EFFECTS OF A COGNITIVE BEHAVIORAL PLAY INTERVENTION ON CHILDREN'S HOPE AND SCHOOL ADJUSTMENT

by

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Submitted in partial fulfillment of the requirements

for the degree of Doctor of Philosophy

Department of Psychology

CASE WESTERN RESERVE UNIVERSITY

August, 2008

CASE WESTERN RESERVE UNIVERSITY

SCHOOL OF GRADUATE STUDIES

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Acknowledgements

This study was supported by awards from Case Western Reserve University's Phi Beta Kappa, the Baker-Nord Center for the Humanities, and the Richard A. Zdanis Research Fellowship, as well as the Graduate Student's Alumni Funds through the Department of Psychology.

I want to thank the children, parents, teachers, and directors from the Cleveland Music School Settlement's Early Childhood program and the Jewish Community Center's Early Childhood programs for participating in the study and for being so accommodating and flexible throughout the process.

As the creator of Cognitive Behavioral Play Therapy, Dr. Susan Knell is responsible for igniting my desire to investigate and validate cognitive behavioral play strategies. Her integrative work is inspiring.

My committee members, Dr. Heath Demaree, Dr. Sonia Minnes, and Dr. Elizabeth Short, have been extremely helpful in providing me with guidance and expertise. In both planned and spontaneous meetings, they answered numerous questions clearly and enabled me to think about the study from multiple perspectives. I thank them.

The study could not have been conducted without the help of my dedicated research assistants, Kelly Christian, Karen Goodwin, Tori Sacha, and Tara Wilcox. I am very grateful to them. I must acknowledge Tori in particular. Tori is responsible for helping to adapt the Affect in Play Scale-P-BR and for conducting the majority of the assessments for the current study. We have also worked together on a number of other projects together and I cannot imagine my graduate school experience without her.

My advisor, Dr. Sandra Russ, has been a fundamental source of support throughout graduate school. I always felt that she prioritized time for our meetings and that she provided me with encouragement and guidance as my research and clinical interests developed. She is the definition of a true mentor.

The study was on the enhancement of hope and as such, it is essential that I thank my parents, Susan and Gene Farber, and my husband, Richard Pearson, for the different ways they enhance my own hope. My parents model hope in the ways they live their own lives and have always encouraged me to pursue my dreams. My husband is my biggest champion. His calming, positive assurance has been a vital source of motivation and stability.

Effects of a Cognitive Behavioral Play Intervention on Children's Hope and School Adjustment

Abstract

by

BETH L. PEARSON

The main objective of the study was to determine whether a Cognitive Behavioral Play Intervention would be effective at enhancing hope and increasing adjustment to school in preschool aged children. The Cognitive Behavioral Play Intervention was developed based on Knell's (1993; 1998) Cognitive Behavioral Play Therapy and Snyder, et. al.'s (1997) conceptualization of hope in children. Forty-eight children were randomly assigned to three conditions: a Cognitive Behavioral Play Intervention, a free play control condition or a puzzles/coloring control condition. It was hypothesized that the CBP Intervention group would have significantly higher hope and greater school adjustment than the control groups. A multi-method/multi-informant approach was used to assess children's hope, perceived competence, problem solving ability, school liking, social competence, anxiety-withdrawal, and play processes at baseline and outcome. The major results of the study were that the CBP Intervention group, as compared to the puzzles/coloring control group, had significantly higher hope, higher social competence, and less anxiety-withdrawal symptoms, according to teacher report. There was a trend which indicated that both the CBP Intervention group and the free play control group had more positive feelings about school than the puzzles/coloring control group, according to teacher report. This was the first intervention to increase preschool children's hope and the first study to provide empirical support for cognitive behavioral play strategies.

EFFECTS OF A COGNITIVE BEHAVIORAL PLAY INTERVENTION ON CHILDREN'S HOPE AND SCHOOL ADJUSTMENT

BETH L. PEARSON

Currently, we are in the midst of an age of accountability (Ogles, Lambert, & Masters, 1996). Managed health care companies are starting to limit reimbursement to therapies of known efficacies and schools are rewarding and punishing teachers contingent on their students' academic performance. Outcomes matter like never before. The purpose of the current study was to investigate the efficacy of cognitive behavioral play strategies. Moreover, the study sought to determine whether a Cognitive Behavioral Play Intervention would be effective at increasing children's hope and adjustment to school, and if so, which mechanisms of change were associated with changes in adjustment.

Children who have a difficult adjustment to school are at risk for later delinquency and psychopathology (Spivack, Marcus, & Swift, 1986; Spivack & Marcus, 1987). Therefore, it is critically important for prevention programs to target healthy adjustment to school in the early years. Several different methods for increasing coping and adjustment have been attempted with young children. Play therapy is frequently used in an attempt to increase coping and adjustment in children. Despite this, play therapy has limited research support due to the paucity of studies and the methodological limitations of the studies that exist (Russ, 2004).

The Importance of Play in Child Development

Play is considered so important that it has been declared by the United Nations to be "a universal and inalienable right of childhood (Landreth, 2002, p. 10)." Pretend play can be defined as "a symbolic behavior in which one thing is playfully treated as if it were something else (Fein, 1987, p. 282.)" Some common elements that typify play behavior are that play is pleasurable, intrinsically complete, intrinsically motivated, and has no goal (Schaefer and O'Connor, 1983).

There are several theoretical reasons that play is considered so vital to children. First, the role of play is essential in the development of a wide-range of adaptive abilities (Russ, 2004). For example, play helps children to expand their vocabulary, to develop object constancy, to form event schemas and scripts, to learn strategies for problem solving, to develop divergent thinking ability, and to develop flexibility in their thinking (Singer and Singer, 1990). Additionally, play serves four broad purposes (Schaefer and O'Connor, 1983). For example, play can serve a biological function (such as the release of energy); intrapersonal functions, (such as gaining mastery over circumstances); interpersonal functions (play can be used to develop social skills); and sociocultural functions (through play, children can imitate adult roles) (Schaefer and O'Connor, 1983).

Russ (2004) reviews a large body of research which has found that play and creativity (including divergent thinking, transformation abilities, and problem-solving) are positively related to each other (Dansky, 1980; Fein, 1981; D. Singer and J. Singer, 1990). Play has been shown to facilitate problem solving. Recently, Wyver and Spence (1999) performed three studies investigating the direction of influence between play and problem-solving. These researchers determined that there is a reciprocal relationship

between play and problem solving, in which different aspects of play lead to different kinds of problem solving and vice versa. Children who received training in thematic play showed improvements in semantic divergent problem solving skills, but not figural problem solving skills, whereas children who were trained in cooperative play showed improvements in both figural and semantic divergent problem-solving skills.

Problem-solving is related to the ability to cope with stressful situations (Russ, 2004). Several studies have found play and coping to be positively related (Christiano and Russ, 1996; Perry and Russ, 1998; Goldstein and Russ, 2000-2001).

Although play and creativity may be related to one another because of the link with problem-solving/divergent thinking, there is an alternative explanation as well. Play may be related to creativity because affect and creativity are positively related (Russ, 1993). As such, if play allows children to have experiences such as accessing of affect-laden thoughts or integrating affect into their narrative, then play may serve to enhance creativity. Several studies have found affect in play to positively relate to creativity (Russ & Grossman-McKee, 1990; Russ & Peterson, 1990; Russ & Schafer, 2005). Clearly, play serves an integral role in the development of a variety of adaptive abilities.

According to Erikson (1963), play is a function of the ego. Play is used by the ego to gain mastery over the self and various parts of life. In play, a child can arrange toys anyway she likes; she can choose which character to be and how to respond. In this way, the child is not passive, but active. Erikson draws on Freud's concept of turning passivity into activity. He describes a child as playing "at doing something that was in reality done to him (p. 217)." In pretend play the child is the master over a microsphere; "the small world of manageable toys." It is the fact that play allows children to control a

part of the world and to gain mastery over experiences which makes play such a critical aspect of healthy development.

Play can also help children manage their distress and increase adjustment. A recent meta-analysis of 94 studies focusing on the efficacy of play therapy and filial therapy found a large effect size for children in play therapy compared to children who received no treatment (Ray, Bratton, Rhine, & Jones, 2001). Bratton and Ray (2000) reviewed a large body of research and found that children in play therapy decreased their levels of aggression/oppositionality in 8 out of 8 studies, decreased behavioral disturbances in school in 6 out of 8 studies, improved personality adjustment in 4 out of 9 studies, decreased anxiety in 7 out of 9 studies, and increased their self-concept in 8 out of 9 studies.

One illustrative example of anxiety-reduction and play is Barnett's (1984) study of a group of children after their mother's departure on the first day of pre-school. Children were randomly assigned to either a free-play condition or a condition in which they listened to a story. Children in the play condition had significantly greater anxiety reduction if they were highly anxious to begin with than highly anxious children in the control condition. Low-anxiety children had no differences in anxiety reduction between the two conditions. Interestingly, the highly anxious children engaged in more fantasy play and the low anxiety children did more functional/manipulative play. It may be that the highly anxious children were using the fantasy play as a form of emotion regulation. That children use play as a means of diffusing negative emotional experiences is certainly one of the guiding principles behind play therapy.

