions that were appropriate to certain situations, and also inferences of emotions in equivocal situations. Lastly, emotion regulation was examined through maternal reports of coping behavior when faced with emotionally difficult situations with peers. A coping items scale was developed for this purpose and mothers indicated how the child was predicted to engage in each of several types of coping behavior. The present study assessed social competence via three methods. Sociometric assessment enabled all of the children in the class to rate their peers on a continuum of likeability through the use of pictures to obtain measures of popularity. Scores for both the number of positive ratings and the number of negative ratings from their classmates were received. The Social Competence and Behavior Evaluation Short Form (SCBE) were distributed to teachers and daycare providers as methods for rating each child’s social competence in the classroom. The procedure was modified slightly in kindergarten, using cards with the names of each classmate versus picture representations to acknowledge new gains in cognitive abilities appropriate of their age.

Results showed a strong relationship between the emotional competence component of development, assessed at ages 3 to 4 years of age as contributing to both the concurrent and kindergarten social competence aspects. The findings bring to our attention the enhanced importance in basic understanding of the affective foundations of younger children’s social competence. It is important to emphasize possibilities of targeting prevention efforts with preschoolers in developing positive peer interactions and
relationships. The results of this study although consistent with previous research must be considered with a degree of caution. Young children who are engaging in sociometric assessments may have the tendency to choose students based on subjective reasons otherwise unknown to the researcher. In addition, measures relied heavily on informant reporting with maternal reports on perceived coping behaviors, child reporting and use of semi-structured measures with young children being utilized as main assessment tools in this study. It may be beneficial to include the reliability across informants (i.e. mothers, children, teacher reports) and examine the degree to which each assessment is influential to the conclusions of the study.

Related to the area of emotionality, Philippot and Feldman (1990) examined the interactions taking place between social competence and decoding of emotions on the faces of children. The main focus of this study was to take note of the fact that the face is the most visible component of a social interaction and can be considered the central focus of attention. Both visibility and the potential for fine discriminating abilities make the face an important medium for communication for many social and affective processes. Facial expressions are related to empathetic processes and pro-social behavior as well as a means to facilitation of reading and successfully directing social interactions. Being able to decode facial expressions may be considered a central component of general social skills because of the significance of facial information in the management of social behaviors. Although there is abundant research supporting the hypothesis that the ability to decode facial expression of emotion is related to various modalities of social competence, almost none of the research has been carried out in children younger than elementary-school age.
This study attempts to demonstrate the relationship between facial expression decoding skills and social competence in early childhood. Subjects were thirty-eight children aged 3-5 years. Children were assigned to either the high social skills group or the low social skills group based on scores obtained on the Social Competence portion of the Achenbach Child Behavior Checklist. Nine 10-20 second videotaped silent scenarios, with three for each category of emotion (happiness, sadness, and fear) were designed. Pilot test questioning was conducted to ensure that even the youngest children would have no difficulty in understanding the presented situations and the emotional implications. Each subject obtained three scores, each of which corresponded to each category of emotion that was investigated.

The results indicated that there was a statistically significant difference between the performances of children that were assigned to the high social skills group vs. those assigned to the low social skills group. In addition, the scores for the different categories of emotions showed that happiness was most accurately decoded, followed by fear, and sadness which was decoded with the lowest accuracy across subjects. Consistent with previous observations, the most socially skilled preschoolers outperformed their less socially skilled peers in decoding facial expressions paralleling results in older children. Findings suggest that even prior to the acquisition of social display rules, basic processes in the decoding of fundamental emotions may be impaired in socially at-risk children.

Future studies may be interested in the examination of covariation between social competence and facial expression decoding skills across age in the same individuals. Present results could also be replicated, and extended to include other types of emotions as well. Interestingly enough since sadness was decoded with the least accuracy it may be
beneficial to further examine this emotion and determine reasons that may further contribute to the difficulty of decoding this emotion. The failure to properly decode sadness may be a result of underdeveloped cognitive abilities of younger children. Empathetic responses increase as children become more socialized and with increasing age. Therefore, the growing ability to exhibit empathetic responses with increasing age may have a direct relation to the inability to accurately recognize sadness at an earlier age.

*Social Skills Deficits and ADHD/Disruptive Behavior Disorder*

Although the inability to provide appropriate responses to certain social situations may be inhibited as a result of a lack of empathetic responses across the younger population, children diagnosed with behavior problems such as Conduct Disorder or Attention-Deficit/Hyperactivity Disorder (ADHD) are especially noted to possess social skills deficits and distinct difficulties with peer interactions when compared to undiagnosed children (Hughes, Dunn, & White, 1998). Negative social interactions are not confined to a single developmental period. Children with hyperactivity appear to manifest a greater amount of aggression and resort to more aggressive solutions to social situations than normal children (Stormont, 2001). As stated previously, hostile or reactive aggression has been documented to be less socially acceptable among the peer group and affect peer reputation status. Maladjustment of early school-age peer relationships may potentially increase a child’s risk for later maladjustment in a number of different areas (e.g. social skills, relationships, self-esteem), even for those individuals who no longer meet criteria for behavioral disorders in adolescence and adulthood (DeWolfe, Byrne, & Bawden, 2000).
Hughes, Dunn, and White (1998) conducted a study in exploration of problematic areas and their contribution to lowered social competence for preschoolers that were identified as “hard-to-manage.” Reasons for focusing on young children in this study included the examination of a number of testable hypotheses. One plausible hypothesis generated from the study was that disruptive children show delayed understanding of the emotional consequences of socio-moral transgressions and are therefore more probable than peers with higher social abilities to violate social rules and norms. Also within the arena of social development, research was extended to consider the possible causes of individual differences in children’s developing understanding of beliefs and emotions. Work with children at risk of being diagnosed with behavioral disorders is important in suggesting that individual differences may extend beyond contrasts in the rates of development, but also affecting the kind of social understanding that is developed. The 25-item Strengths and Difficulties Questionnaire (SDQ) was utilized to establish a sample for study. The participant group consisted of 40 children including 24 boys and 16 girls, ages 3-5 years old. The control group was recruited from a similar screening process and from the same schools as the target group. All control children were individually matched with the target group for age, gender, and school. The two groups were compared on a various set of tasks including: (1) theory of mind tasks (required the prediction of an emotion involving either a nice or a nasty surprise); (2) emotion understanding stories (required affective perspective-taking skills as well as situational understanding); and (3) simple executive function tasks (testing inhibitory control, attentional set-shifting, and working memory).
The results of the study indicated poor emotion understanding among hard-to-manage preschoolers and thus were the same findings previously noted in preschoolers differentiated on level of social skills acquisition (high vs. low). This evidence further implies that young children regardless of diagnoses may suffer the same outcomes as a result of general social skills deficits, and at the same time may benefit from similar interventions composed for the purposes of promoting social competence. For the two groups combined, however, findings showed that happiness and sadness were understood better than fear as was previously concluded in Philippot and Feldman (1990) with normal children. However, further research should be conducted in order to produce consistent findings across or between groups of individuals. Overall findings of this study suggest that impairments in executive function that are well established in school-aged children with ADHD and/or conduct disorder not only emerge early in development, but are associated with impairments in the development of social understanding in “hard-to-manage” children.

The present study conducted by DeWolfe, Byrne, and Bawden (2000) considered several issues in order to depict clear differences between preschool children with and without ADHD, by using parent ratings of behavior and psychosocial correlates. Participants were forty-five preschool children (3-5 years of age) that were assessed at a clinic by means of a 3.5 hour diagnostic protocol during which formal diagnoses were determined via direct observations, standardized questionnaires, administration of tests of attention, psychological parent interview. Control individuals were twenty-five preschool children that were selected to match the twenty-five clinic referred children on socioeconomic status (SES), age (± 4), and sex. The measures employed in the study
were based on parental ratings of the preschool children and child self-ratings obtained within the framework of three domains: behavioral disturbance, social competence, and familial environment. Results indicated that preschool children with ADHD were rated by their parents as exhibiting significantly more aggression, non-compliance/conduct problems, and were more demanding of their parents’ attention as compared to their matched control peers. Preschool children with ADHD were rated as exhibiting significantly underdeveloped social skills and were less adaptable to change in routine. Overall, parents of preschool children with ADHD reported a more stressful and less rewarding parent-child relationship. Parents may be able to cope with parenting-related stress by positive reframing and redirecting preschool child’s challenging behaviors, and many seek solace in the expectation that the preschooler will eventually grow out of their behaviors. As a result, family functioning was not rated as being detrimentally affected.

An interesting finding from this study was the discrepancy between parental ratings of preschool children and the preschool child’s self-ratings. Preschool children with ADHD rated themselves as being equally competent and as socially accepted as their matched peers.

Previous research has indicated similar findings in older children. Many of these young children’s actions suggest that they may be insensitive and unaware of their impact of their behavior on others at this point in their developmental periods. Lower self-ratings of competence and social acceptance may become more pronounced for school-age and adolescent individuals with ADHD as aligned with further maturation of cognitive capabilities, and cognitive-social abilities.
In an additional study examining the differences between preschool-age children with ADHD and control children, DuPaul et al. (2001) comprehensively studied the behavior and social skills functioning of these children across settings. Scores obtained on the Hyperactivity or Daydreams-Attention subscale of the Conners Teacher Rating Scale-Revised (CTRS-R) and the Impulsivity-Hyperactivity subscale of the Conners Parent Rating Scale-Revised (CPRS-R) were used to distinguish the comparative groups. Fifty-eight children (50 boys, 8 girls) were identified as having one of the three subtypes of ADHD (scores at or above the 90th percentile), and 38 children (20 boys, 16 girls) were assigned to a normal control group (scores below the 84th percentile). Participants from both groups were primarily from middle-class socioeconomic backgrounds. Parents and teachers completed the Preschool and Kindergarten Behavior Scales (PKBS) and Social Skills and Problem Behavior subscales for assessment of children’s behavior at home and school. Behavioral observations of parent-child interactions were also conducted in a clinic playroom setting. Four different controlled situations were constructed, each of which was 10 minutes in duration. Direct observations of classroom behavior were also conducted in structured activities. General categories of variables were analyzed using Hotelling $T^2$ tests followed by univariate $t$ tests for significant findings.

Observations yielded results that indicated participants in the ADHD group were found to exhibit greater levels of negative social behavior in both structured classroom and unstructured situations. Children with ADHD displayed more frequent noncompliant and inappropriate behaviors than children in the control group. As expected, children with ADHD were rated as less socially skilled than children in the control group. These
results have several implications for practitioners who work with young children. First of all, screening among young children with behavior difficulties regardless of a diagnosis may promote evaluation of associated problems involving social behavior. Also, the results highlight the need to assess pre-academic skills and preschool classroom behavior of young children that are at risk for behavior disorders and also those who are exhibiting similarly related problems.

*Current Assessment Issues*

It is important to introduce primary problems and limitations that arise when assessing the social functioning of preschool children at this point. Preschoolers are unique in that they possess restricted cognitive and language abilities. Most preschoolers cannot read, therefore making the use of instruments requiring this fundamental skill non-applicable for describing social-emotional functioning (Bracken, 2000). As a result, widely used self-reports of personality or social functioning are generally eliminated from the use with preschool children. Related to the notion of restricted cognitive abilities, preschoolers are also limited in their expressivity and have difficulty describing their full range of thoughts, feelings, or relationships with others and may only be able to provide a general idea of what they think and feel through verbal communication (Bracken, 2000). In addition, many preschoolers are limited in their understanding of emotions or feelings and questions are often misinterpreted. Another limitation affecting the assessment of social competencies of preschoolers involves the large range of normal developmental progress. The range is typically broader for preschoolers than for older children, adolescences, and adults. This creates a problem when attempting to
distinguish preschoolers who deviate from that of a standard or normal functioning individual (Bracken, 2000).

**Social Skills Acquisition through Play Behavior**

Social competence with peers encompasses behaviors and cognitions that reflect successful interacting with peers. A socially competent child is effective in meeting his or her social goals with peers, however is able to maintain flexibility and sensitivity in responding to peer reactions. Demonstration of social competence with peers is observable through play. A primary context for preschool-aged children to acquire and express peer social competencies is through play (Fantuzzo & McWayne, 2002).

Children must be able to initiate play, enter ongoing play groups, appropriately respond to peer initiations, and resolve conflicts with peers. It is assumed that children who engage in complex peer play forms would be socially competent in other aspects of peer relations (Howes & Matheson, 1992).

The relationship between play and child development has been intensively studied in theory driven and empirical studies. The National Association for the Education of Young Children states, “Play is an important vehicle for children’s social, emotional, and cognitive development, as well as a reflection of their development.” (Bredekamp & Copple, 1997, p. 6). Some common characteristics of play include the following: (a) intrinsically motivated, not dependent on external rewards, (b) freely chosen whereas any coercion to engage in an activity may deter it from being considered play, (c) pleasurable and enjoyable eliciting positive responses, (d) involves an element of pretend or make-believe, and (e) involves active engagement requiring children to be more attentive than to most other stimuli (Bracken, 2000). In addition to the characteristics of play already
mentioned, it can be considered a developmental phenomenon that follows a relatively stable sequence. Through play interaction with peers, children are able to test out social roles and learn acceptable social rules. They are encouraged to share, take turns, cooperate, consider others’ perspectives, and inhibit aggression through these interactions, which ultimately teaches appropriate suppression of immediate impulses and acquiring self-control (Bracken, 2000; Gagnon & Nagle, 2004). Although most theories of play assume that it is beneficial, there is widespread debate regarding the magnitude of the benefits, and when during development these benefits occur. Despite considerations of the magnitude and occurrence of benefits of play it is assumed to indeed have advantages and provide areas for children’s social growth. Play can be viewed as an initial attempt at developing mature behaviors that must be learned, and may be used to teach skills and concepts (Pellegrini, 2000).

Studies of the impact of play on childhood development have addressed three main areas of development (Fisher, 1992). First, attempts have been made to demonstrate a relationship between play behavior and the emergence of cognitive development in the acquisition of creative problem-solving, logical thought, and perspective-taking. Another area of interest that has arisen in significance and relates to inquiry has been the contribution of make-believe play to the acquisition of symbols and language mastery. The last main area of research has come from investigating the effects of play training interventions on improving social interactions and/or the building of empathic interpersonal skills, regulation of affect, peer-group popularity, and influence on children’s natural tendencies toward egocentrism (Fisher, 1992).
Fisher (1992) conducted a meta-analysis combining findings from a collaboration of integrative works relating play behavior to development, dating back from the mid-70s. The review presents results from 46 studies. Statistical tests employed the use of effect sizes as the main method of analyzing obtained results. An overall effect size drawn from the data indicated that play resulted in a moderately large and noteworthy improvement in children’s development that was evident in varying degrees over the three major outcome domains studied. Cohen’s scaling method was utilized for interpretation purposes indicating a 12% variance that corresponded to an improvement rate, or gains in performance for 67%. The concluding remarks from the meta-analysis suggest that play enhances the progress of early development from 33% to 67% through adjustments in a number of different functional areas (e.g., reducing failure rates in academic/adjustment functioning due to under-achievement, language problems, socio-emotional difficulties, etc).

The typical meta-analysis review is susceptible to a number of biases regarding the sets of decisions that are required to be made on behalf of the reviewer and thus such factors should be taken into consideration when reporting the results from the study. However, this meta-analysis explored the effects of different types of play and obtained noteworthy evidence of the influential qualities. Data collected from this study should be interpreted with caution although not disregarded.

*Parental Factors and Preschoolers’ Social Competence*

Preschoolers’ social competence may depend on other factors, including the frequency with which informal play activities are initiated by parents’, children, and playmates. Parents are in a very influential position in relation to many aspects of their
children’s social development (Hartup & Moore, 1990; Ladd & Hart, 1992). Adults play a significant role in the socialization of young children by providing guidance as children make the necessary adjustments to life with peers. Children expect adults in positions of authority to instruct them in behaviors by teaching them what is acceptable and what is not, in addition to monitoring their behaviors and protecting them from harm (Hartup & Moore, 1992). Early childhood caregivers and teachers are also functional to a considerable extent in providing a secure base of support from which the child is able to explore the out-of-home social environment (Hartup & Moore, 1992).