Play Therapy

Although play has a purpose in the every day experience of all children, play is also an essential element in helping children in therapeutic situations. Currently, play is used in one form or another by the majority of child clinicians (Koocher and D'Angelo, 1992). One reason for this is that children often lack the cognitive and verbal abilities to express what they feel. Play is a mode of revealing what the child has experienced, the child's feelings and reactions to what was experienced, what the child wants, and the child's perception of self (Landreth, 2002). In therapy there are four broad functions of play (Russ, 2004). First, play is a means of expressing feelings and thoughts. Second, play is a form of communication between the child and therapist. When a therapist empathizes and interprets the child's play, the child feels understood. Third, in some forms of play therapy (psychodynamic, but not cognitive behavioral) play can be a vehicle for the experience of insight and working through. Finally, play provides opportunities to practice ideas, behaviors, and verbal expressions in a permissive, non-judgmental environment (Russ, 2004).

The history of play therapy began with Hermine Hug-Hellmuth who observed and played with children in their homes to become familiar with their environments (Schaefer and Cangelosi, 1993). Hug-Hellmuth, however, did not develop a specific play technique (Landreth, 2002). Therefore, Anna Freud and Melanie Klein are credited with first adapting traditional psychoanalytic techniques for children by incorporating play into the sessions. Whereas Anna Freud used play to help establish a therapeutic alliance with her patients, Klein used play as a substitution for verbalizations (Schaefer and O'Connor, 1983). In 1947 Virginia Axline modified Carl Rogers' client-centered approach into

child-centered play therapy for children. In child-centered play therapy the therapist is non-directive; she focuses on conveying empathy and genuineness in order to allow the child's natural developmental process to take over (Russ, 2004). Cognitive behavioral play therapy (Knell, 1993; Knell, 1998) is a recent addition to the tradition of play therapy. Cognitive behavioral play therapy modifies both cognitive therapy, as conceptualized by Aaron Beck (e.g.1976), and traditional behavioral therapy by using play as the primary way that the therapist conveys information to her child-clients (Knell, 1998).

Cognitive Behavioral Therapy with Children

> According to Kendall (1985) cognitive behavioral methods emphasize:
>
> both the learning process and the influence of the contingencies and models in the environment while underscoring the centrality of mediation/information-processing factors in both the development and remediation of childhood disorders (p. 359).

With respect to cognitions and information-processing, there are two separate types of intervention (Braswell & Kendall, 1988). For some individuals, distorted views of the world cause the individual distress (Beck, 1976). In these cases, it is necessary to help the individual to become more realistic, less pessimistic, and less hopeless. For other individuals, especially children, the problem is that cognitive-mediating strategies are missing. In these cases, it is necessary to help the individual learn to think before she acts. Braswell and Kendall (1988) identify the following treatment components frequently used with children as: problem-solving training, verbal self-instructional training, attribution retraining, modeling, role playing, and behavioral contingencies.

According to Kendall (2000), cognitive behavioral interventions can be either therapeutic, preventative, or enhancement focused. Enhancement-focused interventions

are focused on improving quality of life, rather than targeting individuals who are at risk for a problem or who have a problem (Kendall, 2000).

Stress Inoculation Training

In stress inoculation training (Meichenbaum, 1985), clients are taught that they have an internal monologue continuously running though their heads. By becoming aware of their automatic thoughts, anticipating stressors, and using internal thoughts in a conscious, positive manner, clients can learn to cope more successfully with stressors. Meichenbaum (1985) teaches clients relaxation strategies and problem-solving strategies, using both modeling and role-playing to do so.

Problem-Solving Training

Problem-Solving Training for children began in the late 1960's with the pioneering work of Myrna Shure and George Spivack. These two individuals realized that there were specific cognitive skills associated with better adjustment in children and a lack of these skills was associated with problems in adjustment that caused serious consequences. They labeled these skills "Interpersonal Cognitive Problem-Solving" skills (ICPS skills). For example, children who are deficient in ICPS skills tend to be more impulsive and more aggressive (Spivack & Shure, 1974). A child with ICPS skills knows *how* to think about a problem, rather than specifically *what* to think (Shure, 2001). ICPS skills comprise the *process* of thinking about a problem. These skills include the integration of alternative-solution thinking (the ability to think of many different solutions to a problem) and consequential thinking (the ability to think of different outcomes that might occur after an event). Spivack and Shure designed interventions for teachers to use in inner-city preschools (Spivack & Shure, 1974) and for mothers to

use with their children (Shure & Spivack, 1978) to determine if ICPS skills could be taught. Spivack and Shure found that ICPS training was extremely effective at aiding in a child's adjustment. For example, one 3-month training in either preschool or kindergarten was associated with decreases in impulsivity and inhibition and increases in prosocial behaviors including concern for others, cooperation, sharing, and the degree to which the child was liked by his or her peers, as assessed by teacher's report (as reported in Shure, 2001). Overly inhibited children were found to be more outgoing, better liked by their peers, and more aware of others' emotions following ICPS training (Shure & Spivack, 1982). Shure (2001) also reports that in these early studies gains were maintained at one and two year follow-ups and the programs appeared to have preventive effects when ICPS-trained children's behaviors were compared to control children.

Based on their early successes, ICPS programs have been developed and used widely in early childhood and early intervention programs. The programs are preventive in nature and are meant to occur over the course of 3 months, with games and activities occurring approximately 20 minutes each day (Shure, 1992). The curriculum first teaches children key word concepts such as "same" and "different." Next, children are taught a problem-solving process through the use of pictures of scenes of children in a conflict and by dialoguing as real-life problem situations occur. Children are taught to identify the problem, determine how the people in the conflict feel, generate possible solutions to the problems, and then consider what might happen if a given solution is attempted. The primary thrust of the intervention is to teach children to generate many alternative solutions to their problems.

Recently, the emphasis on quantity of alternative responses (rather than quality) has been called into question. Youngstrom and colleagues demonstrated that the quality of the child's responses (i.e. whether the solutions generated are prosocial or aggressive) is associated with adjustment and appears to be more important than quantity alone (Youngstrom, Meltzer-Wolpaw, Kogos, Schoff, Ackerman, & Izard, 2000). This has important implications for future interventions aimed at improving problem-solving skills.

Other pioneers in the problem-solving field are D'Zurilla and Goldfried, who in 1971 laid out a five-stage model of sequential problem solving steps to be used in the face of a problem. These steps include general orientation, problem definition and formulation, generation of alternatives, decision making, and verification. The final four steps appear to be the same as in Spivack and Shure's model, whereas the first step, "general orientation", refers to the need to focus on problem-solving and minimize other distracters. This is more implicit in Spivack and Shure's model. Dubow and colleagues' I CAN DO program is a 13-session curriculum which teaches children six problem-solving steps: *I*-dentify the problem; what *C*-hoices are available to deal with the problem; pay *A*-ttention to the information and consequences; *N*-arrow the choices down to one; *D*-o it; and *O*bserve the outcome (Dubow, Schmidt, McBride, Edwards, & Merk, 1993). This program was effective at both improving children's ability to generate solutions to a problem and at increasing their self-efficacy to implement the solutions for some stressors.

Modeling Through Stories & Play

Telling stories can be a means of conveying cognitive behavioral principles to children in a developmentally sensitive manner. Grave and Blissett (2004) note, "in a story, abstract concepts, such as causal mediators, can be given concrete form, and introspection can take place externally. Reasoning can be demonstrated using creative and engaging analogy and metaphor…Behavioral enactment takes place in dramatic form (p. 416)." Similarly, Friedberg (1994) states, "Storytelling…can be seen as a form of covert modeling. When children listen to, perceive, and tell therapeutic tales, they create positive coping images (p. 211)."

The use of story-telling is a frequently used intervention in child therapy, although it does not have empirical support. In Gardner's (1993) mutual storytelling technique, for example, a child first creates a made-up story. The therapist then responds by interpreting its psychodynamic meaning and creating a story with the same characters in a similar setting, but with healthier adaptations of the conflicts in the child's story. Therefore, the therapist models adaptive ways of viewing and responding to the world.

Similarly, in Gardner's (1973) talking, feeling, and doing game, a commonly used game in therapy settings, both the child and the therapist take turns answering questions about feelings and experiences they've had or acting out scenarios. The therapist should respond to the cards in the game honestly, but with an appreciation for how her responses relate to the child's problem. Gardner (1983) notes that he often relates experiences that occurred at the time in his life when he was the age that the child is presently. In responding in this way, the therapist models two different messages. First, she models feeling expression and honest disclosure of experiences with another person. Second, the

therapist can be viewed as a coping-model because she can refer to methods she used to deal with a difficult experience and by her presence, demonstrate that she has successfully made it past that difficult time.

Another therapeutic technique which relies primarily on modeling through play is adaptive doll play. Adaptive doll play refers to the modeling of a story for the therapeutic purpose of decreasing a child's distress (Brennan, 1990; Danger, 2003). This technique has been used in case studies, but has not been empirically validated. Danger (2003) used adaptive doll play over the course of five sessions to reduce the symptoms of separation anxiety in a five-year old child. The guidelines of adaptive doll play include the following elements: the story takes no longer than five minutes to tell; the story has a clear beginning, middle, and end; it is told in a distraction-free environment; it focuses on one targeted behavior; it utilizes familiar, specific details from the child's life; it is told realistically; it limits the number of characters and events; it uses the child's name rather than "you"; it does not include any negative emotions expressed by the parent; and the therapist repeats the story 3-5 times over the course of therapy (Danger, 2003).

Cognitive Behavioral Play Therapy

Knell's (1993) Cognitive Behavioral Play Therapy (CBPT) is designed to be used with children ages 2 and ½ to 6 years of age. CBPT incorporates elements of cognitive, behavioral, and traditional play therapies. It is sensitive to developmental issues and emphasizes the empirical validation of effectiveness of interventions (Knell, 1998). Thus far, CBPT has been used to treat encopresis (Knell & Moore, 1990; Knell, 1993), phobias (Knell, 1993), selective mutism (Knell, 1993; Knell, 1993b), children of divorce (Knell, 1993), and sexually abused children (Ruma, 1993; Knell & Ruma, 1996).