Parents are also in control of facilitating children’s access to peers by choosing to reside in particular neighborhoods, enrolling children in preschools, taking them to community settings (library, pool), and other places in which they are likely to meet same-aged peers. Additionally, parents may create informal meeting opportunities with their peers for their children by arranging play groups, or after-school play activities at their homes. These informal play contacts may help children to meet peers, expand playmate networks, maintain existing peer relationships, and also develop good interpersonal skills (Ladd & Hart, 1992). Parents who arrange informal peer activities may encourage development of children’s initiation skills by involving them and modeling components of the initiation process for them (e.g., engaging children in contacting peers and extending play invitations to them) (Ladd & Hart, 1992). These acquired skills of social competence may be important contributions that are exhibited across and generalized to other settings such as school. Some research has found that children tend to form friendships that are closer, more stable, and involve less difficulties
when their parents have taken an active role in arranging for and stimulating peer relations and opportunities (Ladd & Hart, 1992).

However, parental control and initiation is not the sole determining factor in the number and frequency of peer interactions. During preschool, children begin to sponsor their own opportunities to play informally with peers. Children initiate their own peer contacts and also receive play invitations from peers (Ladd & Hart, 1992). The ease in which children are able to make this transition may justifiably be based on parental support and modeling of the process of setting up these interactions. These efforts may ultimately lead up to the point where the child individually makes a personal choice to interact.

In view of these significant factors, a study was conducted by Ladd and Hart (1992) investigating the extent to which parents engage in this socialization activity, in addition to children’s own initiation attempts, and the potential effects on early peer relations and social competence. The sample for the study consisted of 83 preschool children (50 boys and 74 girls) between the ages of 3.5 and 5.6 years of age residing in a southern community. All of the participants were enrolled in one of four center-based preschool programs. A family information questionnaire was distributed at the preschools at the beginning of each assessment period. Questions were related to parents’ perceptions of the importance of informal peer contacts for their children, family structure and family demographics. Sociometric ratings and nomination procedures were utilized to assess children’s peer status among classmates at each time of measurement. Parent telephone logs were also utilized to assemble a collection of parents’ initiation practices and children’s non-school peer contacts for a total of 8 days during each
assessment period (16 days total). Interviews were conducted in which parents were to provide an hour-by-hour account of their child’s non-school social activities (including contacts with peers). Interviewers recorded the duration of each reported contact (minutes), the location of the contact, and a description of the involved peer or peers. Along with the basic data, questions were used to ascertain who had initiated the contact, the degree in which the parent involved the child in initiating the contact, and also the degree to which the parent involved the child in planning the contact. Lastly observations of children’s behavior at preschool were documented. Each child was observed for a total of 90 scans during pre-play periods.

Data was examined through analyses of variance (ANOVA) to determine whether initiation frequencies differed by sponsor (e.g., parents, children, or peers) and by age/gender of the child for each type of sponsor. Most of the families included in the sample, (81% of the parents) had arranged one or more peer contacts during the course of the investigation. Parents who placed greater value on informal peer-play activities had a tendency to initiate more of these experiences and opportunities for their children. Such data lends support to the fact that parents’ values may motivate different socialization practices which in this case was evidenced by the number of opportunities they had created for their children.

These data obtained from the study suggest that parents’ initiations may be associated with several aspects of child competence. In essence, by arranging frequent peer contacts parents are providing a context for children to exhibit and learn prosocial behaviors with peers and promote sociability. Longitudinal studies are needed to determine the age at which parents begin to initiate peer contacts for children and when
during development the responsibilities are transferred to the child. Beyond this, the
efforts of parents and children to arrange informal play activities should also be examined
with more diverse population samples.

Peer Play Interactions and Measurements of Child Development

Research currently supports that the development of social competence is a
critical task for young children to accomplish in order to function successfully in school
and in the social world, since socially competent children are able to recognize and
respond to the established norms operating within both outside and in the school context
(Gagnon & Nagle, 2004). Evaluation of preschoolers constitutes a fundamentally
different task than assessing school-age children for a number of reasons.

First, the behaviors of these children within testing situations can affect the
accuracy of results as their abilities and behaviors do not remain static until later
developmental stages. Second, preschoolers’ cognitive abilities depend to such an extent
on other skills, it is pertinent to examine the various domains of functioning, including
social competence, emotional expression, self-regulation, coping with new situations and
challenges, and play behavior, rather than focusing solely on cognitive development
(Gagnon & Nagle, 2004). Assessment in this way is convergent, and allows the
involvement of formal and informal measurement tools to enhance social and treatment
validity by providing the most valid estimate of developmental functioning at specific age
ranges (Fisher, 1992; Gagnon & Nagle, 2004). Scholars have attempted to measure social
competence for a number of years through the use of rating scales completed by teachers,
parents and students in addition to, direct observations and sociometric assessments.
Despite the source of data, it is important to define the construct of social competence as reflecting the integrity of children in different developmental periods (Pellegrini, 2000).

Assessment tools must be consistent with recommendations outlined in Public Law 99-457, which state that they must have treatment validity, documented reliability and validity, and involve the active participation of parents in order to obtain a comprehensive evaluation. In addition, assessments should be multifaceted in that information should be gathered from multiple sources, instruments, and settings taking an ecological perspective that allows examination of the child’s developmental skills within social, school, and family contexts (Gagnon & Nagle, 2004).

The evaluation of play reveals children’s’ patterns of interactions with both caregivers and peers. Play-based assessments may be a valid substitution for other commonly used measures for school-aged children in their ability to provide information not only on developmental skills but also to reflect the importance of parent-child relationships, and the significance of play as a primary context for young children’s learning and development across settings (Gagnon & Nagle, 2004). Third-party ratings may also be incorporated because they do not rely on the child’s cooperation, which is often a noted hindrance in the assessment of preschoolers. This type of assessment also allows a broader range for acquiring information from multiple sources. In this way play-based assessments may be considered functional, since the results they produce may directly be linked to intervention strategies for young children.

There is a need for the continuation of evaluating psychometric properties of play measures. Assessment of children’s play behaviors are a measure designed to be naturally consistent with recommendations for preschool assessment. Through a study conducted
by Gagnon and Nagle (2004) negative correlations were found between ratings of the Play Disruption and Play Disconnection and the social skills factors of children’s behaviors. Participants were 85, four-year old children (43 male and 42 females), of mainly Caucasian decent (80 children), enrolled in an early intervention program identified to be at risk for future problems in school. Parent and teacher ratings of children’s play with their peers were assessed with respective versions of the Penn Interactive Peer Play Scale (PIPPS, Fantuzzo, Mendez, & Tighe, 1998). The PIPPS is a 32-item rating scale designed to differentiate children who display positive versus negative behaviors during play with peers. The three factors that are measured include Play Interaction (prosocial behaviors and strengths in play), Play Disruption (aggression and nonsocial play), and Play Disconnection (withdrawn behaviors and lack of participation). The Vineland Social-Emotional Early Childhood Scales (SEEC; Sparrow, Balla, & Cicchetti, 1998) was also administered to parents and teachers of children in the study. This measure was used to examine social-emotional development.

Multivariate techniques were utilized in order to analyze the obtained data. Reported findings from the study showed that preschoolers rated as exhibiting high levels of Play Interaction on the parent version of the PIPPS were also rated high on the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). Positive correlations emerged between the Play Interaction and the Self Control, Interpersonal Skills, and Verbal Assertion scales on the SSRS. Negative correlations were found between ratings of the Play Disruption and Play Disconnection and the social skills factors of children’s behaviors.
These findings are relatively straightforward and consistent with previous findings from other studies. Children who scored high on Play Interaction convey children’s play strengths; including prosocial skills such as helping and encouraging others to participate in play and were found to rate positive in terms of their social-emotional skills. Significant correlations were also found between parent and teacher ratings on the PIPPS and the SEEC to reflect the important relationships not only between the two measures, but also between the two involved constructs: peer interactive play and social-emotional development. Given the established importance of social emotional development to children’s success in school, knowledge of children’s play behaviors in this context should be proven especially valuable. For children who display poor play behaviors or who fail to engage appropriately in play with peers, specific play-based interventions should be developed to improve these behaviors. Helping children learn to interact more positively with peers during play may positively affect their success in school. The psychometric integrity of the PIPPS was further validated and extended beyond the initial normed sample (African-American children residing in an urban area enrolled in Headstart programs) by including a sample of primarily Caucasian children living in a more rural area.

Although children’s competency in interacting with peers has been associated with long-term school success, little is known about how this competency may relate to other learning readiness domains. The findings of this research are of particular interest for lower SES children as it has been well established that poor children are more likely to have difficulties in school, ranging from behavioral and emotional difficulties to retention and poor school performance. Coolahan, Fantuzzo, Mendez and McDermott,
(2000) examined how multiple dimensions of interactive peer play relate to constructs of learning behaviors and problem behaviors in low-income, minority children specifically. The researchers hypothesized that positive play interactions would enhance learning behaviors, including competence, motivation, persistence, and attitude towards school, while negatively correlating with classroom behavior problems. Disruptive and aggressive peer interactions would correlate positively with inattentive-passive classroom behavior and negatively with learning behaviors, particularly in areas such as attention and task-related persistence. The participants of the study were 566 preschool children enrolled in a Head Start program in a northeastern U.S. city. Children ranged in age from 44.8 to 71.8 months (M = 59.4). Teachers were asked to complete the Penn Interactive Peer Play Scale (PIPPS: Fantuzzo et al. 1995), and either the Preschool Learning Behaviors Scale (PLBS: McDermott, et al. 1996) or the Conners Teacher Rating Scale-28 (CTRS-28; Conners, 1990) which are measures used to assess successful and faulty learning patterns in young children. Children who exhibited high interactive play ratings received high social skills ratings from teachers and were indicated as being well liked by peers, and engaged during play sessions. Children who were engaged in disruptive play received ratings of low self-control and were more likely to be engaged in solitary play. Those children who were rated as disconnected in play did not appear to be well accepted by peers and were not engaged during play sessions. Canonical and redundancy analyses were performed to investigate the relationship between the PIPPS factors and those of the PLBS and CTRS-28.

Children who exhibited high interactive play ratings received high social skills ratings from teachers and were indicated as being well liked by peers and engaged during
play sessions. Children who were engaged in disruptive play received ratings of low self-control and were more likely to be engaged in solitary play. Those children who were rated as disconnected in play did not appear to be well accepted by peers and were not engaged during play sessions. Greatest overlap was found with Play Disruption correlating negatively with the Attitude factor, and Play Disconnection correlating negatively with the Competence Motivation factor. Overall results showed that the findings were aligned with the original hypotheses proposed by the researchers of this study. In summarization, children who demonstrated positive interactive play behaviors were actively engaged in classroom learning activities and displayed higher levels of competence motivation, attention, persistence, and withheld a positive attitude toward learning in school than did those children who were less engaged in peer play. The present study indicated that peer interaction difficulties were tied to poor learning behaviors, including an unwillingness to accept assistance from the teacher and lack of effort put forth when faced with new challenges. The findings indicate a need for longitudinal data to evaluate ways in which peer relationships relate to motivation towards learning and school functioning during different developmental periods.

Lastly, the findings of this study have implications for school psychologists and practitioners. Specifically, they indicate that children’s success at peer interaction is related to the quality and level of engagement in the classroom context, suggesting that greater opportunities for successful peer play interaction may enhance social competence in addition to academic adjustment. School psychologists should also attend to the assessment of peer interaction difficulties along with teachers as a marker for early school difficulties and encouraging peer interactions amongst children with varied levels
of interactive play as a successful intervention for children who may display inappropriate classroom behaviors (Fantuzzo et al. 1996).

A study conducted by Fantuzzo and McWayne (2002) investigated the multivariate relationships between peer-play behaviors as evidenced in the family and neighborhood environments. More specifically, peer-play relationships within the family context were selected as a focus for this study to emphasize the developmental-ecological theory and research supporting the importance of primary socialization experiences as a foundation for classroom learning. Overall, meaningful relationships were obtained across family, teacher, and independent observer reports informing the continuity of peer-play behaviors across home and school settings as well as relationships to children’s engagement in preschool classroom learning. Children exhibiting interactive play with peers at home (e.g. directing play activity, helping other children settle conflicts, etc.) received high ratings of collaborative play by classroom teachers. These same children were also reported as having positive approaches to learning as evidenced by their increased tendencies at appropriately managing frustration, cooperate in learning groups, ask for and accepting help. The level of interactive peer play that was displayed was also associated with teacher reports of children’s motivation to learn and children’s display of autonomous behavior (e.g., initiation of tasks, independent exploration).

Children’s initiation of tasks and motivation to succeed are two important factors contributing to preschool success and later positive learning experiences. On the other hand, children who evidenced disruptive peer-play experiences at home and in the neighborhood were reported as being disruptive in the classroom with peers and during the learning process. Such children exhibited tendencies such as starting
arguments/fights, physical aggression and verbally offending others during play at school. The overall results are consistent in supporting evidence that peer social and learning-related competencies are interdependent for younger children. These research findings also indicate that parents can contribute quality information for facilitating communication with teachers regarding children’s needs and competences that may impact the experiences of classroom learning. Future research must also closely consider how family variables impact and/or mediate children’s play and school adjustment.

**Gender Issues in Measures of Social Competence**

Additional variables to consider when assessing socio-emotional characteristics in children are reported gender differences and the biases that may drive informant ratings of social competency measures. Issues regarding disagreement-agreement factors among informants are also complicated by the fact that the amount of agreement will vary with the age and sex of the child (Mash & Barkley, 2003). In a study conducted by Elliott et al. (1989) results from the teachers’ ratings on the SSRS indicated consistent significant mean differences between boys and girls. Girls appeared to exhibit more frequent prosocial behaviors and boys were more frequently displaying interfering or negative behaviors. Considerable evidence also suggests that temperamental characteristics are also a predicting factor of childhood adjustment (Bodzinksy, Elias, Steiger, Simon, Gill, & Hitt, 1992).

Boys and girls are suggested to have differing physiological responses to social interactions which further contribute differences in to adjustment outcomes. In evocative social interactions boys are more likely to react aggressively to peers whereas girls are more likely to actively and calmly defend themselves when faced with peer conflict.
Along the same lines, boys are also depicted as less likely to utilize problem-solving strategies to seek out assistance from others when put into stressful situations. As a result, they generally appear to score lower on measures of regulation and delay of gratification when compared to girls (Bodzinsky et al. 1992). On the other hand, girls’ play tends to be oriented more toward maintenance of cooperation, concordant, and close relations (Fabes, Shepard, Guthrie, & Martin 1997). Gender differences seen in arousability and regulation of arousability may be related to the high levels of physical play and dominance that contribute to the qualities linked to boys and not girls. Another component considered in the proposed study is the social grouping process that is assumed initially in young children. Boys are also more likely to play in larger groups of mainly other boys where strong arousal is elicited and play is generally characterized by physical contact. Additionally instances of play usually take place further away from adult supervision. Moreover, girls tend to play more often in clusters of two or three and under the close supervision of adults (Fabes, et al. 1997).

Fabes et al. (1997) discuss factors that may contribute to the perceived differences in the behaviors of boys and girls. Researchers proposed that gender differences were evidenced in temperament arousal and affected by their participation in same-sex peer play interaction groups. Predictions were made that play with same-sex peers would moderate the relation of temperamental arousal to children’s problem behaviors and adjustment for boys and girls. For arousable boys, it was hypothesized that behaviors of hostility and disruptiveness would be exacerbated the more they interacted with other boys. In contrast, girls who were arousable play with same-sex peers were expected to
decrease the likelihood of the continuation of externalizing behaviors toward the
generation of more gender expected behaviors.

Participants were 57 children (29 boys, and 28 girls) enrolled in six preschool or
kindergarten classes at a university-based day care facility. Brief behavioral observations
of children’s free play were assessed everyday over a 3 month period. Buss and Plomins
(1984) Temperament Survey were administered to teachers in order to describe each
child’s temperament using 18 items. In addition, secondary teachers were requested to
complete the Conduct Problems Prevention Research Group’s (1993) Problem Behavior
Checklist for determining the level of externalizing behaviors being exhibited by the
children in the classroom. Each child’s same-sex peer play score was derived by
calculating the number of same-sex interactions for that child by his or her total number
of observations to reflect the proportion of free-play interactions that children spent with
same-sex peers. Regression analyses were then conducted separately for boys and girls.

Generated results indicated that children’s temperamental arousability (i.e., the
degree to which children were reactive to evocative contexts and stimuli/degree to which
they could regulate this reactivity) interacted with their tendencies to play with either
same or opposite-sex peers. Importantly, these relations varied for girls and boys. On one
hand, boys who were rated high in arousability and who were observed to play more
frequently with same-sex peers showed the greatest levels of exhibiting problem
behaviors. It appeared that boys who were easily aroused were at an increased risk of
becoming over-aroused and dysregulated in the context of play with other boys.

This finding may indicate that highly arousable boys make seek out other highly
arousable boys who also engage in rough and physical kinds of play that they like.
Younger children may be more likely to play and relate to those that are the most similar to themselves in regards to styles of play behavior. Girls demonstrated a very different pattern in the interaction of arousability and same-sex peer play. Highly arousable girls who played more with same-sex peers appeared to lower their level of rated problem behaviors. Thus, for girls high in arousability, playing with other girls seemed to inhibit their dysregulation for those who were able to move up in peer status. Those girls who were unable to lower their arousability levels had relatively low peer status ratings. The results suggest that girls’ peer groups are effective at moderating the likelihood that originally arousable girls display problem behaviors. Girls may not accept others into their play groups if they do not adhere to the relatively calm and friendly interactional style that is found in most girls’ play groups. Although most studies on peer interactions with younger children appear to focus on groups of same-sex peers and although developmentally children at this age do exhibit this grouping most commonly, research may be warranted in examining the outcomes of children who engage in more opposite-sex peer interactions. Future studies may seek to employ methods in which boys are mediated in their disruptive behaviors, and whether play between opposite-sex peers alleviates problem behaviors or further enhances them.

Although the study of social skills across genders has promoted the expression of prosocial behaviors, it is still unclear as to what influences children to behave prosocially. Difficulties attributing to the collection of such data include the variety of studies that use diverse research methods while also involving a wide range of ages. Furthermore, factors such as children’s individual characteristics and socialization experiences have for the most part been examined independently of each other (Farver & Branstetter, 1994). In
response to mixed findings relating individual variation in young children’s social
behavior, Farver and Branstetter (1994) extended prior work by examining preschoolers’
naturally occurring responses to their crying peers in an attempt to decipher how
children’s individual characteristics, and experiences with teachers and peers may shape
their responses. Researchers hypothesized that both gender and age would contribute to
increased prosocial behaviors including helping and comforting behaviors, based on
findings indicating that with maturity, children develop higher levels of cognitive
functioning, social skills, and moral reasoning than younger children. However, of more
interest was the fact that girls were expected to respond more prosocially often than boys.
Social competency levels were suggested to increase children’s level of prosocial
behavior. Socially skilled children tend to be better at perspective taking, or surmising
what a peer may be thinking or feeling, thus, girls were hypothesized to hold a general
higher rating of social competency compared to boys. Therefore researchers beliefs were
aligned with stereotypical behaviors expected of girls.

Guidelines for Early Childhood Assessment

In a situation where a child has not acquired adequate social skills it is very likely
that it will be reflected in negative child-adult relationships as well as negative child-
child relationships (Elliott, Barnard, & Gresham, 1989). Thus the identification and
treatment of socially delayed or at-risk preschool children warrant the attention of
teachers, parents, and psychologists alike. Up until this point, much of the review has
illustrated important aspects of the normative development of social skills. However,
many practical issues in the assessment and remediation of social skills deficits in
preschool children have scarcely been addressed. Such factors include the identification
of behaviors that are considered to be important to parents and teacher of young children, the use of parents and teachers in the assessment of preschoolers’ social skills and self-concept, and also the influence of child, family and teacher background variables on social behavior and development.

Young children’s social competencies have been hypothesized as key predictors for latter school adjustment, particularly when it is matched by higher teacher and parental expectations for success (Raver & Zigler, 1997). Therefore it is important to examine how parents and teachers rate such measures when evaluating young children. Similarly, research has repeatedly indicated that children who can remain emotionally positive during the course of group interactions are viewed by teachers and parents alike as more likeable and easier to get along with (Denham & Holt, 1993). These are all concerns confronting many educators and psychologists involved in the delivery of psychoeducational services to preschoolers, yet there is a lack of published literature which addresses these issues (Elliott, Barnard, & Graham, 1989).

The development of assessment measures must meet certain criteria to ensure that the instruments are based on sound scientific methodology. Practitioners are encouraged to use assessment methods that possess qualities of reliability, validity, practicality, and social validity. However, few social skill assessment methods meet all these criteria, and even fewer for those tailored for preschoolers. Although many measures have been developed to measure young children at risk for behavioral issues most of them (a) focus on problem behaviors as opposed to prosocial behaviors, (b) have limited normative data, and (c) have been designed only for parents or teachers (Elliott, Barnard & Gresham 1989). Moreover, there is a tendency for assessment data obtained from different sources
to correlate moderately at best (Achenbach, McConaughy, & Howell, 1987) as was evidenced in the previously discussed study conducted by Elliott et al. (1989), where correlations between parents and teachers on ratings of the SSRS indicated modest relationships it is still recommended to gather multiple sources of information when assessing social behaviors that occur in multiple settings. Teacher reports and parent reports each offer a unique perspective on a child’s social-emotional and behavioral functioning. Ratings are most effective when taken from various informants in a comprehensive assessment.

*Parent and Teacher Reports*

Increasing numbers of children continue to be enrolled in daycare and preschool settings as parents enter the workforce, providing early access to peer interactions. Given this trend, it has become pertinent for educators to develop an understanding of the nature and value of children’s peer interactions and the role these relationships play in the development of social, cognitive, and emotional development (Gagnon & Nagle, 2004). Assessment instruments should have the capacity to establish a link between the home and school. Reports of play behavior provide the ability to track important outcome measures for teachers and parents to better understand their children and for interventions to be designed for young children.

A multi-source, multi-setting, multi-method social-emotional assessment design for young children must focus heavily on a combination of informant-derived data since self-report measures and interviews directly with the child are typically of little use and of questionable accuracy (Merrell, 1996). Pianta and Walsh (1996) argue that a successful transition into kindergarten requires the collaboration of parents and teachers.
while emphasizing the child’s development. This is of particular importance for children who may evidence ethnic and cultural differences between the children’s families and their teachers since the education that takes place in the family is a powerful prerequisite for success in school (Ramey & Ramey, 1999). In addition it is important to be aware of teacher expectations and their perceptions of young students. Children they perceive to be academically and socially more advanced may be treated differently and tend to outperform their peers who are perceived as less competent regardless of whether this may actually be the case (Cooper, 1979; Saracho, 1991). There are clearly differences in teachers’ perceptions of children’s “readiness” and competence ability levels. It would be much more beneficial to create such perceptions in collaboration with parents and work toward a achieving a similar level of competency in young children.

Furthermore it is important to view readiness for school as related to the linkage of home-school expectations and to the social and cultural components that are considered important by both teachers and parents (Tudge, et al. 2003). An assessment of a child’s overall functioning must include the home and school settings, because a child may demonstrate strengths in one context but experience difficulties in a different setting.

Tudge et al. (2003) utilized Bronfenbrenner’s Process-Person-Context-Time (PPCT) ecological model to focus on the relations between school-relevant activities of preschool-aged children and teachers’ subsequent perception of children’s competence upon entering school. The aim of the research was to examine the relations among young children’s engagement in certain types of naturally occurring activities, parents’ values, and teachers’ perceptions of competence once having entered school.
Participants were 20 white preschoolers drawn from two communities in a southeastern city in the United States. The children were observed wherever he or she was present (home, childcare center, friends’ houses, public places, etc) for 20 hours over the course of 1 week. Parents were administered the Kohn’s Q-Sort measure of parental values (Kohn, 1977) and asked to rate the three most and three least important characteristics for their child from a provided list. Approximately 3-4 years after the children had been observed their teachers were asked to complete the teacher form of the Social Skills Rating Scale (SSRS-T, Gresham, & Elliot, 1990). Findings reported that children who had initiated more academic lessons as a preschooler were more likely to be perceived as being competent in year 3, while those who had initiated more conversation with adults were significantly more likely to be perceived as competent in their first years of school (year 2). This research suggests that preschoolers who initiate and engage in activities that involve interaction with adults are more likely to be perceived as competent by teachers in the first years of school.

It is important that teachers and other educators in particular, are aware of the complex nature of child-to-child interaction and its direct relationship to children’s social development. Teachers are decision-making professionals who are able to constantly observe children’s behavior, form hypotheses from their observations and interpretations towards the implementation of interventions based on what they have learned. Teachers are able to enhance social development in their classrooms through establishing contexts, modeling behavior, coaching social strategies, and teaching social awareness (Fisher, 1992). The interaction of teachers with young children affects children’s social and emotional outcomes either negatively or positively (Raver & Zigler, 2002).
Teachers in preschool classrooms are faced with a substantial number of students who lack important social and emotional competencies and whose behavior is already problematic or are at risk for developing problematic behaviors. Teachers and child care providers need assistance in promoting greater social skills in children and reducing challenging behaviors in the classroom both to help individual children and to facilitate a positive learning climate. Developing accurate measures of social competence will generate areas to target and further promote (Raver & Zigler, 2002). Renewed interest in defining and accurately measuring social competencies have been sparked by a growing awareness of the need to tap these multiple dimensions when assessing the cost-effectiveness of intervention programs (Raver & Zigler, 1997).

Current Assessment Methods

In the past, the most frequently used technique for obtaining popularity data amongst children was the use of picture sociometric methods. Despite the popular use as a measure of social competence in preschoolers, there are many points open to criticism (Connolly & Doyle, 1981). Low reliability estimates are frequently reported for this age group, inconsistent relationships with validating criteria have been reported, and also higher rates of social interaction and mature social cognitive functioning are not uniformly correlated with sociometric results (Connolly & Doyle, 1981). Since then, many research attempts have been made to create alternate methods of measuring a child’s peer group status. In the study conducted by Connolly and Doyle (1981) a comparison was made of the predictive validity of the classroom teacher’s rank ordering of the children in terms of relative popularity as a playmate with that of the traditional sociometric measure of popularity. Findings reported that the teacher-based popularity
measure possessed greater predictive validity than did the sociometric popularity measure.

Although the implications of the study indicate that teacher ranking measures are much advantageous in regards to expense and utility, there are concerns with possible halo effects, as teachers were required to complete both social competence measures and rank order measures on the children. The study does however support research indicating that sociometric measures may not yield accurate results in measuring social competence in preschoolers, and that practitioners should be advised to use these measures in conjunction with other methods or revert to using alternate methods.

In a study conducted by Elliot et al. (1989) researchers examined the use of a multi-rater behavior scale, the Social Skill Rating System (Graham & Elliott, 1992) with a diverse sample of preschoolers to test the utility of cross-informant (i.e. parents and teachers) ratings of prosocial and problem behaviors. The parents and teachers of 212 preschool children, (aged 31 to 66 months) from four states, (Florida, Louisiana, Nebraska, and Wisconsin) were volunteers in this study. Three behavior rating scales were utilized: the Social Skills Rating System- Teacher (SSRS-T), the Social Skills Rating System- Parents (SSRS-P), and the Burks Preschool and Kindergarten Inventory (Elliott et al. 1989). Areas such as Cooperation, Social Initiation, Self-Control, and Interfering Behaviors were assessed. Correlations were computed to determine the relationships among the three rating scales and also to compare the ratings of parents and teachers.

At the conclusion of the study both sets of adults were reported to have ranked the importance of cooperative behaviors as being the highest, followed by self-control, and
then social initiating behaviors as being very pertinent in the acquisition of good social
skills. A clear sense of convergence for the frequency of social skills was not evident
between parents and teachers’ ratings. Results indicate that the values of these parents
and teachers result in some specific behavior expectations that differ. However, this is not
surprising when one considers the differences in settings and the number and types of
social contacts that are possible in each of the settings with varying individuals present.

These findings are consistent with previous research on the notion parent and
teachers’ ratings of children further reiterates the unique information that is gathered by
multiple informants toward the understanding of preschool children’s social behaviors
(Elliot, et al. 1989). In particular for young children it may be even more pertinent to
obtain multiple ratings across various settings, as behaviors are likely to be transient and
variable across different situations and with different people more so than older children.
Young children are in the process of establishing their boundaries and exploring their
environments through the interpretation of social cues and through their perceived
reactions of others. Children may impress upon teachers to behave in certain ways in the
classroom, however the interaction and influence is bidirectional in the home, school and
alternate settings. Measures must be sensitive to and attempt to capture the variation by
accurately delineate the developing processes of young children.

Findings of the above research studies support the notion that social competence
is an area which widely influences various other domains in early childhood.
Furthermore, research findings support that play behavior is an important asset to young
children in experiencing and acquiring necessary social skills for future academic and
social success. Given the importance of social emotional development in the early years
to children’s success in school and social interactions, knowledge of child’s play behaviors in this context should prove especially valuable and telling (Gagnon & Nagle, 2004). In addition, input from teachers and parents are necessary in a comprehensive assessment of preschool students. Open communication between parents and teachers through play-based assessment measures may further facilitate in targeting areas that are necessary for improvement both in the home and school settings. Data obtained from parents and teachers may contribute to aspects that influence individual ratings and reveal factors that may contribute to the disparity that has continually been found in measures completed separately by teachers and parents. Among the many factors, gender effects may be a very relevant area that is worth further exploration. The broad area of social competence offers an avenue for educators to explore and gather information towards providing effective early intervention services to young children.

**Purpose of the Study**

By comparing scores on a norm-referenced play scale with corresponding scores on a standardized measure of early social emotional skills, which holds high regards in the field, information on the utility of a play-based measure with a sample of preschool children may be provided. The purpose of the present study also seeks to further evaluate the construct validity of the parent version of the Penn Interactive Peer Play Scale (PIPPS) and to compare it with the teacher version in a population that extends beyond the initial standardization sample. Previous research has validated this measure to include a sample of primarily Caucasian children living in a more rural area. This finding indicates that the PIPPS can be used validly with other demographic groups of preschool children.
Another goal of this study is to accentuate the importance of parental input for obtaining a more accurate picture of peer play interactions and acquiring of social skills. The opportunities created by an assessment process may foster parent-teacher communications while encouraging parental involvement in their children’s education early on. Through forming partnerships between parents and incorporating their views into the function of the classroom, early education programs can begin to bridge the discontinuities that are present in the home and school contexts. Play behavior measures are convenient and accessible for individuals in obtaining data that may be acquired across settings. This common information and knowledge may readily start dialogue and be shared between parents and teachers about important emerging developmental competencies in preschool children on a frequent basis without being intrusive (Fantuzzo et al., 1998). Researchers and professional groups have been adamant in stating that early childhood assessment should provide information that is not confined to providing categorical eligibility determination but information that is linked directly to intervention planning (Bracken, 2000). Information obtained from play-based assessments can be directly linked to and translated into recommendations and Individualized Education Plan (IEP) and objectives.