Traditional cognitive therapy focuses on changing dysfunctional thinking, which in turn should lead to a change in one's feelings. When using cognitive therapy with adults, clients are helped to identify and label their irrational, illogical, and dysfunctional thoughts. Knell (1998) notes that young children may not differentiate between irrational, illogical thinking and rational, logical thinking. Therefore, the cognitive element of CBPT focuses on either targeting thoughts which, despite being developmentally appropriate, are maladaptive or on increasing adaptive beliefs, when there are none present. The cognitive interventions incorporated within CBPT include recording maladaptive thoughts (for example by drawing pictures or recording with a tape recorder), generating alternative explanations (guided largely by the therapist), bibliotherapy, self-instruction, and developing and practicing positive self-statements (Knell, 1998).

Traditional behavior therapy is based on classical conditioning, operant conditioning, and social learning (Knell, 1998). Based on these three models, Knell utilizes systematic desensitization, contingency management, positive reinforcement, shaping, stimulus fading, extinction and differential reinforcement of other behaviors, self-monitoring, and activity scheduling as the active behavioral interventions in CBPT (Knell, 1998). All of these behavioral interventions can be demonstrated to the child patients by a model (for example, a doll or puppet). In this way, social learning is one of the primary means of helping the child.

Because CBPT targets young children, puppets, stuffed animals, and story books are developmentally appropriate models of both the cognitive and the behavioral interventions. CBPT is usually conducted in a playroom or an office equipped with

appropriate play materials. Sometimes, however, treatment will take place in another setting if it is necessary (Knell, 1998). For example, treatment for an anxious/phobic child might take place in a setting that resembles the feared situation (Knell, 1998). For a child with selective Mutism, it would be necessary to be in an environment in which the child spoke. Toys are often selected by the therapist to pertain to the problem for which the child is attending therapy. CBPT is similar to other play therapies in that it emphasizes the use of play as communication between therapist and child and it conveys the message that therapy is a safe, non-judgmental environment (Knell, 1998). There are also several differences between CBPT and traditional play therapies. In CBPT, the therapist is not a neutral observer; she provides direction, establishes goals, develops interventions that are suited to facilitating those goals, selects the play materials with the child, and provides psychoeducation to the child. Additionally, the therapist helps the child to mediate between words and behaviors (Knell, 1998). Overall, cognitive behavioral play therapy is intended to be a short-term, goal-oriented intervention.

There was one study, prior to Knell's work, that incorporated behavioral therapy strategies into play. Patterson (1965) used dolls in play therapy as a means of treating school phobia in a seven-year old child. Over the course of 23 therapy sessions the therapist encouraged the child-patient to use a doll to model graduated exposure of going to school and engaging in prosocial behavior with other children. M & M candies were used as reinforcements for this primarily behavioral intervention.

The Patterson (1965) study used behavioral strategies only, whereas Knell's (1993) approach is the first to integrate all elements of both cognitive and behavioral therapy in play. Although Knell's (1998) cognitive behavioral play therapy is based on

the principles of cognitive behavioral therapy, cognitive behavioral play therapy has not yet been empirically tested.

Hope

Hope is a psychological characteristic which is vital for having a satisfying life. Erik Erikson (1964) wrote that "hope is both the earliest and the most indispensable virtue inherent in the state of being alive (p. 115)." By this, Erikson meant that without hope, life hardly seems worth living. He refers to hope, later, as "the fundamental human strength (p. 231)", which humans acquire if their early experiences with their caregivers lead them to believe that the world is, generally, a trustworthy place.

Other psychologists have expanded upon the notion of hope and defined it in a precise manner. Hope, as it will be referred to in the present study, refers to the construct delineated by Snyder, Irving, and Anderson (1991). They define hope as "a positive motivational state that is based on an interactive derived sense of successful agency (goal-directed energy), and pathways (planning to meet goals) (p. 281)." Therefore, hope has three components. The first is that hope involves having specific goals. For example, "I want to make friends" or "I'd like to tie my shoes by myself." The second is pathways or waypower thinking, which pertains to one's perceived capacity to generate pathways to reach a goal (McDermott & Snyder, 2000). This relates to divergent thinking and the person's ability to come up with multiple paths to get to the same destination. Therefore, creative flexibility is needed for waypower thinking. The third component of hope is willpower thinking, which taps into one's perceived ability to initiate movement towards the goal (McDermott & Snyder, 2000). This is also known as agency. Agency involves a

person believing it is possible to reach her goal and having the confidence to take strides towards it.

McDermott and Snyder (2000) identify several examples of high-hope statements (pgs. 84-85). Some high-agency statements include, "Yes, I can." "I don't give up easily." "I'm excited about my future" and "Sure, I can do it." These statements all indicate that the individual believes in her ability to persevere and succeed at the goals she sets for herself. Examples of high-pathways statements include, "I can find ways to get what I want", "I'm good at planning", and "If I'm stuck, I'll find a way out." These statements all indicate that the individual believes in her ability to generate solutions to challenges.

Hope & Other Psychological Constructs

Each of the two kinds of hope thoughts (willpower and waypower) is conceptually related to another psychological construct. Willpower thinking, or agency, is similar to Bandura's (1977) concept of self-efficacy. Self-efficacy has to do with a person's belief that she *can* accomplish a given task. Self-efficacy effects the efforts that a person will put forth to achieve a goal and how long one will persist in those efforts (Bandura, 1977). It is the same sense of "I can" as in willpower thinking, in Snyder et al.'s (1991) concept of hope. Hope theorists have noted that hope and self-efficacy are related in that they both focus on goals (Snyder, Ilardi, Cheavens, Michael, Yamhure, & Sympson, 2000). One difference, however, is that self-efficacy beliefs are situation-specific, whereas agency/will-power thinking can be cross-situational and enduring (Snyder et al., 2000).

The way-power thinking, or pathways, component of hope is conceptually related to alternative-solution thinking. Alternative-solution thinking refers to the ability to generate multiple ways to solve the same problem. Snyder et al. (2000) note that problem-solving interventions are related to pathways. Problem-solving interventions (Spivack & Shure, 1992; Dubow et al., 1993) help clients to enhance their way-power thinking by teaching a structured approach that emphasizes generating multiple solutions to problems and then evaluating those possible solutions.

Hope & Development

Snyder, McDermott, Cook, and Rapoff (1997) believe that two aspects of hopeful thinking, goals and waypower thinking, begin developing in infants. For example, infants appear to have goals given that they point at objects they want, wiggle towards interesting items, and make help-seeking noises. These behaviors indicate that there is something specific the baby wants. In a very rudimentary way, the baby has a goal of obtaining it and has some small plan for doing so. Similarly, they note that babies appear to have the capacity to recognize when events co-occur. By doing so, they are in the rudimentary planning stages. For example, they note that an infant often recognizes when he is about to be fed and stops crying once he is picked up and taken into the kitchen where the food is normally served. Therefore, he seems to realize that the pathway of crying is no longer necessary because he is about to achieve his goal (i.e. get fed).

By the time a typically developing child has reached 21 to 24 months or so, Snyder et al. (1997) notes that she will likely be using language that demonstrates her

sense of willpower thinking. For example, “Me too”; “I can do it” “No, my way” are all common phrases of toddlers.

Hope and Adaptive Correlates

In a review of the research literature, Cheavens, Michael, and Snyder (2005) show that hope relates to academic performance in junior high school (Lopez, Bouwakamp, Edwards, & Teramoto Pediotti, 2000), high school (Snyder, Harris, et al., 1991), and college (Curry, Maniar, Sondag, & Sandstedt, 1999) as well as athletic performance (Curry, Snyder, Cook, Ruby, & Rehm, 1997). Importantly, hope also relates to health in a number of ways. In their review, Cheavens et al. (2005) note that hope is both related to prevention efforts (Snyder, Feldman, Taylor, Schroeder, & Adams , 2000) as well as coping with health difficulties (Irving, Snyder, & Crowson, 1998). In terms of psychological health, hope has been found to be negatively related to depression (Snyder, Hoza, et al., 1997) and other psychopathology on the Minnesota Multiphasic Personality Inventory (Irving, Crenshaw, Snyder, Francis, & Gentry, 1990) (as cited in Cheavens et al., 2005). Hope has been found to be positively associated with perceived competence and self-esteem in children (Snyder, Hoza, et al., 1997).

As for coping, there is preliminary evidence which suggests that hope is related to helpful coping strategies. Recently, hope was found to be positively related to support seeking coping in a group of homeless children and both support seeking coping and active coping in a group of elementary school children (Farber, 2005). Both of these types of coping are adaptive, action-oriented responses to stress. In these children, hope and anxiety were negatively correlated (Farber, 2005). Similarly, in a study of children with sickle-cell disease, Lewis and Kliewer (1996) found hope to be negatively related to

anxiety. They found that coping strategies moderated that relationship, in that children who had high levels of hope *and* who reported using primarily active, support, and distraction coping strategies were the ones who reported less anxiety (as reviewed in Roberts, Brown, Johnson, & Reinke, 2002). In summary, because high-hope individuals make goals, plan ways to accomplish their goals, and have a sense that they can achieve their goals, they tend to be successful in a number of areas.

Hope Interventions

Clearly, hope is relevant to many important life domains. Although hope occurs naturally in all people (Snyder, Hoza et al., 1997), there is variability in the amount of hope one might possess. Therefore, one may want to increase hope through interventions. At its most fundamental level, engaging in therapy is all about increasing hope (Snyder, Ilardi, et al., 2000). A client comes to therapy because her goals are blocked (e.g. a goal of feeling good) and therapy focuses on finding pathways to reach that goal. By coming to therapy, the client is exhibiting a sense of agency; additionally, the therapist will use a variety of strategies to enhance the client's agency further (Snyder, Ilardi, et al., 2000). At the present time, hope interventions are in the early stages of development. A few interventions have focused on increasing hope in children (McDermott & Hastings, 2000; Edwards & Lopez, 2000) and adolescents (Pedrotti, Lopez, and Krieshok, 2000). These programs ranged from 5-8 sessions and taught children how to enhance their hope in a variety of ways including: the use of a story-character model; a hope game in which children had to identify obstacles, pathways, and agency thoughts; the creation of hope cartoons and hope stories in which the children identified their goals and high-hope language; teaching a problem-solving approach; and

working with other students to discuss their goals for the future. These interventions have good preliminary results for increasing children's hope (see Lopez et al., 2004 for a review).

Adjustment to School in Young Children

School entry and transition can be viewed as "a time both of opportunity and risk (Ladd & Price, 1987)." Adjustment to pre-school and kindergarten requires that children become comfortable in a new physical environment; they must share materials and adult attention with peers, they must become accustomed to classroom rules and routines, they must interact cooperatively with their peers, and finally, they must meet a variety of academic challenges (Ladd, 1990; Olsen & Rosenblum, 1998). The transition from preschool to kindergarten requires increased competence as both the social and academic expectations and demands are higher (Ladd & Price, 1987). Clearly, adjusting to school, whether beginning preschool or transitioning to kindergarten, is a developmental challenge.

It is critically important that child are aided in this important developmental challenge, as adjustment to school in the early years has been found to be related to later developmental outcomes (Spivack, Marcus, & Swift, 1986; Spivack & Marcus, 1987; Hinshaw, 1992; Olsen & Rosenblum, 1998). For example, difficulties in preschool-age social competence has been found to be predictive of internalizing problem behaviors in kindergarten (Olsen & Rosenblum, 1998). In one study, classroom behavior of children in kindergarten through third grade was predictive of later delinquency and school misconduct in adolescence (Spivack, et al., 1986). Additionally, classroom adjustment in

kindergarten has been found to be related to psychopathology at age twenty (Spivack & Marcus, 1987).

There are several child characteristics which have been found to be related to a child's adjustment to school. Primarily, a child's social skills appear to play a role in how easy or difficult adjustment to school will be for a child (Ladd & Price, 1987; Olsen & Rosenblum, 1998). For example, children who demonstrated good cooperative play skills in preschool and who were well-liked in preschool tended to become better liked by their peers in kindergarten (Ladd & Price, 1987). Similarly, children who were aggressive in preschool tended to become disliked by their kindergarten classmates and were viewed as hostile by their kindergarten teachers (Ladd & Price, 1987). Spivack and Shure (1974) found that in preschool, children who were better able to generate a wide range of alternative solutions to interpersonal problems were better socially adjusted. Social adjustment, specifically, is important because it has been shown to be linked to adjustment to school more generally (Ladd, Kochenderfer, & Coleman, 1997). Schultz, Izard, Ackerman, and Youngstrom (2001) review several studies which indicate that social problems and social withdrawal predict later problems such as loneliness, depression, and acting out in school.

Integration of the Literature

The current study's design incorporated the research literature in many important ways. Drawing on Kendall's (2000) distinctions of types of interventions, it was determined that the current study would be an enhancement-focused intervention aimed at increasing young children's hopeful thinking skills. The children in the current study

were not at risk for having a difficult adjustment to school; the aim was to make their adjustment even easier than it otherwise might have been.

In considering on whom the intervention should focus, it was decided that young children were the population who could most benefit. Hirshfeld-Becker and Biederman (2002) note that "younger children are more plastic, both in terms of their behavior and their neurodevelopment… their behaviors may therefore be easier to modify…[and] young children often have an openness to learning (pgs. 163-164)." Importantly, it was felt that preschool-aged children would be capable of benefiting from the intervention, since developmentally they are capable of all three aspects of hope (Snyder, McDermott, et al., 1997).

When designing the protocol for the Cognitive Behavioral Play (CBP) Intervention, many elements of existing therapies were included. The Cognitive Behavioral Play Intervention in the present study can be seen as a derivation of stress inoculation training. Children were taught (indirectly) that when they are confronted with a problem (or in Meichenbaum's terms- a stressor) they can use their thoughts in a conscious manner to help them mediate the event. They were taught to use hopeful thinking statements that enhance their sense of agency and a problem-solving method to generate pathways to reach their goal. Spivack and Shure's (1974) Interpersonal Cognitive Problem-Solving program, D'Zurilla and Goldfried's (1971) problem-solving training, and Dubow et al.'s (1993) I CAN DO program were the theoretical guides for the problem-solving component of the intervention.

Many aspects of Knell's (1993; 1998) Cognitive- Behavioral Play Therapy were incorporated in the CBP Intervention. Dolls and toys were chosen which were specific to

the target issue. The Investigator used modeling and praise, two aspects of social learning, to teach the hopeful thinking skills. Like Knell's CBPT, children were taught to use self-instruction and practiced making positive self-statements while engaging in pretend play.

Summary and Hypotheses

The purpose of the present study was to compare a Cognitive Behavioral Play Intervention to a free play control condition and a puzzles/coloring control condition to determine whether the intervention was effective at enhancing hope and increasing children's adjustment to school. This was the first empirical study to investigate the effectiveness of CBP strategies. It was also the first study to attempt to increase hope in preschool children.

It was hypothesized that the CBP Intervention would be effective at increasing hope and school adjustment as compared to the control groups. There are several reasons to expect that the CBP Intervention would be more effective than the control conditions for increasing hope and adjustment to school. Enhancement of hope was specifically targeted in the CBP Intervention condition. Hope should be important in school adjustment because hope involves having goals, planning ways to accomplish one's goals, and having a sense that it is possible to achieve one's goals. School adjustment requires reaching many goals, both socially and academically. Children in the Cognitive Behavioral Play Intervention were presented with coping models (doll figures) who demonstrated having goals and using will-power thinking and way-power thinking- the three components of hope. The coping models also demonstrated a step-by-step method of solving problems.

Secondly, children in the Cognitive Behavioral Play Intervention engaged in pretend play processes. In this condition, the Investigator directed the children's play in a constructive manner. The activity of pretend play has been shown to reduce children's distress (Burstein & Meichenbaum, 1979; Milos & Reiss, 1982; Barnett, 1984; Kenealy, 1989). Therefore, the act of play may be a calming, emotion regulatory experience. Additionally, play is an active meaning-making process rather than a passive one (Erikson, 1963). Because children are actively involved in play they make meaning out of their experiences, which should lead to better mastery than in an activity which does not involve meaning-making. Further, pretend play allows children the opportunity to actively practice new skills as well as integrate affect into an organized narrative, which is a complex cognitive task (Russ, 2004). Finally, play has been shown to be related to coping ability (Christiano & Russ, 1996; Perry & Russ, 1998; Goldstein and Russ, 2001). By increasing the amount of time children spend on fantasy and pretend, children's coping ability may also increase.

To control for confounding variables, two different kinds of control groups were used. The free play control condition controlled for engagement in pretend play processes and positive/individual attention from the Investigator. The puzzles/coloring condition only controlled for positive/individual attention from the Investigator. Using these two types of control groups allowed another important research question to be explored. This question was whether the hypothesized mechanisms of change accounted for changes in the outcome scores.

Method

Participants

Forty-eight preschool children (16 per condition) participated in the study. Originally we obtained written parental consent for 52 children to participate. Of the 6 children who did not participate, 5 received baseline measures and then chose voluntarily to discontinue further involvement with the study. The sixth child was found to have developmental differences which made him significantly different from the rest of the sample and therefore ineligible to continue. There were no significant differences in age, in prior years of schooling, in parental level of education, or in any of the means of the baseline measures, between the children who did not complete the study and those who did.

The sample of children who completed the study were 48 children (27 boys, 21 girls) ranging from four to five years of age (mean= 4.66 years, sd= .36) in 2 private nursery schools in the Cleveland area. All children were in mainstream classrooms. This was a highly educated sample. Mothers' average years of education was 18.73 (sd= 2.21). Fathers' average years of education was 19.08 (sd= 2.66).

The sample was diverse with respect to race/ethnicity and religion. The sample identified themselves as follows: 77.1% identified as Caucasian, 10.4% identified as African American, 6.3% identified their ethnicity as "other" or gave no response., 4.2% identified as Asian, and 2.1% identified as Latino/Hispanic. Thirty-seven and a half percent identified as Catholic, 20.8% identified as Jewish, 18.8% identified as Christian, 8.3% identified as intermarried, 8.3% identified as having no religion, 2.1% identified as Eastern Orthodox, 2.1% identified as atheist/agnostic, and 2.1% gave no response. At the

first nursery school, approximately 30% of the parents agreed to have their children participate in the study, whereas the participation rate was approximately 50% for the second nursery school.

More children came from the first nursery school (N=40) than the second nursery school (N=8). This was due to proximity of the school and scheduling preferences of the research assistants, rather than differences in levels of involvement. There were no differences between the schools on children's age, parental level of education, or any of the baseline measures between children at the two different schools. There was a significant difference between prior years of schooling [$F(1, 46) = 11.70$, $p < 001$]. Children at the first nursery (where the majority of participants came from) attended an average of 1.43 years of school (sd= .71) prior to the current school year. Children at the second nursery school attended an average of 2.34 years of school (sd= .74) prior to the school year in which the study was conducted.