Another strength associated with using play-based assessment is the ease with which parents can be brought into the assessment/intervention process. Best practices advise that assessment with young children include family and the importance of involving parents in the entire assessment process should be recognized. Important information about parent-child interactions may also be obtained through such forms of play-based assessment (Bracken, 2000).
In addition, although the focus of transitioning into kindergarten has frequently been from the perspective of the school, family involvement and informal education that takes place in the home setting is also a powerful prerequisite for success in formal education. This further supports that a successful transition requires establishing strong connections between parents and teachers in which the emphasis is on the child’s development (Tudge et al. 2003). The PIPPS therefore demonstrates several advantages over other assessment instruments because of its ability to: (1) assess a primary competency or early childhood; (2) measure congruent constructs among the parent and teacher versions, and (3) attend to children’s cultural contexts. The PIPPS has demonstrated its usefulness as an instrument to evaluate preschool age children as presented in the literature.
Chapter 3

Method

Introduction

The purpose of this study was to explore the relationship between play behavior and social competence in preschool children. In addition, this study aimed to determine the correlation between ratings of social competence and play behavior obtained from parents and preschool teachers while examining whether frequent communication between the parties played a factor in the degree of correlation obtained on measures. This chapter presents information regarding participants who were involved in this study, the method through which data were collected, and the analyses that were conducted.

Participants

The participants in this study were 32 pairs of preschool teachers and parents/guardians who rated preschool students enrolled at three area preschool centers located in and around West Central Florida. Preschool students enrolled in all of the classrooms ranged in age from 3-5 years and those students who were proficient in either English and/or Spanish were included in this study.

The three preschool centers that participated in this study included Preschool 1, a local university-based preschool center, and two local preschools: Preschool 2 and Preschool 3. The teachers employed at all three preschools were recruited for participation. All of the preschool teachers involved in this study were employed full time.
in the classrooms and had equal access to parent communication as well as student interactions and opportunities for observation. In addition, participating students met the criteria of at least 4 months of participation in the preschool classrooms. The purpose of this criterion was to ensure that teachers had adequate knowledge of the children and had sufficient social interactions and observations considered representative of the child. Additionally, this time requirement allowed for teachers and parents to have had sufficient time to establish a pattern of communication. Students who were excluded from participating in this study had been enrolled less than 4 months in their preschool classrooms, were outside of the 3-5 year age range, and/or were native speakers of languages other than Spanish or English.

Preschool 1 is an educational research center for child development located on a university campus in West Central Florida. This preschool primarily provides services for children 2 - 5 years of age whose parents are university students, faculty and staff, or from the community at large. The preschool also houses a small school age program. The Center's program provides an environment that fosters many play opportunities. The curriculum emphasizes developmentally appropriate, active, and concrete experiences for children. Emphasis is placed on the entire process of learning rather than focusing on the outcomes. Experiences are provided so children are exposed to opportunities rich in social, emotional, physical, and cognitive domains. The outdoor play area encourages climbing, balancing, riding wheel toys, sociodramatic play, and gardening. This developmentally appropriate program stresses hands-on learning. Particular emphasis is placed on: appropriate play experiences; cognitive development; emergent literacy;
creativity and exploration; health promotion and physical development; and social development.

Two preschool teachers were employed at Preschool 1 with students eligible for this study. Although both had originally agreed to participate in this study, only one of the teachers was able to commit due to personal circumstances. Within this classroom there were 14 students identified as meeting all of the exclusion/inclusion criteria. Ten students (71%) returned with completed parent and teacher rating scales and were included in this study. Total enrollment of students at this school is 68 students. Demographic data indicate that 45% of students are considered White, non-Hispanic, 20% Black, 35% Hispanic, and 10% are classified as Other.

Preschool 2 is an independent Montessori School that serves Pre-K through 8th grade. The curriculum consists of a combination of Montessori principles and practices with other innovative educational techniques, with particular emphasis on independent and small, flexible learning groups which are tailored to the individual needs of the child. Daily lessons include reading, math, language arts, science, social studies, history, Spanish, library skills, computer skills, environmental studies, multicultural studies, conflict mediation, and practical life skills. The mission of Preschool 2 is to stimulate the natural curiosity of the child, nurture a love of learning, and build self-esteem and support through a sense of gained independence and responsibility. The ratio of teachers to students is 5:1 and allows for vast individualized attention. The demographic information for Preschool 2 indicate that among a total population of 61 enrolled students, 73% are considered White, non-Hispanic, 9% Hispanic, 9% Asian/Pacific Islander, 7% African-American, non-Hispanic, and 2% Native American/Native Alaskan.
At this school, both preschool teachers had indicated willingness to participate and gave consent for participation. Nineteen students were identified as eligible participants for this study. Twelve students (63%) returned completed packets of parent rating scales and were included in this study.

Preschool 3 is a preschool center that underscores the importance of empowering children to strengthen their talents and pursue their passions. This school serves students enrolled in Pre-K through 12th grade. Their unique program is designed to challenge students while providing a safe, nurturing, and caring environment. The framework of this curriculum emphasizes that equal importance be given to four human functions: thinking/cognitive, feeling/emotional, physical/sensing, and intuition. Children are exposed to all modes of these functions and they are promoted through opportunities towards developing independence, responsibility, consideration, and cooperation.

Features of the school include: small classes with a student-teacher ratio of 10:1 or better, free acceleration allowing students to progress at their own speed, broad varied rich curriculum, dual-enrollment program with local universities, full time guidance program, emphasis on self-directed learning, and foreign language classes which begin at the age of 3 years. The early childhood program has established a responsive environment with the provision of advanced learning opportunities. The program’s goal is to instill a love and excitement for learning and to develop and optimize growth in young students. The demographic information of Preschool 3 data indicate that within a total enrollment of 73 students, 75% of the students are considered to be White, non-Hispanic, 9% are Hispanic, 9% Asian/Pacific Islander, and 7% Black, non-Hispanic. From this particular school, there were two preschool classrooms with 17 identified preschool students who
were eligible for participation. Ten students (59%) returned completed parent forms and were included in this study.

The number of participants for this study was selected based on the sample participants accessible to the researcher. A power analysis was conducted in order to determine the N (sample size) necessary to obtain a power of 0.8 for various effect sizes. Cohen (1992) provided guidelines from which to interpret practical use for standardized effect sizes; a small effect size was defined as 0.10 or lower, a medium effect size was defined as 0.30, and a large effect size was defined as 0.50 or higher. The proposed sample size was therefore considered adequate if the effect size obtained was large. For example, a sample population of 30 pairs of teachers and parents were speculated to provide a statistically significant effect if an effect size of \( r > 0.5 \) was established (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Test</th>
<th>( \alpha = 0.05 )</th>
<th>( \alpha = 0.05 )</th>
<th>( \alpha = 0.05 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant ( r )</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Mean difference</td>
<td>26</td>
<td>64</td>
<td>393</td>
</tr>
</tbody>
</table>

In total across the three preschool centers 50 students met the exclusion and inclusion criteria set forth for this study. Out of the 50, a total of 39 (78%) were successful in returning consent forms by the requested date. Although all 39 students were given packets of parent rating scales, a total of 32 students (82%) returned with
completed packets of parent rating scales within the allotted time period. In summary, a total of 50 students were found eligible to participate in this study according to exclusion/inclusion criteria across the three preschool centers, and 32 students returned with completed packets of parent rating scales (64%). There were no instances where students had returned with parent rating scales and teachers had not completed teacher rating scales. Table 2 provides the response rate by preschool and Table 3 presents additional demographic information obtained for each preschool center.

Therefore, the present study met the minimum requirements of sample size, which enhanced the power of the statistical analysis. Among the children for whom the rating scales were completed, 39% were females and 61% were males. Participating teachers and parents completed all items on the scales so that all rating scales were included in the data analysis.

Table 2

Response Rate by Preschool Center

<table>
<thead>
<tr>
<th>Preschool Center</th>
<th>Total Number of Eligible Students</th>
<th>Total Packets Completed</th>
<th>% Packets Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool 1</td>
<td>14</td>
<td>10</td>
<td>71</td>
</tr>
<tr>
<td>Preschool 2</td>
<td>19</td>
<td>12</td>
<td>63</td>
</tr>
<tr>
<td>Preschool 3</td>
<td>17</td>
<td>10</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>32</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>

Table 3

Demographic Information by Preschool Center

<table>
<thead>
<tr>
<th>Preschool Center</th>
<th>Gender</th>
<th>Age Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Female</td>
<td>% Male</td>
</tr>
<tr>
<td>Preschool 1</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Preschool 2</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>Preschool 3</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
Instrumentation

Parent-Teacher Communication Form

The Parent-Teacher Communication Form (See Appendix A) was developed by the researcher of the study in order to collect additional information about the participants. This form includes three questions requesting teachers to indicate their relationship to the child, the child’s sex, and the number of informal and formal parent-teacher communications occurring either on a daily, weekly, monthly, and/or semester basis.

Preschool and Kindergarten Behavior Scales

The Preschool and Kindergarten Behavior Scales-2nd edition (PKBS-2; Merrell, 2002) is a norm-referenced, standardized behavior rating scale that is designed for use in evaluating social skills and problem behaviors of preschool and kindergarten children ages 3-6 years in a variety of settings with multiple informants. Included items are developmentally sensitive and appropriate for use with young children. The PKBS-2 is estimated to take approximately 10-12 minutes to complete and contains 72 items that are completed by the parent/guardian or teacher of a child. This scale is available in English and Spanish for both teacher and parent versions. The PKBS was recently revised to include an expanded norming sample consisting of greater diversity to conform to the demographic data reported in the 2000 U.S. census. In addition, separate score conversion tables for home rater and school raters are included. Thus, behavior ratings completed by parents are compared only with ratings from other home-based raters, and behavior ratings completed by teachers are compared with ratings from other school-based raters.
Items are classified into either the Social Skills scale or Problem Behaviors scale. The Social Skills Scale consists of 34 items categorized into three subscales: Social Cooperation, Social Interaction, and Social Independence which describe adaptive or positive social skills that are characteristic of socially competent children. These items are rated on a 4-point Likert scale (i.e., 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often). The Social Cooperation subscale includes 12 items that reflect behavioral characteristics that are considered important in following instructions from adults, cooperating, and compromising with peers. The Social Interaction subscale includes 11 items that reflect behaviors that are important in gaining and maintaining acceptance and friendship with peers. Lastly, the Social Independence subscale includes 11 items that reflect behaviors and characteristics that are important in achieving social independence within the peer group. The Problem Behaviors scale includes 42 items that describe problem behaviors commonly observed in the early childhood/preschool population. These items are rated using the same 4-point scale described for the Social Skills Scale. The items in the Problem Behavior Scale are divided into two empirically derived subscales: Externalizing Problems and Internalizing Problems. However, for the purposes of this study, only the Social Skills Scale will be utilized therefore further details highlighting the Problem Behavior Scale will not be included.

Factor analytic studies of the PKBS-2 were conducted and provide evidence in support of the validity of the instrument based on its internal structure. For the Social Skills Scales, the range of inter-correlation coefficients was reported to be moderate to strong (0.58 to 0.90). The range of correlations for the Problem Behavior scores also
range from moderate to strong (0.47 to 0.97). The final factor solutions used in developing the PKBS-2 subscales are psychometrically strong, and clinically useful.

In order to score the responses on the PKBS-2, the administrator calculates raw scores for the subscales and the composite score, which are then converted into standard scores, percentile rankings, and functional levels guided by a conversion table provided in the manual. Revisions to the original PKBS scoring allows each empirically derived subscale to contribute equally to the total score, regardless of the number of items in each scale which is derived by summing the standard scores for each subscale within each scale.

Merrell (1994, 2002) found test-retest reliability estimates to range from 0.36 to 0.78. More specifically, test-retest reliability for the Social Skills Total at 3 weeks and 3 months was 0.58 and 0.69, respectively. Test-retest reliability for the Problem Behaviors Total was 0.86 and 0.78, respectively. Alpha and split-half coefficients measuring internal reliability range from 0.90 to 0.97 for Total Scores, and ranged from 0.80 to 0.90 for the Social Skills and Problem Behaviors subscales. Inter-rater agreement coefficients for reliability within preschool settings were moderate to moderately strong, ranging from 0.36 to 0.61 for Social Skills subscales, and from 0.46 to 0.63 for Problem Behaviors. All are statistically significant at the p < 0.001 level. Inter-rater reliabilities for the PKBS-2 across raters in different settings range from 0.2 to 0.57 for Social Skills subscales, while the range of coefficients for inter-rater reliability for the Problem Behavior scores is 0.13 to 0.42. Overall, these results indicate that the ratings of children are likely to vary across settings with different raters, indicating that preschool-age children may behave in different manners across the home and school settings.
In order to examine the criterion-related reliability of the Spanish version, it was compared to the English version using the Pearson bivariate product-moment method. Reliability coefficients that resulted from this procedure were 0.93 for Social Skills and 0.94 for Problem Behaviors. In addition, internal consistency of the Spanish form was found to be high at 0.93 for Social Skills and 0.96 for Problem Behaviors (Carney & Merrell, 2002). This finding provides further support for the comparability of the two PKBS-2 forms as measuring the same construct in a similar manner.

The idea supporting the establishment of validity between measures by investigating relationships to other measures is based on two premises. Test scores are purported to measure specific constructs and should therefore correlate strongly with scores from other instruments that have demonstrated a measure of the same construct, therefore evidencing convergent validity. Secondly, test scores purported to measure specific constructs should correlate either weakly or inversely with scores from other instruments that have demonstrated to measure opposing constructs and exhibiting discriminant validity (Merrell 1994, 2002).

Convergent and discriminant construct validity of the PKBS-2 have been explored with several different behavior rating scales designed to measure a variety of social, emotional, and behavioral constructs. Merrell (1995b) investigated the relationship between the PKBS-2 scores and scores for the preschool form of the Social Skills Rating System (SSRS: Greshman & Elliott, 1990). In this study, ratings from both instruments were compared for a sample of 86 preschool-age children (3 to 5 years), who had been referred for special education Child Find screenings in a large urban public school district. Relationships between the raw scores obtained on the social skills scales for the
PKBS-2 and the SSRS for this sample were found to be correlated at a moderate to strong level, with the coefficients ranging from 0.32 to 0.76. The problem behavior scores of the two measures reported a range of coefficients from 0.25 to 0.83. Stronger correlations were found between internalizing to internalizing and externalizing to externalizing problem behavior scores of the two measures. Negative correlations were obtained between the social skills and problem behavior scores.

An additional convergent validity study for the PKBS-2 was reported in Merrell (1995b). PKBS-2 scores and teacher ratings on the Matson Evaluation of Social Skills with Youngsters (MESSY; Matson, Esvelt-Dawson & Kazdin, 1983; Matson, Rotari & Helsel, 1983, 1985) were compared. The MESSY teacher form produces two factor scores for Inappropriate Assertiveness/Impulsivity and Appropriate Social Skills. These domains appear to sample the same social skills and problem behaviors that are purported to be measured by the PKBS-2. The results of the bivariate Pearson product-moment correlations reported most of the coefficients as statistically significant at the p < 0.001 level. Coefficients for the Social Skills Scale on the PKB-2 were moderately to very strong (0.62 to 0.85) and relatively weak to quite strong for problem behavior scores (0.22 to 0.72). The correlations between the PKBS-2 composite scores and the MESSY factors were substantial (0.84 between the Social Skills composite score and MESSY Factor II, and 0.64 between the Problem Behavior composite score and MESSY Factor I). The majority of correlations between scores purported to measure differing constructs was negative, and was very weak to moderate in strength.
Penn Interactive Peer Play Scale (PIPPS)

The Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning & Debnam, 1995) is a 32-item behavioral rating instrument useful for understanding peer play behaviors and for meeting the need for congruent play assessment measures for parents and teachers across settings during early childhood (Fantuzzo, & McWayne, 2002). The PIPPS was developed to assess the interactive peer play behavior of young children. It was developed in partnership with teachers and parents to assess play in the home and school contexts, and to gain an understanding of cultural expressions within play. The PIPPS has parallel versions for parents and teachers, and for preschool and kindergarten-age children. The parent version assesses play in the home and neighborhood, whereas the teacher version examines at school. Each version contains 32 four-point Likert-scale items that indicate how often the behavior has been observed during free play (i.e., “never,” “seldom,” “often,” or “always”). The items assess competencies within play to identify children who demonstrate successful peer play interactions and those children who experience difficulties with peer play. To identify children’s strengths and weaknesses, the PIPPS includes descriptions of positive and negative play interactions. Studies of the reliability and validity with preschool children reveal three reliable dimensions: Play Interaction, Play Disruption, and Play Disconnection (Fantuzzo, Mendez et al., 1998; Fantuzzo, Coolahan et al., 1998; Hampton & Fantuzzo, 2003). The Play Interaction factor includes items that describe cooperation, helpful behaviors and creative behaviors that contribute to successful peer play interactions. The Play Disruption factor describes aggressive, antisocial behavior that interferes with ongoing peer play interactions, whereas Play
Disconnection examines nonparticipatory behaviors in play interactions with peers (Gagnon & Nagle 2004; Hampton & Fantuzzo, 2003).

Studies have evaluated the ability of the PIPPS to assess interactive peer play for preschool children (Coolahan, Fantuzzo, Mendez & McDermott, 2000; Fantuzzo, & McWayne, 2002; Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning & Debnam, 1995; Gagnon & Nagle, 2004; Fantuzzo, Mendez & Tighe, 1998; Fantuzzo, Coolahan, Mendez McDermott & Sutton-Smith, 1998). To date, both construct and concurrent validity have been demonstrated. A series of common exploratory factor analyses were conducted for both parent and teacher versions of the rating scale that examined both orthogonal (varimax) and oblique (promax) solutions. The three-factor orthogonal solution best satisfied criteria that were set by researchers. The constructs for each version have demonstrated reliability, with Cronbach alphas of 0.92, 0.91, and 0.89 for the respective teacher factors of Play Interaction, Play Disruption, and Play Disconnection, and Cronbach alphas of 0.84, 0.81, and 0.74, respectively, for the parent factors (Fantuzzo et al., 1995).

In order to fulfill the need for quality peer play assessment for Hispanic preschool children, a Spanish teacher version of the PIPPS was recently developed and is currently being evaluated. Results of factor analyses of the Spanish version replicated and confirmed a three-factor solution similar to that of the English version. Cronbach’s alphas of 0.83-0.88 were established (Castro, Mendez, & Fantuzzo, 2002).

Concurrent validity of the preschool PIPPS has been examined with measures of social competence using teacher rating scales, sociometric techniques through peer reports and direct observations of play. One study found that children who evidenced
high interactive play ratings also received high social skills ratings from teachers, and were also well liked by peers and engaged during play sessions observed (Fantuzzo, Coolahan et al., 1998). Moreover, children who were perceived to be disruptive in their play as rated by the PIPPS received ratings of low self-control and were more likely to be engaged in solitary play. Finally, children who received high ratings of Play Disconnection were associated with low acceptability by peers and observed to engage in solitary play (Fantuzzo, Coolahan et al., 1998).

Additional assessments of concurrent validity have been undertaken with measures of school functioning and dimensions of school readiness. Relationships were found between parent ratings of home-based, peer play behaviors and four measures of children’s classroom behaviors that contribute to effective social functioning within the classroom (Fantuzzo & McWayne, 2002). Specifically, children’s classroom behaviors such as school-based peer play, approaches to learning, self-regulation, and behavior problems were analyzed using bivariate correlational and multivariate methods in order to determine that play competencies exhibited in the home environment were significantly associated with prosocial behavior in the classroom, motivation to learn, task persistence, and autonomy. Moreover, children who were rated as exhibiting disruptive or disconnected play behaviors were significantly related to demonstrating tendencies of disruptive and dysregulated experiences in the classroom with peers and with the learning process. Another study evaluated the relationship of the PIPPS to social-emotional development as assessed by the Vineland Social-Emotional Early Childhood Scale (SEEC; Sparrow, Balla, & Cicchetti, 1998) further validating the psychometric integrity of the PIPPS by extending beyond the initial standardization
sample to include a sample of primarily Caucasian children living in a more rural area. Significant relationships were found between teacher and parent ratings of children’s play with their peers and their corresponding observations of social-emotional development. Relationships additionally demonstrated the important role of play and peer relationships in the development of social competence. More specifically, the significant relationships between the Parent PIPPS and the SEEC indicated that children who had acquired competent play behaviors also displayed strong social-emotional skills whereas children who were negative and aggressive during play interactions tended to display lower levels of social-emotional development. The canonical variate that emerged from the analyses indicated that Prosocial Involved dimensions from the SEEC reflected strong, positive relationships between Interpersonal Relationships, Play Interaction, Play and Leisure time and Coping skills, and a negative association with Play Disruption (Gagnon & Nagle, 2004).

These studies indicate the usefulness of the PIPPS for assessing an important aspect of children’s social competence during preschool. The PIPPS has demonstrated its relation to other measures of social competence and classroom functioning in addition to construct validity. An exploration of the technical properties of the two presented rating scales show that scores obtained on these instruments are adequately reliable and valid. The technical properties of these instruments, along with their lack of intrusiveness and appropriateness for the characteristics of this sample make them appropriate instruments for use in this study.
Procedures

Protection of research participants

Several steps were taken to protect research participants. Approval was obtained from the University of South Florida Institutional Review Board (IRB), and from the directors of each of the participating preschool centers. Parents were given an informed consent form to sign that described the purpose of the study, rights of the participants, nature of their involvement, measures to ensure participant anonymity, methods in which data would be collected, and a description of how data would be stored during and after research completion. The explanation of participants’ rights included information regarding confidentiality, ability of participants to withdraw, refusal to answer any question, and emphasis on voluntary participation. Teachers were also informed of the purpose of the study, confidentiality procedures, and voluntary participation in a similar manner. Rating forms completed by teacher/parent pairs were assigned a number and all identifying information was removed from these documents. All of the forms and letters distributed to parents were thereafter organized according to student numbers and entered into a database.

Recruitment of center for participation

Teachers at the three preschool centers were contacted by the investigator either in person, via telephone or through email and invited to participate after permission from the Directors of each school was obtained. Teachers were selected based on voluntary participation and also based on whether children enrolled in their classrooms met inclusion/exclusion criteria according to age, time of enrollment, and native languages spoken by the children. Only those students returning with parent consent forms were
included in the study. Teachers were consulted regarding the best approaches for collecting information from parents, and the times most convenient for the researcher to collect data from the teachers. After the investigator had consulted with the teachers, standard procedures were developed and adhered to throughout the data collection process. Across all three sites, similar procedures were followed. Modes of communication consisted of sending letters home with children as well as handing off notes to parents at the beginning and end of the day. When letters, consent forms and rating packets were completed and returned, teachers and/or Directors from each of the sites contacted the investigator via email. The investigator then went to the locations to pick them up.

*Parent data collection*

An informal letter was distributed to all parents or guardians of children who were enrolled in each of the classrooms that had teachers serving as participants in the study. This letter briefly explained the purpose of the study, procedures for collecting data and requested their voluntary participation (see Appendix B). Parental consent forms were then administered to only those parents and caregivers who had given initial consent by signing and returning the informal letter. The consent forms reiterated confidentiality of all responses and that the purpose of data collection was strictly for research. Parents were asked to return the consent forms to their child’s teacher. All consent forms and rating scales were available in both Spanish and English in order to allow parents to complete forms in their most proficient language. Considerable care was taken to assure that a systematic process of translation was achieved in developing equivalence in all letters and consent forms so that cultural equivalence was achieved. Several steps were
taken to ensure the preservation of meaning across languages including the assistance of a bilingual School Psychology Graduate student to translate all documents, and back translation by an independent bilingual individual, a person not involved in the earlier translation.

All students possessing surnames of Hispanic origin were given two complete sets of documents, one in each language. Rating scales were requested for completion by one parent, legal guardian or primary caregiver per child. A primary caregiver was defined as an adult with whom a child lives and who has responsibility for the child. Individuals should have opportunities to observe the child in peer play interactions and have had responsibility for communicating with the classroom teacher. Consenting parents were sent home a packet through means of the classroom teacher which included the PIPPS-Parent and the PKBS-2 parent version forms. All rating scales were counterbalanced to decrease the possible bias resulting from order effects. Parents of students who were assigned an even number in the database were instructed to fill out the PIPPS first while parents and teachers of students assigned an odd number were instructed to first complete the PKBS-2. The completion time was predicted to range from 20-30 minutes. Modes of parent-teacher communication included the use of a folder that the child brought home for the parent to check, and handing documents/papers directly to parents at the end of the day. All sets of child measures were requested for completion within a two week span and the investigator arranged to pick up the completed forms at the respective schools from classroom teachers.
**Teacher data collection**

Teachers received the Parent-Teacher Communication Form, PIPPS-Teacher, and the PKBS-2 teacher version to complete for those children for whom parental consent was obtained. Rating scales were counterbalanced in a similar fashion through procedures described above for parents. The completion time for teachers was predicted to range from 20-30 minutes. All sets of child measures were requested for completion within a two week span and the investigator arranged to pick up materials at the respective schools when contacted by classroom teachers and/or school directors indicating that the forms had been completed.

**Scoring of Protocols**

All scores obtained on the protocols were entered into a database according to student number. In order to ensure integrity of scoring procedures and obtain inter-rater agreement, 24% (8 out of 33 possible) of the protocols were randomly selected and scored by another School Psychology graduate student. Only scores producing at least 80% agreement according to the inter-rater reliability formula (Agreements/Disagreements + Agreements) were included in the data analyses.
Chapter Four

Results

This chapter presents the data analyses conducted to examine parent and teacher observations of preschool children’s play behaviors. To determine whether observations of play behavior in preschool children accurately assessed social competence as measured by traditional social skills rating scales, the scores of both parent and teacher versions obtained on the PKBS-2 and PIPPS were examined. The analyses were conducted separately for the teacher and parent measures to examine the relationship between the sets of variables of the PIPPS and the corresponding version of the PKBS-2. Separate analyses were conducted for the relationships between the PIPPS-parent and the PKBS-2 parent version and between the PIPPS-teacher and PKBS-2 teacher version. An assessment of concurrent validity was conducted to determine how well the constructs of the PIPPS related to an outcome criterion selected as a standardized measure of social competence.

Internal Reliability for the PKBS-Social Skills Scale and PIPPS

In order to assess the reliability for obtaining accurate scores on the PKBS-2 and PIPPS and data from further analyses, the reliability estimates through internal consistency on both measures were calculated. The reliability coefficient describes the degree to which the PKBS-2 Social Skills Scale and the PIPPS represent something other than measurement error. In essence, if two sets of parallel measures agree perfectly then
the obtained coefficient should be 1.00. However, for example, if raters are unmotivated and indicate answers which may not be representative of child behaviors through random selection it is likely that the results from these raters will represent only measurement error. The reliability coefficients that are provided for each of the measures estimate the correlation between the obtained scores from parents and teachers and the score on a parallel form of the measure (Glass & Hopkins, 1996). For a multi-dimensional scale like the PIPPS, reliability coefficients of .7 are considered acceptable. If the systems demonstrate poor reliability, then the information that is produced from the scales will not be meaningful. However, if the scales produce strong reliabilities, the information is suggested to be much more meaningful (Glass & Hopkins, 1996).

Results indicate that all three factors of the PIPPS were found to demonstrate high levels of internal consistency. Internal consistency coefficients for the preschool teacher version of the scale were found to be significant as evidenced by high Cronbach alpha coefficients for each subdomain, with coefficients ranging from .720, .878, and .797 for the Play Interaction, Play Disruption, and Play Disconnection factors, respectively. Internal consistency coefficients for the preschool parent version of the scale were found to be .774 for Play Interaction, .769 for Play Disruption, and .627 for the Play Disconnection factor.

Internal consistency coefficients for the PKBS-2 Social skills parent scales were also found to demonstrate high reliability scores as indicated by a coefficient of .870, .894, and .785 for the Social Cooperation, Social Interaction, and Social Independence factors, respectively. Internal consistency coefficients for the PKBS-2 Social skills teacher scales were found to be .934 for the Social Cooperation subscale, .860, for Social
Interaction subscale, and .707 for the Social Independence subscale. Overall, these data indicate that the PKBS-2 and the PIPPS measure social competency and play behaviors with high levels of reliability and consistency. See Table 4 below for a summary of the Cronbach coefficient alphas for the two rating systems.

**Table 4**

*Internal Consistency (alpha) Reliability for the PKBS-2 Social Skills Scale and PIPPS*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficient alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PIPPS-Teacher</strong></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>.720</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>.878</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>.797</td>
</tr>
<tr>
<td><strong>PIPPS-Parent</strong></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>.744</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>.769</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>.627</td>
</tr>
<tr>
<td><strong>PKBS-2 Social Skills Scale Parent</strong></td>
<td></td>
</tr>
<tr>
<td>Social Cooperation</td>
<td>.870</td>
</tr>
<tr>
<td>Social Interaction</td>
<td>.894</td>
</tr>
<tr>
<td>Social Independence</td>
<td>.785</td>
</tr>
<tr>
<td><strong>PKBS-2 Social Skills Scale Teacher</strong></td>
<td></td>
</tr>
<tr>
<td>Social Cooperation</td>
<td>.934</td>
</tr>
<tr>
<td>Social Interaction</td>
<td>.860</td>
</tr>
<tr>
<td>Social Independence</td>
<td>.707</td>
</tr>
</tbody>
</table>

*Note N=32*

**Descriptive Statistics for the PKBS-2 and PIPPS Systems**

Descriptive statistics were collected and provided in order to gather more information concerning overall scores on the PKBS-2 and the PIPPS. The mean, median, standard deviation, skewness and kurtosis values of scores on the PKBS-2 and PIPPS are reported. Procedures to screen for outliers and linear relationships were instituted through preliminary data checking methods. In addition, data were run through a statistical
program both with and without the inclusion of all possible outliers. This was to ensure that outlier values were not attributable to impossible circumstances. Another School Psychology graduate student was enlisted to independently enter the data to ensure that data entry was accurate.

A summarization of descriptive statistics is provided in Table 5. Obtained skewness and kurtosis values indicate some degree of non-normality distribution for the PIPPS- Parent Play Disconnection (-1.497 and 3.360) and Play Disruption (-1.454 and 4.804) scales respectively. There appears to a slight degree of negative skewness to these data. The data indicate that overall a greater number of parents had a tendency to rate their children as exhibiting more negative play behaviors than would be expected in a normal distribution of raters.

A graphical representation of the scores obtained on these subscales would present high scores on the Play Disconnection and Disruption domains as rated by parents as clustering together at the end with higher values and tailing off towards the left where lower values are represented. Parent ratings on these same subscales also produced a positively kurtotic representation. Kurtosis is examined when one wishes to determine whether distributions have more extremely high or low scores than would be expected in a normal distribution of scores. Distributions of scores such as those indicated by parents on Play Disconnection and Disruption subscales indicate a leptokurtic distribution which signifies that there are more scores that are farther from the mean than in a normal distribution. In summarization, highly skewed distributions tend to be leptokurtic because there are more scores that deviate far from the mean. Overall, the results of these descriptive statistics indicate that parents were more apt to score their children as having
more negative play behaviors than those expected for a normal distribution and also from those scores that were noted by teachers on these same subscales. All of the other values were noted to be $\leq 1.0$ demonstrating approximately normal distributions for the remaining subscales.