Procedure

The directors of two private nursery schools in the Cleveland area gave permission to conduct the current study at their schools and approval was obtained from the Case Western Reserve University Institutional Review Board. Teachers in the pre-k classrooms of the participating schools signed consent forms indicating their willingness to participate in the study. (See Appendix B for consent forms).

Children were recruited for the study by sending a letter home to the children's parents or guardians from the school. Once a parent/guardian returned the consent form indicating that their child could participate in the study, baseline measures were sent to

the home to be completed by the parent/guardian. Teachers completed baseline measures before the child was seen by the Investigator.

After parents and teachers returned the baseline measures (a demographics measure, the *Young Children's Hope Scale-Observer Rating Form,* the *School Liking and Avoidance Questionnaire-Parent/Teacher Version,* and the *Social Competence and Behavioral Evaluation-30),* the child was assigned to one of three conditions: the Cognitive Behavioral Play Intervention, the free-play control condition, or the puzzles/coloring control condition. There were 16 children in each condition. (See Table 1 for procedure).

Children were systematically assigned to each condition based on their gender so that a relatively even amount of males and females were in each group. The first male child available (based on the teacher's schedule) was assigned to the CBP Intervention and the first female child available was assigned to the free-play control condition. Following this, the second female available was assigned to the CBP Intervention and the second male available was assigned to the free-play control condition and so on. For the first year of the study, children were systematically assigned to these two conditions, alternating by gender. During the second year of the study, the puzzles/coloring control condition was added to the design of the study. Systematic assignment to each condition, alternating by gender, continued until 48 children completed the study.

First, children met individually with a research assistant for approximately 45 minutes to be assessed on the *Pictorial Scale of Perceived Competence and Social Acceptance for Young Children,* the *Young Children's Hope Scale*, the *Preschool Interpersonal Problem-Solving Test,* the *School Liking and Avoidance Questionnaire,*

and the *Affect in Play Scale-P-BR*. The research assistants were blind to group assignment and to the hypotheses of the study. [1]At baseline, Research Assistant 1 assessed 28 children, Research Assistant 2 assessed 11 children, and Research Assistant 3 assessed 9 children. After the baseline assessment session, children met individually with the primary investigator for 3 twenty-minute sessions generally over the course of three weeks. Typically, approximately a week later, the same research assistant who conducted the baseline assessment re-administered the same five measures.

Although the total length of interaction with the children was supposed to occur within 35 days, this was not always the case. For the entire sample, with respect to the number of days between baseline and outcome sessions, the minimum number of days was 15, the maximum number of days was 99, and the average number of days was 41.73. As for the time between the first session with the Investigator and the last session with the Investigator, the minimum number of days was 7, the maximum number of days was 51, and the mean number of days was 18.52. There were no significant differences between the groups in the mean amount of days from baseline to outcome.

In the sessions with the Investigator, both the cognitive behavioral play (CBP) Intervention group and the free-play control group were presented with the same scenarios. All of the scenarios chosen for the study were based on common problems experienced by young school children. They were chosen after speaking with teachers and parents of nursery school and kindergarten children and based on concerns and experiences presented in picture books for young children such as, *D.W.'s Guide to*

[1] Typically, the examiner who assessed the child at baseline, re-assessed the same child at outcome. However, during the course of the study, Research Assistant 2 became very ill and could no longer participate in the study. Therefore, 8 of the 11 children that Research Assistant 2 assessed at baseline received outcome assessments from Research Assistant 1.

Preschool (Brown, 2003), *Tom Goes to Kindergarten* (Wild, 2000), and *I'll Go To School If…* (Flood, 1997). In the first session, each child was presented with three scenarios: a doll who is scared of making new friends at school, a doll who is missing his/her mother while at school, and a doll who is being teased at school. At the end of the session, the child could make-up a story about anything he/she wanted. In the second session, each child was presented with scenarios about a doll who is feeling sick at school, a doll who has lost his/her favorite toy at school, and a doll who is feeling hungry while at school, followed by an opportunity to make up at story about anything he/she wanted. In the third session, each child was presented with a story about a doll who is feeling awake at naptime, and the stories about missing mother and being teased that were used in the first session. At the end of the third session, the child again could make up a story about anything he/she wanted. (See Appendix A for scripts).

In a number of important ways the CBP Intervention and the free play control condition did not differ. The scenarios for both groups were the same and both groups engaged in pretend play. In both conditions the Investigator used standardized prompts, and the amount of time spent with each child was equal, as was the amount of positive attention given.

The primary difference between the two conditions was how the Investigator interacted with the child through the play. In the free-play control condition, children were told the story scenarios and could then choose to play in any way they wanted. The examiner followed the child's lead and gave the child positive attention, but did not guide the play. In the CBP Intervention, the Investigator used a doll to model hopeful thinking

and problem-solving steps. She was more directive in encouraging the child to use a doll to practice hopeful thinking and problem-solving steps.

For example, in the first scenario, children in both the cognitive behavioral play condition and the free-play condition were told:

> **This boy's name is Matt. Matt has never been to school before. He is a little scared of the other kids. He wants to make new friends but he's not sure the other kids will like him.**

Children in the free-play control condition were then encouraged to continue playing in anyway that they wanted, whereas children in the CBP Intervention group were then prompted:

> **You be Matt and I will be Matt's older cousin who has some ideas about how to help Matt. Let's pretend this is the playground and those are some other kids from Matt's class. (other dolls). Go ahead and show me what Matt could do to make friends with the kids…**

Children in both play conditions were encouraged to be active participants in the play process. In the CBP Intervention, the Investigator modeled hopeful thinking and problem-solving skills. Additionally, in the CBP Intervention, the Investigator attempted to increase the child's fantasy and affect expression and aimed to help the child integrate their affect into the narrative by using commonly used play therapy techniques such as reflecting feeling labels, asking about causation of feelings, and modeling feeling-expression (Russ, 2004).

Cognitive Behavioral Play Intervention. Children in the cognitive behavioral play condition were given dolls and miniature props (such as books, clothes, basketball, etc.) to play with. The target of the first session was to enhance will-power thinking. Will-power thinking is the agentic component of hope. In the first session, the Investigator

modeled a minimum of 10 will-power thinking statements over the course of the 20 minute session. For example, "I can do this." "If I try, it'll get easier." "I'm a nice person, she'll like me." The target of the second session was to enhance way-power thinking. Way-power thinking is the divergent thinking component of hope. When a person uses way-power thinking she believes that she is capable of generating ideas of multiple pathways to reach her goals. The second session introduced children to Spivack and Shure's (1992) problem-solving approach. Through play, the Investigator demonstrated the problem-solving approach of: stating the problem, generating possible solutions, evaluating the solutions, and trying a solution a total of 3 times. The target of the third intervention session was to review and integrate both types of hopeful thinking: will-power and the way-power thinking. In the third session, the Investigator modeled the problem-solving approach 3 times and modeled at least 5 will-power statements.

Free Play Control Condition. Inclusion of the free play control condition allowed the effects of engaging in pretend play and receiving positive/individual attention from the Investigator to be controlled for. Like the children in the cognitive behavioral play condition, the children in the free play control condition were given the same dolls and miniature props (such as books, clothes, basketball, etc.) to play with. Children in the free play control condition heard the same stories as children in the CBP Intervention condition. At the end of each story, the child was prompted "Go ahead and make up a story about (doll's name) trying to feel better about _____." The child could then play anyway he/she wanted and frequently engaged in pretend play that was unrelated to the initial story prompt. No attempt was made to guide the child back to the original story-prompt. While the child played, the Investigator imitated/followed the child's lead,

described what the dolls were doing, showed interest/engagement, and gave unspecific praise.

Puzzles and Coloring Control Condition. Inclusion of the puzzles/coloring control condition allowed the effects of positive/individual attention from the Investigator to be controlled for. Children in this control condition were presented with puzzles and coloring sheets that were selected based on their neutral content (e.g. they were unlikely to produce strong affect or hopeful thoughts). Investigator interaction was controlled for by using prompts and encouragement unrelated to pretend play or hopeful thinking. For example, children were asked questions such as "how many puzzle pieces have you put together?" or "what color is that?". Therefore, children in the control condition should have had an equal amount of positive attention from the Investigator as compared to children in the other conditions.

Fidelity. To insure that the requirements of each protocol (scripts and prompts) were followed and that there was no method-contamination across the intervention and control groups, a research assistant (blind to the hypotheses of the study) observed and assessed the Primary Investigator in 28 randomly chosen sessions. Therefore, fidelity was assessed in 19% of the total number of sessions (3 sessions X 48 children= 144 total sessions). Of the 28 sessions, 8 of these were of the cognitive behavioral play intervention, 10 of the sessions were of the free play control condition, and 10 of the sessions were of the puzzles/coloring control condition. The Investigator was rated on redirecting behavior, acknowledgement, verbal praise, warmth, and harshness on a 1-5 Likert-type scale to ensure that children were treated consistently across conditions. These five items were derived from a teacher measure of affection, attention, and

encouragement developed in a study by Sacha and Russ (2006). The research assistant also used a checklist to ensure that the requirements of each protocol were being met. (See appendix A for fidelity checklists.)

Measures. (See Table 2 for a depiction of constructs and their related measures. See Appendix C for measures.) There were four measures used to assess constructs related to hope: the Young Children's Hope Scale (YCHS), the Young Children's Hope Scale-Observer Form (YCHS-Obs), the Preschool Interpersonal Problem Solving Test (PIPS), and the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA). Because the Young Children's Hope Scale's validity has not been established, a measure of perceived self-competence (PSPCSA) was used as an additional measure of agency/will-power thinking (one kind of hopeful thinking). A measure of alternative-solution thinking (PIPS) was used as an additional measure of pathways/way-power thinking (the other kind of hopeful thinking). Additionally, the YCHS-Obs was completed by children's parents and teachers so that there were multiple informants of children's hope.

The *Young Children's Hope Scale* (YCHS; McDermott, Hastings, Gariglietti, & Callahan, 1997) measures dispositional hope in children in preschool through age 7. The scale is a 6-item self-report measure. Three items measure will-power thinking and three items measure way-power thinking. The lowest possible score is 6 and the highest is 18. Lopez and colleagues note that the scale has been administered to more than 1000 children, but it is still considered "under construction" because stability, discriminant validity, and experimental construct validity have not been fully established (Lopez, Ciarlelli, Coffman, Stone, & Wyatt, 2000.) In an ethnically diverse sample of 165 six

and seven year-olds, McDermott and Gariglietti (1999) reported a YCHS total mean score of 13.88 (SD= 2.40). Waypower thinking averaged 7.15 (SD= 1.46) and Willpower thinking averaged 6.75 (SD= 1.35). McDermott et al. (1997) reported an internal consistency of alpha= .88 in a sample of 669 first through fourth graders. As for construct validity, McDermott et al. (1997) found a positive but insignificant correlation between the YCHS total score and the teachers' rating of the students' hope, as assessed on an observational Children's Hope Scale. However, the YCHS and the teachers' ratings of students' academic standing (r= .66) and social adjustment (r= .62) were positively and significantly correlated. (All of the psychometric information reported here was found in Lopez et al.(2000), as they had access to unpublished data).

The *Young Children's Hope Scale-Observer Form* has the same six items as the YCHS; however an observer (such as a parent or a teacher) responds to the statements about the young child. Snyder and McDermott (1998) report that the YCHS Observer Form correlates positively and moderately with the self-report YCHS (r= .40) (as cited in Lopez et al., 2000).

The *Preschool Interpersonal Problem Solving Test-2nd Edition* (PIPS; Shure, 1992) is a measure of alternative solution thinking skills. Children are presented with two problem situations: (1) a child wanting a toy that another child currently has and (2) a child wanting to avert a mother's anger after breaking something valuable. For each situation, the child is shown picture cards that accompany the problem. After the child responds, the examiner probes for further responses.

In the current study, the administration of the PIPS was modified. The first item was given in the typical manner. For the second item, instead of asking the child to

respond verbally as to how to solve the problem, the child was given a doll-figure and asked to "play out" how the doll should solve the problem. The child's play response was scored using the same criteria as verbal responses. The second item was modified to include play so that it was structured more similarly to the intervention, which utilized play.

The PIPS has been found to have adequate reliability (Shure, 1992). In a group of 57 four year-old preschool children, test-retest reliability over the course of one week was .72. In a group of 180 children, test-retest reliability over a period of time between three and five months was found to be .59. The PIPS has demonstrated good validity in several studies (Shure, 1992.) The PIPS discriminates between children who differ with respect to adjustment in the classroom and the relationship is not moderated by IQ. The PIPS is sensitive to change that occurs due to interventions. Additionally, Shure (1992) presents norms based on 469 inner city four-year olds for the number of responses given and number of categories of responses given for adjusted children, impulsive children, and inhibited children.

The *Pictorial Scale of Perceived Competence and Social Acceptance for Young Children* (Harter & Pike, 1984) is a downward extension of the Self-Perception Profile for Children (Harter, 1982). Pictures are used rather than the written questionnaire used with older children. The scale is comprised of four subscales of six items each. These are: Cognitive Competence, Physical Competence, Peer Acceptance, and Maternal Acceptance, which fall into two factors of General Competence and Social Acceptance. For each item, the child is shown two contrasting pictures, one depicting a competent child and the other depicting an incompetent child. The child is first asked which picture

is most like him or her and then rates on a 4-point Likert-type scale how much she or he is like the boy/girl in the picture. In the current study, only items from the Competence scale were used.

The scale was validated on 90 preschool children, 56 kindergarten children, 65 first-grade children, and 44 second-grade children. The reliability of the measure appears to be adequate. The individual subscales ranged from alpha= .62-.83 when the preschool and kindergarten children were combined. The internal consistency for the combined Competence subscales was .76, the combined Acceptance subscales was .87, and the total score was .88

The scale shows limited evidence of validity (Byrne, 1996). Teacher ratings of the children's competence was used as one measure of convergent validity. The correlations between teacher and child ratings for cognitive competence was .37 ($p < .001$) and for physical competence was .30 ($p < .005$). There was a non-significant relationship for social acceptance and teachers did not rate children on maternal acceptance. As for discriminant validity, there were significant differences in cognitive competence scores between 12 children who were held back in school and children who were promoted. Similarly, there were significant differences between the peer acceptance scores of 10 children who were new to school and a matched comparison group. Finally, the physical competence scores of 8 children who were born preterm were significantly lower than the scores of children who were born full-term.

The *School Liking and Avoidance Questionnaire* (SLAQ; Adapted from Ladd & Price, 1987) is a measure of school attitude and affect towards school. The questionnaire contains a total of 14 items. Nine items assess school liking and five items assess desire

to avoid school. The scale has a two-factor structure. Children rate the items on a 3-point Likert-type scale. In a sample of 200 kindergarten children (Ladd, Buhs, & Seid, 2000) internal consistency for both subscales was found to be adequate. Chronbach's alpha= .87 in the fall and .91 in the spring. In that sample, the stability of school liking and avoidance was explored. Moderate stability coefficients were found from fall to spring of kindergarten ($r= .53$, $p< .001$). School liking declined significantly over the school year (Fall: M= 2.58, SD= .44; Spring: M= 2.44, SD= .54). Validity was established by correlating the children's reports of school liking with parent reports of school avoidance. Children's school liking scores were correlated inversely with their scores of school avoidance ($r= -.45$, $p< .001$) and parents' reports of school avoidance ($r= -.30$, $p< .001$).

The *School Liking and Avoidance Questionnaire-Parent & Teacher Reports* (Adapted from Birch & Ladd, 1997) measure caregivers' perceptions about how much a child likes school and caregivers' perceptions about how much of an effort a child makes to avoid the classroom environment. The parent and teacher report versions of the SLAQ were developed by Birch and Ladd from the Teacher Rating Scale of School Adjustment (TRSSA). The TRSSA has four reliable subscales including School Liking, School Avoidance, Cooperative Participation, and Self-Directedness. Only the School Liking and School Avoidance subscales are used in the SLAQ-Parent and Teacher reports. In a sample of over 200 kindergarten children, the internal consistency of teacher report of School Liking was alpha= .89 and School Avoidance was alpha= .74 (Birch & Ladd, 1997). In a sample of 200 kindergarten children, the internal consistency of parent report

of School Avoidance was alpha= .87 in the fall and alpha= .90 in the spring (Ladd, Buhs, & Seid, 2000).

In the current study, hypotheses were made about the School Liking score but not the School Avoidance score.

The *Social Competence and Behavior Evaluation Scale-30* (SCBE-30; LaFreniere & Dumas, 1996) is a 30-item short-form scale of the original 80-item Social Competence and Behavior Evaluation Scale (LaFreniere & Dumas, 1995). The scale is designed to be used by teachers to rate children's social competence, emotion regulation and expression, and adjustment difficulties. The scale was validated on 2,646 participants (aged 30-78 months) from four different geographical locations. The SCBE-30 was found to have three factors comprised of 10-items each: Anger-aggression, social competence, and anxiety-withdrawal. Internal consistency for all three scales ranged from .80 to .92 in each of the samples. Interrater reliability was assessed in three of the samples and was found to be high, ranging from .78 to .91. Test-retest reliability assessed after two weeks was high, ranging from .78-.86. After six-months the test-retest reliability ranged from .61-.79. Validity was established by comparing the SCBE-30 to the original SCBE. These correlations were very high, ranging from .92-.97. Additionally, the scores on the SCBE-30 were compared to the scores on the Revised Behavior Problem Checklist (Hogan, Quay, Vaughn, & Shapiro, 1989). Pearson correlations for the measures of anxiety-withdrawal were .67 and .87 for anger-aggression.

The *Social Competence and Behavior Evaluation-30 (parent version)* (LaFreniere, 1990) was recently validated by Kotler and McMahon (2002). Like the SCBE-30 (teacher version), the scale is designed to assess patterns of anxiety/withdrawal,

anger/aggression, and social competence. The validation sample was comprised of 218 parents (89% mothers and 11% fathers) of children between the ages of 3 years, 0 months and 4 years, 11 months. Like the teacher version, a 3-factor structure was found. Chronbach's alpha for the anxiety/withdrawal factor= .73, anger/aggression= .82, and social competence= .78.

Construct validity was established by using a compliance task to determine whether children identified as high on each of the factors could be distinguished behaviorally on several observational variables. There were significant group differences. Anxious-withdrawn children were significantly lower compared to socially competent children on completed compliance ($p < .05$). Angry-aggressive children were significantly lower on initiated compliance ($p < .01$) and completed compliance ($p < .01$) compared to socially competent children. Angry-aggressive children were also significantly more noncompliant compared to socially competent children ($p < .05$) and significantly more aversive compared to both anxious-withdrawn children ($p < .001$) and socially competent children ($p < .001$).

In the current study, hypotheses were made about the anxiety-withdrawal scale and the social competence scale. The anger-aggression scale was used for exploratory purposes only.