Table 5

Descriptive Statistics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PKBS-2 Social Skills Scale and PIPPS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIPPS-Parent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>29</td>
<td>67</td>
<td>50.09</td>
<td>7.61</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>10</td>
<td>63</td>
<td>47.22</td>
<td>10.75</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>10</td>
<td>64</td>
<td>46.19</td>
<td>9.95</td>
</tr>
<tr>
<td>PIPPS-Teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>34</td>
<td>70</td>
<td>51.38</td>
<td>8.24</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>28</td>
<td>60</td>
<td>46.75</td>
<td>8.35</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>26</td>
<td>62</td>
<td>46.28</td>
<td>8.77</td>
</tr>
<tr>
<td>PKBS-2 Social Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>83</td>
<td>120</td>
<td>107.78</td>
<td>10.63</td>
</tr>
<tr>
<td>Teacher</td>
<td>80</td>
<td>123</td>
<td>104.44</td>
<td>12.33</td>
</tr>
</tbody>
</table>

In order to examine the degree to which observations of play behavior in preschool children accurately assess social competence as measured by traditional social skills rating scales, the scores of both parent and teacher versions obtained on the PKBS-2 and PIPPS were examined. However, separate analyses were conducted for the teacher and parent measures to examine the relationship between the sets of variables of the PIPPS and the corresponding version of the PKBS-2. An assessment of concurrent validity was conducted to determine how well the constructs of the PIPPS related to an outcome criterion selected as a standardized measure of social competence.
Concurrent Validity of the PIPPS-Parent with the PKBS-2 Social Skills Scale Parent

In order to assess the concurrent validity of the PIPPS-Parent with the PKBS-2 Social Skills Scale-Parent, Pearson-product moment coefficients were computed for the three PIPPS-Parent factors and the PKBS-2 Social Skills Scale-Parent factor. This particular analysis examined the overall significance of the relationship between the PIPPS and PKBS-2 and was explored in order to determine whether the overlap between the two instruments was greater than that expected by chance. A correlational design with provision of confidence intervals was conducted. A 95% confidence interval was calculated to determine a range in which the population correlation value was likely to fall. The results indicated a magnitude of correlations falling in the low to moderate range. The only correlation that was considered statistically significant at the \( p < .05 \) level was the PIPPS-Parent Play Interaction factor and the PKBS-2 Social Skills Scale-Parent \( (r = .49; \ p < .0001) \). However, all of the correlations were in the expected direction. PKBS-2 Social Skills Scale Social competence scores are hypothesized to be negatively related to negative play behaviors such as those proposed on the Play Disconnection and Play Disruption domains of the PIPPS. Children who score high on these play domains are likely to be rated lower on overall social competence and the results of this analysis further supported this notion. Overall, these results indicate an overall low to moderate relationship between the PIPPS-Parent and PKBS-2 Social Skills Scale-Parent.
Table 6

*Correlations of PIPPS-Parent Factors with PKBS-2 Social Skills Scale - Parent*

<table>
<thead>
<tr>
<th>PKBS-2 Social Skills Scale - Parent Factor</th>
<th>PIPPS-Parent Factors</th>
<th>Social Competence Score</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play Interaction</td>
<td>Play Interaction</td>
<td>.49*</td>
<td>.17 to .72</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>Play Disconnection</td>
<td>-.20</td>
<td>-.51 to .16</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>Play Disruption</td>
<td>-.24</td>
<td>-.54 to .11</td>
</tr>
</tbody>
</table>

*Note* = p< .001

*Concurrent Validity of the PIPPS-Teacher with the PKBS-2 Social Skills Scale Teacher*

In order to assess the concurrent validity of the PIPPS-Teacher with the PKBS-2 Social Skills Scale-Teacher, Pearson-product moment coefficients were computed for the three PIPPS-Teacher factors and the PKBS-2 Social Skills Scale-Teacher factor. The results demonstrate a strong relationship between the two measures. As displayed in Table 7, all of the correlations were statistically significant and were in the expected direction. The magnitude of the correlations was in the moderate to high range. The highest correlation among factors was between the PKBS-2 Social Skills Scale and the Play Interaction scale of the PIPPS (r = .74; p < .0001), followed by teacher reports on the Play Disruption, (r = .45; p < .0001) and Play Disconnection (r = .43; p < .0001) with the PKBS-2 Social Skills Scale Teacher.

Overall, these results indicate significant relationships between the PIPPS-Teacher and PKBS-2 Teacher. Therefore, convergent validity was supported by the significant correlation between the PKBS 2-Teacher Social Skills scale and the PIPPS-Teacher factors.
Table 7

Correlations of PIPPS-Teacher Factors with PKBS-2 Social Skills Scale- Teacher Factor

<table>
<thead>
<tr>
<th>PIPPS-Teacher Factors</th>
<th>Social Competence Score</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play Interaction</td>
<td>.74*</td>
<td>.53 to .87</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>-.43*</td>
<td>-.67 to -.09</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>-.45*</td>
<td>-.69 to -.12</td>
</tr>
</tbody>
</table>

*Note* = *p* < .001

Differences in Group Means between Gender and PKBS-2 Social Skills Scale and PIPPS

The second research question was designed to study whether parent and teacher ratings of preschoolers’ social competence varied as a function of a child’s gender. The group means and standard deviations for parent and teacher ratings for boys and girls were calculated and compared to one another using an independent *t* test. The means of the two groups of the sample were used to determine whether they varied enough to determine a statistically significant difference between ratings obtained for boys and girls. A 95% confidence interval was calculated around the mean differences to determine where population values were likely to fall.

The difference in the group means between the child’s gender and the teacher and parent ratings on the PKBS-2 and PIPPS scales were examined for statistically significant findings. Table 7 displays the descriptive statistics, independent *t*-test results, and 95% confidence intervals of the difference for the PKBS-2 and PIPPS on gender comparisons. Several comparisons resulted in the findings of insignificant mean differences. The mean score for parent and teacher ratings for females ranged from 42.77 (PIPPS- Parent Play Disruption subscale) to 109.62 (PKBS-2 Parent Social Skills scale). In comparison, mean scores for males indicated a range from 45.63 (PIPPS- Teacher Play Disconnection...
subscale) to 106.53 (PKBS-2 Parent Social Skills scale). Difference in mean scores for females and males ranged from .23 (PIPPS- Parent Play Interaction subscale) to 5.76 (PIPPS- Parent Play Disruption subscale). These results are presented below in Table 8. Levene’s Test for Equality of Variances was conducted to assess the equal variances assumption. F values ranged from 0.016 (PIPPS- Parent Play Disconnect) to 6.183 (PIPPS- Teacher Play Disruption). Results from the t-test for equality of means indicated \( t \) values which ranged from -1.651 (PIPPS- Parent Play Disruption) to 1.092 (PKBS-2 Teacher Social Skills Scale). Overall these data signified that the obtained means were not different enough to consider the parent and teacher ratings of males and females as distinct and separate groups as indicated by results of the independent \( t \) test.

While the means were not distinct enough to consider the ratings of participating preschool students to be different within statistical standards, it should be noted that on average both teachers and parents rated boys as being more disruptive in their play as indicated on the PIPPS Play Disruption subscale. In addition, girls on average were rated as having higher social competence scores overall by both teachers and parents as indicated by higher scores on the PKBS-2 system. However as previously indicated because the means cannot be considered different, no definite conclusions may be stated based upon these data.
Table 8

Mean Scores for Parent and Teacher Measures as a Function of Gender

<table>
<thead>
<tr>
<th>Measure</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PKBS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Skills-Parent</td>
<td>109.62</td>
<td>9.07</td>
<td>106.53</td>
<td>11.65</td>
<td>3.09</td>
</tr>
<tr>
<td>Social Skills-Teacher</td>
<td>107.31</td>
<td>11.59</td>
<td>102.47</td>
<td>12.75</td>
<td>4.84</td>
</tr>
<tr>
<td>PIPPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent- Play Interact</td>
<td>50.23</td>
<td>5.82</td>
<td>50.00</td>
<td>8.78</td>
<td>.23</td>
</tr>
<tr>
<td>Parent-Play Disrupt</td>
<td>42.77</td>
<td>11.42</td>
<td>48.53</td>
<td>8.33</td>
<td>5.76</td>
</tr>
<tr>
<td>Parent-Play Disconnect</td>
<td>46.92</td>
<td>9.24</td>
<td>47.42</td>
<td>11.91</td>
<td>.50</td>
</tr>
<tr>
<td>Teacher- Play Interact</td>
<td>54.62</td>
<td>8.19</td>
<td>49.16</td>
<td>7.70</td>
<td>5.46</td>
</tr>
<tr>
<td>Teacher- Play Disrupt</td>
<td>44.00</td>
<td>11.52</td>
<td>47.84</td>
<td>8.33</td>
<td>3.84</td>
</tr>
<tr>
<td>Teacher- Play Disconnect</td>
<td>48.38</td>
<td>6.59</td>
<td>45.63</td>
<td>9.37</td>
<td>2.75</td>
</tr>
</tbody>
</table>

Relationships between the PIPPS-Teacher and the PIPPS-Parent

The third research question was aimed to determine whether the PIPPS-Teacher and PIPPS-Parent were congruent and significantly related to one another. In order to examine the degree of relationship between the teacher and parent versions of the PIPPS system, bivariate correlational analyses were conducted (see Table 8). Significant correlations were expected between each corresponding factor for the parent and teacher versions that consider the congruence between the factors of the teacher and parent versions (i.e., Play Interaction-Parent correlates with Play Interaction-Teacher). Obtained correlations were found to be moderate and ranged from .30 to .49. The only statistically significant correlation found was among the teacher and parent factors of Play Interaction ($r = .49; p < .0001$). Overall, these results indicate a significant relationship between the parent and teacher reports on only the Play Interaction factor of the PIPPS. Therefore,
the obtained correlations are too weak to conclude that any statistically significant
relationship was found to exist between the overall PIPPS parent and teacher versions of
this system through this investigation.

Table 9

Correlations of PIPPS-Teacher Factors with PIPPS-Parent Factors

<table>
<thead>
<tr>
<th>PIPPS-Teacher Factor</th>
<th>PIPPS-Parent Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play Interact</td>
<td>Play Interact</td>
</tr>
<tr>
<td></td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td></td>
<td>Play Disconnect</td>
</tr>
<tr>
<td></td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td></td>
<td>Play Disruption</td>
</tr>
<tr>
<td></td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td>Play Interact</td>
<td>* .49</td>
</tr>
<tr>
<td></td>
<td>-.31</td>
</tr>
<tr>
<td></td>
<td>-.16</td>
</tr>
<tr>
<td>Play Disconnect</td>
<td>-.21</td>
</tr>
<tr>
<td></td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>-.11</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>-.15</td>
</tr>
<tr>
<td></td>
<td>.39*</td>
</tr>
<tr>
<td></td>
<td>.30</td>
</tr>
</tbody>
</table>

Note * = p < .001

Predictive Validity of the Parent Teacher Communication Form with the PKBS and PIPPS

A fourth analysis was conducted to determine whether the level of
communication reported as occurring between the parents and teachers was related to the
individual measures of social competence. The obtained data indicated that overall levels
of present parent teacher communication were relatively high across all sample
participants, with the majority of teachers communicating with parents on a daily basis.
Therefore, the data were not able to be analyzed in terms of low communication and high
communication categorical groups. Since there was no clear indication of a natural split
in the level of communication taking place between parents and teachers the data were
examined as a continuous factor and a correlational design was conducted.
Bivariate correlations were computed for the three PIPPS-Teacher, PIPPS-Parent, PKBS-2 Social Skills Scale Teacher, PKBS-2 Social Skills Scale Parent, and level of communication existing between parents and teachers as indicated on the PTAC Form. The levels of communication were rated on a continuum. The findings from these results are displayed in Table 9. Only the PIPPS-Play Disconnection Parent subscale ($r = 0.36; p<0.001$) obtained a statistically significant relationship with the level of communication between the parent and teacher. These results indicate that there is very little to virtually no predictive validity between the PTAC form and the overall ratings of social competence that were completed by parents and teachers.

Table 10

Correlations of PIPPS-Teacher, PIPPS-Parent, PKBS-2 Social Skills Scale-Parent, PKBS-2 Social Skills Scale-Teacher with the Parent-Teacher Communication form

<table>
<thead>
<tr>
<th>Measure</th>
<th>Level of Communication</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PIPPS-Teacher Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>.02</td>
<td>-.33 to .37</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>.03</td>
<td>-.32 to .38</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>.29</td>
<td>-.06 to .58</td>
</tr>
<tr>
<td><strong>PIPPS-Parent Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td>.04</td>
<td>-.31 to .38</td>
</tr>
<tr>
<td>Play Disconnection</td>
<td>.36*</td>
<td>.01 to .63</td>
</tr>
<tr>
<td>Play Disruption</td>
<td>.06</td>
<td>-.30 to .40</td>
</tr>
<tr>
<td><strong>PKBS-2 Social Skills Scale-Parent</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Competence Score</td>
<td>-.09</td>
<td>-.42 to .22</td>
</tr>
<tr>
<td><strong>PKBS-2 Social Skills Scale-Teacher</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Competence Score</td>
<td>-.12</td>
<td>-.45 to .24</td>
</tr>
</tbody>
</table>

*Note* $*=p<.001$
Summary of findings

In the present investigation, numerous analyses were conducted to assess the similarity of parent and teacher ratings on the PKBS-2 Social Skills and PIPPS rating systems. Although broad conclusions are not able to be made, specific relationships were depicted through these analyses.

In examining the relationship between parent and teachers ratings on both measures, convergent validity was supported by a significant correlation between the PKBS 2-Teacher Social Skills scale and the PIPPS-Teacher factors. However, a much lower relationship was determined for the PKBS 2- Parent Social Skills scale and the PIPPS-Parent factors where only one factor of the PIPPS system was found to be significantly correlated with the PKBS-2 Parent Social Skills scale.

Analyses which examined the predictive validity through the degree of relationship between the social competence rating forms as a function of gender and the level of existing parent and teacher communications did not reveal overall significant results. Although these results were not statistically significant, the differences that did appear can be considered of clinical importance as higher scores on ratings of social competence for girls and higher levels of disruptive play for boys presented in the data are supported by the existing literature.

The level of parent-teacher communication was not significantly related to any of the scores obtained on the individual scales or subscales of the PIPPS and PKBS system overall, however there was a statistically significant relationship between parent ratings on the PIPPS Play Disconnection factor and increased level of parent teacher communication.
Lastly, analyses indicated that teacher reports and parent reports on the PIPPS system were not highly correlated. These results indicated a sole significant relationship between the parent and teacher reports on only the Play Interaction factor of the PIPPS. The correlation between the Play Disruption and Disconnection factors can only be considered moderate to weak at best.
Chapter Five

Discussion

The PIPPS system was developed for the purposes of meeting the needs of early childhood assessment in accordance with the best practice guidelines. Studies thus far have demonstrated that the preschool version of the PIPPS is a valid instrument that assesses peer play interactions, measures congruent constructs among the teacher and parent versions, and is sensitive to cultural contexts. Consequently, the primary objective of this study was to replicate previous findings of validity as well as to expand the utility of this instrument by considering the effects of gender and communication levels on parents’ and teachers’ ratings of preschoolers’ play behaviors.

To evaluate the validity of the PIPPS system for preschool children and its use with parents and teachers across multiple settings, four hypotheses were tested relating to: (1) the concurrent validity of parent and teacher versions of the PIPPS and the Social Skills scale of the PKBS-2; (2) the relationship between teacher/parent ratings and child gender; (3) the relationship between the teacher and parent versions of the PIPPS; and (4) the predictive validity of teacher and parent ratings on the PIPPS and PKBS-2 with level of communication between the two parties. The following sections discuss the results of these findings in relation to the empirical research. The subsequent section
discusses the limitations of the study as well as suggestions for future research. Finally, implications of these findings for practice are presented.

I) *Does the preschool version of the PIPPS demonstrate concurrent validity with the Social Skills scale of the PKBS-2?*

**Concurrent Validity**

The first hypothesis asserted that the PIPPS would demonstrate concurrent validity with a standardized measure of social competence, through divergent and convergent relationships. Bivariate analyses supported this hypothesis for both the teacher and parent versions. The Play Interaction factor of the PIPPS correlated positively with the PKBS-2 Social Skills scale, whereas the Play Disruption and Play Disconnection factors demonstrated negative correlations with the PKBS-2 Social Skills scale.