The *Affect in Play Scale* (APS; Russ, 1993; Russ, 2004) is a standardized instrument designed to assess amount of affect and variety of affect expressed in play as well as imagination, organization, and comfort with play in children ages six through ten. The primary scales include total frequency of affective expression, frequency of positive affect, frequency of negative affect, variety of affect categories, organization of fantasy,

level of imagination, and comfort in play. Children are given two human-like puppets and three blocks and told to "play in any way [they] like for five minutes." The children are videotaped while they play and the play is scored at a later time.

The scale has good psychometric properties including interrater reliability ranging from .73 to .96, split half reliability of .84, and stability over a four year period ranging from .53 to .82 (Russ, Niec, & Kaugars, 2000). Validity of the APS has been established in a large number of studies. For example, the APS has been positively related to a variety of theoretically relevant criteria such as creativity and coping and negatively related to pain reports in non-clinical populations (Russ et al., 2000). Additionally, the APS has been shown to be sensitive to changes in play skills due to an intervention (Russ, Moore, & Pearson, submitted).

For the current study, the *Affect in Play Scale-Preschool-Brief Rating Version* (APS-P-BR) was created by combining elements of the *Affect in Play Scale-Preschool Version* (APS-P; Kaugara & Russ, 2000) and the *Affect in Play Scale-Brief Rating Version* (APS-BR; Sacha Cordiano, Russ, & Short 2008) so that the play scale could be used with a preschool sample of children, without the use of videotapes. The *Affect in Play Scale-Preschool Version* was adapted from the APS to be used with four and five year-old children (Kaugars & Russ, 2000). Instead of using puppets and blocks, this version utilizes animal toys, plastic cups, a toy car, and a "hairy" rubber ball. The basic format of the APS is used within the APS-P, however there are a few differences. The primary difference in the format of the APS-P is that children are not told to play in any way they like; instead they are given more explicit directions to "make up a story" and they are provided with examples of things the toys can do. Scoring differences are

centered primarily on how affect is scored. Frequency of affect is the number of 10-second intervals in 5 minutes in which a child expresses affect or an affect theme rather than counting each separate affect theme. Also, there are 12 affect categories instead of 11. The additional category is "undefined affect expression", which refers to sound effects and comments that aren't understandable but which appear to include affect such as "roar" or "beep, beep."

The APS-P has been found to have good reliability. Inter-rater reliability in a group of 20 randomly selected cocaine-exposed preschool children was adequate (total affect- r= .95; variety of affect- r= .92; imagination- r= .88, organization- r= .88, and complexity- r= .84 (Kaugars, 2001). Internal consistency for frequency of affect was found to be .88 in a study of typically developing nursery school children (Seja & Russ, 1999). The APS-P has demonstrated relevance to theoretically-meaningful variables. For example, affect and comfort were both positively related to creativity and all play scores were positively related to teachers' ratings of daily play behavior (Seja & Russ, 1999).

The *Affect in Play Scale-Brief Rating Version* (APS-BR; Sacha Cordiano, Russ, & Short, 2008) is a modification of the original APS which is intended to be used to score play as it occurs, rather than play that has been videotaped. Modifications to the original APS scoring system include the following: Instead of a total frequency count, the rater is instead asked to rate the total frequency on a 1-4 scale from low to high. In the APS-BR there is not a variety of play score; instead, the observer rates the overall tone of affect in the story and determines whether it is generally positive or generally negative in tone. Finally, the imagination score, organization score, and comfort score are rated on 4-point

Likert-type scales, rather than 5-points. The APS-BR has been found to have good interrater reliability and good validity (Sacha Cordiano, Russ, & Short, 2008).

The APS-P-BR, in the current study, used the structure and instructions from the APS-P and a combination of scoring elements from the APS, APS-P, and the APS-BR to assess children's play skills. An administration and scoring manual was created for training and administration purposes. Like the APS-BR, imagination, organization, and comfort are rated on 4 point Likert-type scales. Through experimentation it was determined that frequency of affect counts could be obtained reliably and therefore units of affect are scored like the original APS. Rather than obtaining a variety of affect score, affect is categorized as either positive, negative, or undefined. Instructions for the task are given as follows:

> **I am here to learn about how children play. In this basket I have some toys that we're going to play with today. Let's see what's inside. (Show hippo) Oh look, this is a hippo. (Show bear) This is a bear. (Show big and little dog) This is a big dog and this is a little dog. (Show shark) This is a shark. I have some cups. (Present three cups) Let's count together and see how many there are. One, two, three. Good. (Show car) What is this? A car. See, it's yellow. Oh look, here are some more animals. (Show elephant) What animal is this? That's right. It's an elephant. (Show giraffe) This is a giraffe. (Show zebra) This is a zebra. (Show lion) What animal is this? That's right, it's a lion. (Show ball) This is a ball. What colors do you see? That's right. Green, blue, and purple. That's all the toys in the basket. Now we're going to make up a story using the toys on the table. See how you can play with the toys. This is the bear. (Exaggerate voice tones) He says, "I'm really hungry! Where can I find some food? (Goes over to cups) Oh look, I found some cookies. I love cookies. Yum! Yum! Here's another cup. Oh yucky! I don't like what's inside there! Yuck!" Now you keep playing. What happens next? (After five minutes) Stop. You did a good job. Now you can help me put all the toys back in the basket.**

Hypotheses

Constructs related to hope.

1. The CBP Intervention group will have significantly higher total hope scores (YCHS & YCHS-Obs) as compared to the free play control condition and the puzzles/coloring control condition.

2. The CBP Intervention group will have significantly higher problem-solving scores (PIPS) as compared to the free play control condition and the puzzles/coloring control condition.

3. The CBP Intervention group will have significantly higher total perceived competence scores (PSPCSA) as compared to the free play control condition and the puzzles/coloring control condition.

Constructs related to adjustment.

1. The CBP Intervention group will have significantly higher total social competence scores (SCBE-30- parent & teacher versions) as compared to the free play control condition and the puzzles/coloring control condition.

2. The CBP Intervention group will have significantly lower total anxiety-withdrawal scores (SCBE-30-parent & teacher) as compared to the free play control condition and the puzzles/coloring control condition.

3. The CBP Intervention group will have significantly higher school liking scores (SLAQ & SLAQ-parent & teacher) as compared to the free play control condition and the puzzles/coloring control condition.

Results

All data analyses were conducted using the Statistical Package for the Social Sciences (SPSS 14.0).

Data Analysis Strategy

Chi-square analyses were performed to compare groups on gender and a univarate ANOVA was conducted to compare groups on participants' age. A multivariate analysis of variance (MANOVA) was conducted to determine if there were significant differences between the three research assistants on the participant's baseline scores. Internal consistency for each of the measures (YCHS, YCHS-Obs, PSPCSA, SLAQ, and SCBE-30) was calculated using Chronbach's alpha. Interrater reliabilities were calculated for all APS-P-BR variables using intraclass correlation coefficients as outlined by Shrout and Fleiss (1979). All baseline scores and fidelity scores were analyzed using MANOVAs and/or univariate analysis of variance (ANOVA) with condition (CBP Intervention, free play control condition, and puzzles/coloring control condition) as the between subject variable.

For the major hypotheses, analyses of covariance (ANCOVAs) and/or multivariate analyses of covariance (MANCOVAs) with *a priori* contrasts were conducted. For each hypothesis, the cognitive behavioral play group was first compared to the puzzles/coloring control group and then compared to the free play control group. The alpha level was set at .05 for the hypothesized effects. Partial eta squared is presented as a measure of effect size in the ANOVA analyses. (See Table 6). A small, medium, and large effect size are signified by .01, .06, and .14 respectively (Green, Salkind, &Akey, 2000).

Pearson bi-variate correlations using two-tailed tests of significance were conducted to determine whether relationships existed between the different informants and different measures. Several exploratory analyses were conducted. ANCOVAs with additional comparisons between the free play control group and the puzzles/coloring control group were conducted to explore differences between the control groups. Three simultaneous step-wise multiple regression analyses were conducted to determine which variables accounted for changes in the measures of adjustment for the CBP Intervention group.

Preliminary Analyses: Success of Randomization Examiner Effects

Chi square analyses revealed no significant differences between the three groups on sex (X^2= .75; see Table 3.) Multivariate tests of between subject effects using General Linear Modeling revealed no differences between the groups on baseline scores. There was a significant effect of group on participants' age [F (2, 45)= 3.88, p< .05]. However, the difference was between the two control groups. Because the two control groups were not compared to one another in the main analyses, age was not used as a covariate.

There were no differences on any of the baseline scores except for school liking. There was a significant difference in the responses given by the participants in the presence of research assistant 1 (mean=13.15, sd=3.86) and research assistant 3 (mean=17.00, sd= 1.32) regarding how much the participants reported liking school (F (2, 44)= 3.44, p< .05).

Descriptive Statistics

Means, standard deviations, and ranges were calculated for all baseline measures and are presented in Table 4. Descriptive statistics for each of outcome measures,

separated by group, are presented in Table 5. There were different numbers of participants for different measures. Forty-eight participants completed the study (N= 16 per group). For all of the teacher-report measures, the number of participants was 48. One child-participant (from the puzzles/coloring control group) completed the baseline session and the three sessions with the Investigator, however refused to complete the outcome assessment. Therefore, for children's self-report on the YCHS, total perceived competence, Item 1 of the PIPS, school liking score, and all play variables, the number of participants was 47. Item 2 of the PIPS was added in the middle of the study; therefore the number of participants for the second item of the PIPS was 33. Finally, 4 parents did not return some or all of their forms. Therefore, for parent report of the YCHS-Obs, the number of participants was 44, for parent-report of the SLAQ, the number of participants was 45, and for parent report of the SCBE-30, the number of participants was 45.