The relationships that were derived between the PIPPS and an instrument assessing global social skills support the use of the PIPPS as a measure of social competence. Children who received high ratings for Play Interaction were viewed by teachers and parents as demonstrating socially skilled behavior overall. Although the magnitude of the correlations ranged from low associations to statistically significant results, all of the correlations were in the expected direction. Parents and Teachers indicated that children with higher ratings on either the Play Disruption or Play Disconnection factor were more likely to have lower overall Social Competence scores. Thus, the Play Interaction factor identified aspects of children’s social skills, whereas Play Disruption and Play Disconnection reflected areas of need regarding peer interactions.
Typically, broad social skills competence scales assess social skills and problem behaviors, with the problem behavior domain typically divided into categories composed of externalizing and internalizing problems (LaFreniere & Dumas, 1996; Merrell, 1996). Externalizing behaviors include aggressive and disruptive behaviors while internalizing behaviors typically refer to social withdrawal and anxious behaviors (Merrell, 1996). The PIPPS captures these categories of behaviors by considering positive social skills through the Play Interaction construct, and addressing measures of externalizing and internalizing behaviors through the constructs of Play Disruption and Play Disconnection. According to researchers, children who score high on evaluations of internalizing and externalizing behaviors typically demonstrate overall declines in peer acceptance and friendships resulting in increased self-report of loneliness (Sanderson & Siegal, 1995).

Although the constructs of the PIPPS measure the same domains of social competence as other early childhood assessment measures, the PIPPS also uniquely assesses social skills and problem behaviors within a particular aspect of social competence in examining peer interactions. The importance of the capacity to identify specific aspects of developmentally appropriate social competences is emphasized by the recognition that different types of peer interactions have associated consequences for children’s social and academic functioning. Problems with peers can lead to difficulties with socio-emotional functioning (Ladd, 1999) as well as academic functioning (Welsh et al., 2001) and can occur throughout early childhood and into school age years.

On the other hand, average and well-accepted peers are often characterized by the display of cooperative, friendly, and prosocial behaviors (Denham & Holt, 1993). An understanding of the types of behaviors that are associated with peer rejection facilitates
the identification of children who may need additional supports and could benefit from specific interventions targeting prosocial skills. Thus, the ability of the PIPPS to identify behaviors that are typically associated with popular, rejected, and neglected children serves an important role in early childhood assessment.

2) *Do teacher and parent ratings for preschoolers' social competence vary based upon a child's gender?*

**Gender Differences in Parent and Teacher ratings**

The second hypothesis of this study stated that parent and teacher ratings would differ as a function of the rated child’s gender, with boys being more likely to score lower on the overall social competence measures as compared to girls. This speculation was based on previous research indicating strong evidence to support that boys tend to score higher on classroom ratings of hyperactivity and aggression as compared to girls (Lutz, Fantuzzo, & McDermott, 2002). These specific factors are associated with the Play Disruption scale of the PIPPS and would be demonstrated in a higher score on this subscale as well as a lower score on the PKBS-2 Social Skills scale.

The analyses that examined the overall mean scores that parents and teachers indicated on rating scores did not result in statistically significant findings. Overall, this finding is contrary to results from previous research indicating that boys are much more likely to score significantly lower than girls on ratings of overall social competence (Lutz et al., 2002). However, it is important to highlight the fact that when differences did exist for interactions between girls and boys play, girls were rated higher on overall positive play behaviors (Play Interaction, overall Social Competence), whereas boys tended to be rated higher on negative play behaviors (Play Disruption, lower overall Social
Competence). The preschool centers that participated in this study have 1:10 or better teacher to student ratios throughout their schools. It is likely that the preschool classes participate in large group activities for the majority of their schedules which is not conducive for allowing smaller groups or gender based groups to form.

Previous literature has indicated that boys who tend to play with same sex peers are likely to exhibit increased levels of overactive behavior which may translate to higher problem behaviors, (Fabes et al., 1997; Noone Lutz, Fantuzzo & McDermott, 2002) since oftentimes boys are likely to engage in higher levels of physical play and contact in groups of boys than when girls are participating in play. In contrast, girls’ play is oriented towards the maintenance of cooperative, concordant, and close relations when involved in groups of same sex peers and therefore are more conducive to promoting positive adaptation and adjustment (Fabes et al., 1997). In this study, as previously mentioned, since the majority of the classrooms are likely to engage in large group activities, the level of social competence may be equalized for boys and girls since there are lesser opportunities to promote levels of higher physical play in same sex groups of boys and therefore lead to a lack of differentiation in groups of boys and girls social competence and categorization of play behaviors.

One of the main purposes of this research question was to examine the possible rating bias of preschoolers’ gender. This was to explore whether this factor confounds the assessment of children’s social skills by parents and teachers. As supported by this particular investigation there was no evidence that parent and teacher ratings were biased based on preschooler’s gender, as these groups did not obtain scores that could be considered statistically different. Gender role socialization and development are
potentially shaped by a multitude of factors and settings including influences by parents, teachers, and peers at home, school, and play settings.

In order to determine whether contradictory results of this study to previous findings in the literature were associated with distinct characteristics of this particular sample population above and beyond the low teacher to student ratio in the classrooms, mean scores derived from boys and girls were compared to the normative sample means provided in the examiner’s manual of the PKBS-2. All of the PKBS-2 standard scores are based on a distribution with a mean of 100 and a standard deviation of 15. It is interpreted that a standard score of 100 is at the mean score level of the national normative sample. However, it should also be noted that according to the PKBS-2 examiner’s manual score distributions for the Social Skills Scale are somewhat skewed in the direction of more desirable behavior ratings and fewer undesirable behavior ratings and this is simply a reflection of normative samples for child behavior ratings (Shapiro & Kratchowill, 2000). It is typical for a greater majority of the children to have adequate or good social adjustment than present with social deficits or problems. Therefore, according to the information provided in the manual on mean scores for the normative sample, mean scores for boys and girls in this particular study reflect average scores indicating that they may be justifiably compared to results from previous studies examining boys and girls’ social skills scores on the PKBS-2.

The teacher and parent ratings did not indicate any apparent influences of gender biases and expectations that would have been reflected in a statistically significantly lower overall social competence mean score for boys as compared to girls. This finding would lead one to believe that the raters in this study may be more encouraging of
children to explore a wider variety of activities without restricting females and males to engage in activities that are typically associated with their respective genders. With parents, teachers, and peers encouraging exploration of various aspects of physical and imaginative play, children may be motivated to seek out friends with varying interests as well as be involved in a wider variety of school activities (Birch & Ladd, 1996; Lutz et al., 2002).

3) Are PIPPS-Teacher and the PIPPS-Parent versions congruent and significantly related to one another?

Relationships between Teacher and Parent Versions

Another hypothesis of this study indicated that the results obtained from the teacher and parent versions would demonstrate congruence, and that statistically significant relationships would be found. Correlational analyses provided a moderate degree of relationship between teacher and parent versions which confirmed their ability to provide for some agreement of findings between teacher and parent reports. Overall results from these analyses indicate that the two versions have some meaningful relationships.

The capacity of the PIPPS system to measure the same constructs in teacher and parent versions represents an advantage over existing early childhood social competence measures, which lack the ability for parents and teachers to communicate about the same constructs in different contexts (Bracken, 2000; Merrell, 1996). The development of the PIPPS was based on observations made from peer play and thereby enhances the likelihood that the ratings are based on behaviors that teachers and parents are actually observing in the respective contexts. Additionally, parents and teachers assisted with the
construction of this instrument, increasing the likelihood of a common interpretation and use of a common language (Fantuzzo et al., 1995).

One of the purposes of the PIPPS is to differentiate children who display positive play behaviors from those who are less successful in these interactions and identify the strengths of resilient children. The significant but relatively low degree of overlap between parent and teacher versions suggests that there is some similarity between the reports of peer play interactions within the home and school settings.

The different perspectives among parents and teachers may reflect the contexts in which parents and teachers observe children’s peer play interactions. Teachers may be more likely to focus on and be cognizant of positive play behaviors. This may be due to their teaching experience as well as their understanding of children’s social behaviors in the classroom context. In contrast, parents may be drawn to and more likely to recognize disruptive behaviors are compared to prosocial behaviors. These findings suggest that teachers may have a more objective perspective than parents in identifying positive and negative behaviors in play interactions exhibited among preschool children (Milfort & Greenfield, 2002).

Other influences on the problem-focused orientation of the PIPPS ratings is the extent and length of time in which parents and teachers are able to observe play. Teachers have numerous children to monitor in the classroom, which may allow them to be more attuned to easily observable prosocial and problematic interactions during peer play. In addition, the length of time in which the play occurs may influence the type of interactions observed. More complex forms of play tend to emerge over longer durations of play, which is typically observed in the home environment. Parents have the advantage
of observing their children over time in the home and community. In doing so, they provide information that is otherwise unavailable to teachers. This may explain the greater differentiation that parents make in characterizing play interactions.

Another hypothesis is that teachers spend time praising positive prosocial behaviors in an effort to encourage and reinforce those types of behaviors that serve to facilitate the school experience. In contrast, parents may be drawn to and more likely to recognize disruptive behaviors as compared to prosocial behaviors which are likely to be expected in the home environment rather than directly taught (Milfort & Greenfield, 2002).

However, it is important to consider the way in which teacher perceptions of social and academic competence may be influenced. There are some data to indicate links between specific skills such as children’s ability to initiate and engage in conversation and teachers’ subsequent perceptions of competence. If these skills are not encouraged and/or opportunities to engage in these situations are not valued or emphasized in the home environment, preschool children may likely be rated lower on overall social competence. Such findings have important implications in that teachers can assist children who have had fewer opportunities to engage in conversation with adults and provide them with those opportunities (Tudge et al., 2003).

The differences in the types of behaviors reported by parents and teachers correspond may also reflect the amount of contact between these individuals. Research has indicated the importance of informants having a common frame of reference when assessing young children (Tudge et al., 2003). Activities such as volunteering in the classroom, planning classroom activities with the teacher, and participating in school-
based events with the teacher all increase the amount of communication. In addition, daily, biweekly, or multiple modes of communication between teacher and parents increase the opportunities to interact and to share perspectives about children’s behavior. Thus, increased parental involvement may also facilitate positive behaviors to generalize to the school setting and likewise result in the decrease of negative behaviors to generalize across settings as well.

4) Do parent and teacher ratings on the PIPPS and PKBS-2 vary as a function of the frequency of communications that are reported as occurring between parties?

Predictive Validity

Lastly, this study hypothesized that the level of communication presently ongoing between parents and teachers would be associated with the degree of agreement between parent and teacher measures of social competency ratings. The results of bivariate analyses did not yield overall significant relationships between the Parent Teacher Communication Form and the PIPPS. However, parent ratings on the PIPPS Play Disconnection factor did yield a small, but significant association with increased levels of parent teacher communication. In other words, higher levels of parent-teacher communication led to higher associated ratings only on the Play Disconnection subscale. This may reflect the fact that there was very little variation found in the level of communication between teachers and parents. The majority of parent teacher groups indicated that communication was made daily through verbal exchange at the end of the day or through letters sent home. Therefore, analyses were not able to be made on the basis of distinct groups defined by low communication and high communication groups.
However, of interest is the sole significant correlation that was found. Play Disconnection reflects withdrawn behavior and nonparticipation in peer play. Unlike children who are overtly rejected by their peers, those who appear to be neglected are not likely to be aggressive and therefore may be harder to detect than those who display more obvious behaviors (Sanderson & Siegal, 1995). Thus, there may be a subgroup of neglected children obtaining high scores on the Play Disconnection subscale who choose to play alone and refrain from participating in social interactions. Although this group of children is less likely to report feelings or perceive themselves as lonely, research has indicated that withdrawn behaviors as rated by teachers contributed to elementary school childrens’ reports of loneliness in later years. Social isolation may have its antecedents in early childhood. Therefore, it is important to address these issues early on in a child’s education (Sanderson & Siegel, 1995). Children who are identified on the Play Disconnection scale as neglected and who are least likely to participate in social interactions are expected to benefit from organized play groups and social skills instruction by increasing their desire to engage in social interactions and thus being taught to form friendships (Sanderson & Siegel, 1995).

Limitations and Implications for Future Research

Although the overall results of this study support the use of the PIPPS by parents and teachers of preschool children, the results are qualified by both the sample and the methods of this assessment. A discussion of some limitations inherent in this study is in order so that the findings are interpreted with appropriate caution.

In recognition of the importance of early childhood assessment, this study selected a diverse sample population with respect to the region of the country as well as
across individual preschool classrooms and their philosophies of teaching. This sample was, however, predominantly White with a greater distribution of males as compared to females. Additionally, the disproportionate representation of one ethnic group as well as gender within this sample limits an understanding of the validity of these constructs for other populations of preschool children. Further research is warranted to assess the construct validity of this measure with a more diverse sample of children to determine the ability of the PIPPS to assess interactive peer play among all populations of children residing in various areas. For the purposes of deriving assessment measures to guide the development of appropriate curricula and intervention strategies, it is important to be cognizant of the applicability as well as appropriateness for all children within the particular early childhood program. The current evaluation of the PIPPS indicates its validity for a predominantly White sample and therefore its use for other ethnic groups merits further study.

Another consideration is in regards to the sample population of preschool teachers who completed rating scales and observations for preschool children within the classroom setting. All preschool teacher participants in this study were female. Additional research should explore the use of the PIPPS with the inclusion of a more diverse gender population of teachers and paraprofessionals in the classroom setting. The research has indicated that there are clear differences in teachers’ perceptions of children’s readiness as applicable to academic and social standards. Although this concept may be somewhat ambiguous, teachers’ perceptions and expectations are likely to influence their attitudes and interactions with their students. Children that they perceive to be socially more advanced may be treated differently and therefore given
more opportunities to outperform their peers who are perceived as less competent, both in academic as well as social domains. Although men are highly underrepresented in early childhood education, results from recent studies have shown differences between female and male preschool teachers’ play willingness. Sandberg and Pramling-Samuelsson (2005), found that female preschool teachers tend to value calm play and emphasize the importance of social development while male preschool teachers accentuate the significance of physical development. Although it is believed that less than 6% of all preschool teachers nationwide are males, emerging data indicate the importance of assessing male and female interactions with young children in encouraging different play interactions.

The methods of assessment used in this study also limit the results. For the concurrent validity assessment, the results are qualified by the use of the same rater to complete the PIPPS and the PKBS-2, which can ultimately lead to source variance. The subjectivity of the rater and the idiosyncratic ways in which the rater completes the scales can contribute to error (Merrell, 1999). Both the PIPPS as well as PKBS-2 versions identify home- and school-based behaviors, therefore this study relied on these selected measures of assessment of social competence within these contexts. Thus, parent and teacher rating scales provided the sole means of examining concurrent validity. Including additional methods of evaluating behavior within these contexts would contribute to and enhance the ecological framework in understanding the concurrent validity of the PIPPS. By employing a multi-method as well as multi-source assessment plan, source variance is reduced and a more comprehensive understanding of a child’s social functioning may be obtained (Merrell, 1999). Future studies should therefore employ multiple methods of
examining the concurrent validity. Such studies may utilize additional sources of information such as observations, peer reports, and narrative recordings.

The method that was used for assessing the predictive validity of the PIPPS must also be considered when interpreting the results of this study. The current study used the Parent Teacher Communication Form developed by the researcher. This particular form requires judgments to be based on teacher’s subjective perceptions and referral to recent interactions with parents in determining the level of parent-teacher communication. Therefore, the Parent Teacher Communication Form is not an objective measure of present communication. In particular, these forms were only distributed to teachers and findings may have differed had they been administered to both teachers as well as parents. There are many factors that may likely influence teacher ratings on this form. Teachers may average the time that is typically spent with parents in their classroom, thereby reporting the average time spent with parents in general without regard to individual differences across parents. In particular, if the amount of communication is similar across families with the exception of those families that stand out merely because they either have much lower levels of communication or much higher levels of communication, distinctions are likely to be overlooked. Future studies should examine the predictive validity of the PIPPS to more objective measures of communication by utilizing daily reports or documentation indicating the forms and amount of communication with individual parents. In addition, teachers may also have referred to the most recent week or the current week in which rating scales were completed without considering more typical levels of communication.
There is research to support the changing amounts in parent-teacher interaction across the transition from preschool into kindergarten. One study found that the average amount of weekly contact between parents and teachers in Head Start was 33 minutes per child as compared to 9.2 minutes per child in kindergarten (Fantuzzo et al., 1998). It is imperative that teacher-parent communication levels are highly encouraged to increase the likelihood that these interactions will be sustained over the transition. Teachers and parents can only benefit from opportunities to learn from one another about children’s functioning and develop a shared perspective for understanding an individual child’s strengths and deficits. An understanding of children’s strengths and needs upon entry to kindergarten can assist both teachers and parents in setting up appropriate educational experiences for each child. To maximize the effectiveness of this communication, tools are needed for providing systematic means of communication.

Should a similar investigation be conducted in the future, researchers are encouraged to obtain a larger sample size, and sample from a population whose findings would generalize to a larger group of preschool as well as kindergarten children. This study was conducted within a single large county. Future research should explore the use of the PIPPS in urban settings to determine its appropriateness with a more generalizable sample. There is wide recognition of the risks faced by ethnic minority children living in low-income urban areas. Therefore, it is imperative that future studies examine groups of high-risk young children so that early intervention and prevention efforts may increase the likelihood of their success and decrease the probability for future difficulties.
Implications for Practice

Developmental research reports that it is essential for children to develop social competence in order to achieve success, particularly in the transition from preschool to kindergarten. For young children, a primary component of social competence is composed of their ability to establish and engage in effective interactions with peers during play (Raver & Zigler, 1997). Acquisition of these skills has been shown to facilitate positive perceptions of school and motivation to attend, increased school involvement, and enhanced academic achievement (Birch & Ladd, 1996). This research highlights emerging evidence that emotional development and academic learning are far more closely intertwined in the early years than may have been previously understood (Raver & Knitze, 2002).

As evidenced in past research as well as the findings from this particular study, the capability of the PIPPS to address important aspects of social competence assessment has been demonstrated. This instrument has proven its ability to target specific interactions and experiences of young children who may be at risk for social skill deficits. Because there is an emphasis on the need for social skills assessment upon entry into early childhood programs to identify areas of need, guidelines have proposed that information be derived from both parents and teachers. Observations should elicit behaviors that occur in natural contexts (Fantuzzo et al., 1998). The ability of the PIPPS to satisfy and address the need for developmentally appropriate assessment of interactive peer play across home and school settings with young children attests to its usefulness as a tool for screening and assessment (Fantuzzo & McWayne, 2002). The PIPPS taps into dimensions that address success in actively engaging with peers, social withdraw
symptoms, aggressive/acting out behaviors, and dimensions of problem behaviors (Raver & Zigler, 1997).

Informing the curriculum

The increased demand for early childhood education services is partly due to the recognition of the crucial importance of experiences during the earliest years of life (Fantuzzo & McWayne, 2002). Results obtained from the PIPPS can contribute to the development of educational experiences that enhance social skills development by indicating areas of individual children’s strengths as well as difficulties in interactive peer play situations. Teachers can use this instrument to determine specific aspects of peer play interactions that must be addressed in order to meet the needs of an individual child and to modify a child’s curriculum based on empirically validated constructs.

Establishing methods of parent and teacher communication

According to the guidelines suggested by the National Association for the Education of Young Children (NAEYC), establishing partnerships between teachers and parents and obtaining information from multiple sources are important components of early childhood education (Raver & Zigler, 1997). The PIPPS provides a means of communication between the home and school in regards to a child’s strengths and needs in the areas of problem behaviors and social competency skills. Because the parent and teacher measures assess the same constructs, the same terminology may be used when discussing a child’s interactive peer play and social performance. The ability to communicate using the same terms that have shared meaning strengthens the partnership and allows parents and teachers to work together in providing additional social opportunities for their children across contexts.
Additionally, the PIPPS can facilitate the importance of teaching peer play and educate parents about social competence. As parents are able to gain a better understanding of the value of peer play, they are more likely to promote opportunities for peer play interactions in the home context. Parents can further learn to identify the behaviors that support Play Interaction and behaviors that should be discouraged and relate to Play Disconnection and Play Disruption factors.

Conclusions

The primary purpose of this study was to provide additional evidence for the importance of considering social competence in young children in relation to their development and long-term outcomes. Overall, the results of this study revealed several capacities for the use of the PIPPS as a valid assessment instrument for preschool children. First, the PIPPS measures peer play interactions, which have proven its relevance to early childhood social competency. The importance of attaining this competency is evidenced by a growing body of research indicating the consequences of poor peer relationships, future academic functioning, and overall well being. Second, this instrument has shown significant congruence in the measure of constructs among the parent and teacher versions. Establishing effective partnerships between parents and teachers early on in academic careers is critical for successful school adjustment. By allowing parents and teachers to converse over a relatively simplistic scale, the PIPPS encourages essential linkages in early childhood assessment.
References


*Contemporary Educational Psychology*, 13, 41-58.
Appendices
Appendix A: Parent and Teacher Consent forms

Institutional Review Board Early Childhood Cover Letter

Dear Parent/Caregiver:

The following information is being presented to help you decide whether or not you would like to take part in a minimal risk research study. Please read this carefully. If you do not understand anything, please feel free to contact the person in charge of the study. The goal in conducting this study is to learn about the experiences of young children and the way they engage in play behavior with their peers and with individuals in the home environment. English and Spanish speaking parents and caregivers of children ages 3-5 years, currently enrolled at ________ for a minimum of 4 months are being included in this study.

Why We’ve Sent This Letter to You: You are being asked to participate in this study because you are a parent or caregiver of a child (ages 3-5 years) who is enrolled in a preschool classroom at ________. The researcher has obtained consent from the Director, and the classroom teachers have agreed to take part in this study as well. The study is entitled: Measuring the Social Competence in Preschool-Aged School Children through the Examination of Play Behavior. The researcher would like to find out more about how young children play with their friends and their siblings at home and at school and how this is interpreted by parents and teachers alike.

Why You Should Participate: By taking part in this research study, you may increase your overall knowledge of the importance of your child’s play behaviors and how well they show these behaviors in school as compared to home.

You may also find that factors of play behavior and social skills are easy concepts to speak to your child’s classroom teacher about. In addition, you may find it helpful to speak to them in regards to your child’s social progress in school by referring to specific skills mentioned on the rating scales.

Completing the Survey: You will be asked to fill out two rating forms for this study during times that are most convenient for you. It is estimated that it will take 10-15 minutes for completion. You will need to hand in your forms to the classroom teacher when you are finished filling them out. We would like for you to hand them into the classroom teacher within two weeks of receiving them.

Please Note: Your participation is completely voluntary. By returning the survey to the classroom teacher at ________, you are agreeing that you consent to participate in this research. If you choose not to participate, or if you withdraw, this will in no way affect your relationship with ________, USF, or any other party.

Confidentiality of Your Responses: There is minimal risk to you for participating in this research. Your privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board, and others working on their behalf may inspect the records from this research project. Your individual responses will not be shared with any other school system personnel or anyone other than Eun-Yeop Lee after they are collected from your teachers. All names will be removed and replaced with a number to protect the confidentiality of your responses.
Appendix A: (Continued)

What We’ll Do With Your Responses: The purpose of this research study is to find out if play behaviors are able to determine the level of social skills that young children have acquired. It is expected that this study will add useful information to the research available on social and emotional factors with young children. This study is also expected to add to the literature which has shown that examining play behavior may be an additional method of accurately measuring social skills with young children. The results of this study may be published. However, the data obtained from you will be combined with data from other people in the publication. The published results will not include your name or any other information that would in any way personally identify you.

Questions? If you have any questions about this research study, please contact Eun-Yeop Lee, MA. at (XXX) XXX-XXXX. If you have questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at 813-974-5638.

Want to See the Results? The researcher will be more than happy to share results of this study. In addition, the completed master’s thesis will be kept on reserve at the USF Library.

Thank you for taking the time to participate!

Sincerely,

Eun-Yeop Lee, MA
USF Graduate Student

Consent to Take Part in This Research Study

By signing this form I agree that:

- I have fully read or have had read and explained to me this informed consent form describing this research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

_______________________________
Signature of Participant

________________________________
Printed Name of Participant

______________________
Date
Appendix A: (Continued)

Letter of Support

To Whom It May Concern:

This letter is to provide support for and allow my school to participate in the study entitled “Measuring social competence in preschool-aged children through the examination of play behaviors,” which will be conducted by Eun-Yeop Lee, MA (USF School Psychology Graduate student) for her master’s thesis. I can verify that I have received materials describing the study as well as the procedures that will be conducted. In addition, I have the understanding that parent and teacher rating forms will be used in this study without further intrusion on, or direct interaction with the students in the classroom.

Thank you,
Appendix B: Instrumentation

Parent-Teacher Communication Form

Please indicate your answers below by placing a check mark next to the response that applies:

1. Gender of the child
   A. Male
   B. Female

2. What is your relation to this child?
   A. Pre-K classroom teacher
   B. Paraprofessional in Pre-K classroom

For the following question please read the instructions below:

1. Please indicate forms of parent-teacher communication (i.e. letters home, face-to-face meetings, phone calls home, etc.) that have taken place in the past school year by placing a check next to the following options that apply.
2. Please rank order the top two forms of communication that occur the most frequently by placing a 1 and a 2 next to the responses that apply.
3. Please indicate the frequency in which any of these communications have occurred in the past school year by placing a check next to the following options that apply.

3. **Type of Communication:** (Rank order top two)  **Frequency of Communication:**
   ___ Letters home
   ___ Phone calls home
   ___ Parent-teacher conference
   ___ Speak to parent/guardian at start/end of school day
   ___ Other: (please indicate) __________________
   ___ 2 or more times a week
   ___ Once a week
   ___ Once a month
   ___ Once a semester
   ___ Once a year
   ___ Never

Thank you for your time. Your assistance is greatly appreciated!

Please feel free to call if you have any further questions (XXX) XXX-XXXX
## PENN INTERACTIVE PEER PLAY SCALE

### Teacher Report

In the past few months, indicate how much you have observed the following behaviors in this child during free play by filling in the appropriate circle.

<table>
<thead>
<tr>
<th>Behavior Description</th>
<th>NEVER</th>
<th>Seldom</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Helps other children</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>2. Starts fights &amp; arguments</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>3. Is rejected by others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>4. Does not take turns</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>5. Hovers outside play group</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>6. Shares toys with other children</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>7. Withdraws</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>8. Demands to be in charge</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>9. Wanders aimlessly</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>10. Rejects the play ideas of others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>11. Is ignored by others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>12. Tattles</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>13. Helps settle peer conflicts</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>14. Destroys others’ things</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>15. Disagrees without fighting</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>NEVER</td>
<td>SELDOM</td>
<td>OFTEN</td>
<td>ALWAYS</td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
<td>--------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>16. Refuses to play when invited</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>17. Needs help to start playing</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>18. Verbally offends others (name calling)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>19. Directs others’ action politely</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>20. Cries, whines, shows temper</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>21. Encourages others to join play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>22. Grabs others’ things</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>23. Comforts others who are hurt or sad</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>24. Confused in play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>25. Verbalizes stories during play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>27. Disrupts play of others</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>28. Seems unhappy</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>29. Shows positive emotions during play (e.g. smiles, laughs)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>30. Is physically aggressive</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>31. Shows creativity in making up play stories and activities</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>32. Disrupts class during transitions from one activity to another</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
### PENN INTERACTIVE PEER PLAY SCALE

#### Parent Report

*In the past two months, indicate how much you have observed the following behaviors in this child during play at home or in the neighborhood by filling in the appropriate circle.*

<table>
<thead>
<tr>
<th>Behavior</th>
<th>NEVER</th>
<th>SELDOM</th>
<th>OFTEN</th>
<th>ALWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Helps other children</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>2. Starts fights &amp; arguments</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>3. Is rejected by others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>4. Does not take turns</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>5. Hovers outside play group</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>6. Shares toys with other children</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>7. Withdraws</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>8. Demands to be in charge</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>9. Wanders aimlessly</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>10. Rejects the play ideas of others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>11. Is ignored by others</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>12. Tattles</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>13. Helps settle peer conflicts</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>14. Destroys others’ things</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>15. Disagrees without fighting</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

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Continue on the other side
Appendix B: (Continued)

<table>
<thead>
<tr>
<th>Behavior</th>
<th>NEVER</th>
<th>SELDOM</th>
<th>OFTEN</th>
<th>ALWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Refuses to play when invited</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>17. Needs help to start playing</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>18. Verbally offends others (name calling)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>19. Directs others' action politely</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>20. Cries, whines, shows temper</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>21. Encourages others to join play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>22. Grabs other's things</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>23. Comforts others who are hurt or sad</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>24. Confused in play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>25. Verbalizes stories during play</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>26. Needs parent's direction</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>27. Disrupts the play of others</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>28. Seems unhappy</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>29. Shows positive emotions during play (e.g. smiles, laughs)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>30. Is physically aggressive</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>31. Shows creativity in making up play stories and activities</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>32. Is disruptive during transitions (moving from one activity to another)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

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## PKBS-2

### Preschool and Kindergarten Behavior Scales

#### Section I. Child Information

<table>
<thead>
<tr>
<th>Child's Name</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Age:</th>
<th>Year</th>
<th>Months</th>
<th>Sex: M □ F □</th>
</tr>
</thead>
</table>

Is this child receiving services in a school or in a school-related program (e.g., Preschool, Head Start)? Yes □ No □

If Yes, what is the name of the school and the program?

If this child has a disability, please list the special education service category or classification:

#### Section II. Rater Information

<table>
<thead>
<tr>
<th>Rated By</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Relationship to Child</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date Completed</th>
<th></th>
</tr>
</thead>
</table>

List the setting(s) in which you observe or interact with this child:

#### Section III. Instructions and Scales

Please rate the child on each of the items on pages 2 and 3 of this rating form. Ratings should be based on your observations of this child’s behavior during the past 3 months. The rating points for each item appear in the following format:

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Never**

If the child does not exhibit a specified behavior, or if you have not had an opportunity to observe it, circle 0, which indicates Never.

**Rarely**

If the child exhibits a specified behavior or characteristic, but only very infrequently, circle 1, which indicates Rarely.

**Sometimes**

If the child occasionally exhibits a specified behavior characteristic, circle 2, which indicates Sometimes.

**Often**

If the child frequently exhibits a specified behavior or characteristic, circle 3, which indicates Often.

Please complete all items and do not circle between numbers.
<table>
<thead>
<tr>
<th>Social Skills Scale</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Scoring Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Works or plays independently</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2. Is cooperative</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3. Smiles and laughs with other children</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4. Plays with several different children</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5. Tries to understand another child's behavior (&quot;Why are you crying?&quot;)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>6. Is accepted and liked by other children</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>7. Follows instructions from adults</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>8. Attempts new tasks before asking for help</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>9. Makes friends easily</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>10. Shows self-control</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>11. Is invited by other children to play</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>12. Uses free time in an acceptable way</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>13. Is able to separate from parent without extreme distress</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>14. Participates in family or classroom discussions</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15. Asks for help from adults when needed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>16. Sits and listens when stories are being read</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>17. Stands up for other children's rights (&quot;That's his!&quot;)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>18. Adapts well to different environments</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>19. Has skills or abilities that are admired by peers</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>20. Comforts other children who are upset</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>21. Invites other children to play</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>22. Cleans up his or her messes when asked</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>23. Follows rules</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>24. Seeks comfort from an adult when hurt</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>25. Shares toys and other belongings</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>26. Stands up for his or her rights</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>27. Apologizes for accidental behavior that may upset others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>28. Gives in or compromises with peers when appropriate</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>29. Accepts decisions made by adults</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>30. Takes turns with toys and other objects</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>31. Is confident in social situations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>32. Responds appropriately when corrected</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>33. Is sensitive to adult problems (&quot;Are you sad?&quot;)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>34. Shows affection for other children</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Raw Score Totals

PKBS-2 2

142