Skewness and kurtosis were calculated for all continuous variables. At baseline, the scores for positive affect in play, negative affect in play, undefined affect in play, comfort in play, parent report of children's school liking, parent report of children's school avoidance, parent report of children's anxiety-withdrawal, teacher report of children's anxiety-withdrawal, teacher report of children's school avoidance, and teacher report of children's anger were all significantly skewed. At outcome, Item 1 of the PIPS, positive affect in play, undefined affect in play, comfort in play, parent report of children's school liking, parent report of children's school avoidance, parent report of children's anxiety-withdrawal, teacher report of children's school avoidance, and teacher report of children's hope were all significantly skewed. All skewed variables were transformed using either a power transformation, a square root transformation, or an

inverse transformation depending on whether the skew was positive or negative, moderate or severe. Once the transformations were completed, all data met the criteria for normality as suggested by Kline (1998). The pattern of relationships between the variables remained the same, whether the variables were transformed or not. Only transformed variables were used in the analyses.

Reliability Analyses

Young Children's Hope Scale. At baseline, Chronbach's alpha for children's self-report of hope was .64, teacher report of children's hope was .86, and parent report of children's hope was .71. At outcome, Chronbach's alpha for children's self-report of hope was .62, teacher report of children's hope was .82, and parent report of children's hope was .74. Parent and teacher report of hope scores are in the acceptable range for reliability. Children's self-report of hope was somewhat inconsistent, although the level of reliability is still considered acceptable if the measure is in the early stages of development (Nunnally, 1967).

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children. At baseline, internal consistency for the Competence subscale was .61. At outcome, internal consistency for the Competence subscale was .58. These levels of consistency are lower than the original validation sample's internal consistency of .76 and indicate inconsistent responding.

School Liking and Avoidance Questionnaire. Internal consistency for children's school liking scores was adequate (at baseline, alpha= .83; at outcome, alpha= .84). These levels of internal consistency are comparable to the validation sample. Internal consistency for parent report of school liking was adequate (at baseline-alpha= .75, at

outcome- alpha= .75). Internal consistency was adequate for teacher report of school liking (at baseline-alpha= .83, at outcome- alpha= .65).

Social Competence and Behavior Evaluation Scale-30. At baseline, on the anxiety-withdrawal scale parents' reports were inconsistent (alpha= .53). At outcome, parent report on the anxiety-withdrawal scale was adequate (alpha= .88). Teacher report on the anxiety-withdrawal scale was adequate both at baseline (alpha= .84) and at outcome (alpha= .84). On the social competence Scale, internal consistency was adequate (for parents at baseline- alpha= .78; for parents at outcome- alpha= .86; for teachers at baseline- alpha= .89; for teachers at outcome- alpha= .88).

The Affect in Play Scale-Preschool-Brief Rating Version. To determine if the raters could reliably score the APS-P-BR, raters practiced scoring children's play using a videotape of the Affect in Play Scale- Preschool Version from a previous study. The Investigator reviewed the videotape to select a variety of cases (e.g. children with a range of play scores) for training purposes and for the interrater reliability analyses. The Investigator selected twenty cases (that had not been used for training purposes) to be scored by the three raters. The raters watched each case one time only to simulate live scoring. If they had difficulty hearing what was said, they rewound the tape one time only.

A two way mixed model testing for consistency was used on the affect variables and a two way mixed model testing for absolute agreement was used on the non-affect variables. Intraclass correlation coefficients were as follows: frequency of positive affect-alpha= .83, frequency of negative affect-alpha= .82, imagination- alpha= .96, organization- alpha= .93 and comfort- alpha= .93).

Fidelity Analyses

To determine if there were any significant mean differences between the groups in how the Investigator treated participants, one-way ANOVAs with group as the between subjects factor were conducted. Importantly, there were no significant differences in the amount of praise, reflection, acknowledgement, warmth, or harshness that the Primary Investigator used between the three groups. As called for in the protocol, hopeful thinking prompts (including willpower statements, statement of problem, generating solutions, evaluating solutions, and encouraging problem resolution) and prompts regarding affect (including asking how dolls were feeling, discussing causation of feelings, and modeling feelings) were given by the Investigator significantly more in the cognitive behavioral play group than in either of the control groups. As called for in the protocol, the prompt of "describing what the child is doing" was given significantly more in the free-play control group than in the Cognitive Behavioral Play Intervention or the puzzles/coloring control group. Finally, as called for in the protocol, the puzzle/coloring prompts (including asking what's in the picture, what piece is that, what color is that, how many pieces are there, and giving help) were given significantly more in the puzzles/coloring control group than in the cognitive behavioral play group or in the free play control group.

There were two unexpected results from the fidelity analyses: The Primary Investigator was observed "following the child's lead" significantly more in the cognitive behavioral play group than in either of the control groups [$F(2, 26) = 40.90$, $p < .001$]**.** She was also observed "redirecting" the children in the free play control group significantly more than for children in the Cognitive Behavioral Play Intervention or for

children in the puzzles/coloring control group [F (2, 26)= 5.10, p< .01]. Overall, however, the intervention appears to have been free from method-contamination.

Main Analyses

Hope. ANCOVAs were used to determine the effects of group on children's total hope scores, while controlling for baseline hope. Three separate ANCOVAs were used for each of the different informants: children's self report (YCHS), parent report (YCH-Obs), and teacher report (YCHS-Obs). There was a significant effect of group on children's hope as rated by teachers [*F* (3, 44)= 17.06, *p*< .001]. As anticipated, baseline teacher report of hope was a significant covariate [F (1, 44)= 8.32, p< .01]. The contrast, specified *a priori*, between the CBP Intervention group and the puzzles/coloring control group revealed a significant effect [*F* (1, 44)= 3.94, *p*< .05]. This indicated that, post-intervention, the CBP Intervention group had significantly higher hope than the puzzles/coloring control group. No differences were found between the CBP Intervention group and the puzzles/coloring control on parent or child report of hope. No differences emerged between the CBP Intervention group and the free play control group on any of the measures of hope.

Problem Solving. Because the two items of the PIPS were significantly correlated with one another, a MANCOVA was used to determine the effects of group, while controlling for baseline PIPS scores on problem solving. There were no significant effects of group on problem-solving ability.

Perceived Competence. An ANCOVA was used to determine the effects of group on perceived competence scores (PSPCSA), while controlling for baseline perceived competence scores. There was no significant effect of group on perceived competence.

Social Competence. Two ANCOVAs were used to analyze children's social competence (parent report and teacher report of the SCBE-30). Baseline social competence scores were entered as a covariate in each analysis. There was a significant effect of group on children's social competence as rated by teachers [F (3, 44)= 12.14, p< .001]). As expected, baseline teacher report of social competence was a significant covariate [F (1, 44)= 25.03, p< .001]. The contrast between the CBP Intervention group and the puzzles/coloring control group revealed a significant effect [F (1, 44)= 4.41, p< .05], with the CBP Intervention group rated as more socially competent than the puzzles/coloring control group. No differences emerged between the CBP Intervention group and the free play control group.

There was a significant effect of group on children's social competence as rated by parents [F (3, 41)= 2.98, p< .05). Baseline parent report of social competence was a significant covariate [F (1, 41)= 86.26, p< .001]. The contrast between the CBP Intervention group and. the puzzles/coloring group contrast was not significant. The contrast between the CBP Intervention group and the free play control group was significant [F (1, 41)= 8.08, p< .01]. It should be noted that, contrary to expectation, the free play control group was rated by parents as significantly more socially competent than the CBP Intervention group.

Anxiety-Withdrawal. Two ANCOVAs were used to analyze children's anxiety-withdrawal (parent report and teacher report of the SCBE-30). Baseline anxiety-withdrawal scores were entered as a covariate in each analysis. There was a significant effect of group on teacher report of children's anxiety-withdrawal [F (3, 44)= 5.61, p< .01]. As anticipated, baseline teacher report of anxiety-withdrawal was a significant

covariate [F (1, 44)= 35.26, p< .001]. The contrast between the CBP Intervention group and the puzzles/coloring control group revealed a significant effect [*F* (1, 44)= 4.58, *p*< .05], with the CBP Intervention group rated as less anxious-withdrawn than the puzzles/coloring control group. No differences emerged between the CBP Intervention group and the free play control group.

There was a significant effect of group on children's anxiety-withdrawal as rated by parents [F (3, 41)= 5.34, p< .01]. Baseline parent report of children's anxiety-withdrawal was a significant covariate [F (1, 41)= 29.25, p< .001]. Although none of the contrasts for parent report of anxiety-withdrawal were significant, there was a trend indicating that parents reported that the CBP Intervention group and the free play control group were less anxious-withdrawn than the puzzles/coloring control group.

School Liking. Three separate ANCOVAs were used to analyze children's school liking (self-report, parent-report, and teacher-report of the SLAQ). There was a significant effect of group on school liking as reported by teachers [*F* (3, 44)= 16.55, *p*< .001]. Baseline teacher report of school liking was a significant covariate [F (1, 44)= 4.90, p< .05.] Although there was a trend indicating that both the CBP Intervention group and the free play control group had higher scores on teacher report of school liking, none of the individual contrasts were significant. No group differences emerged on parent or child reports of school liking.

Summary of Main Analyses. In summary, as hypothesized, the Cognitive Behavioral Play Intervention as compared to the puzzles/coloring control group was effective at increasing children's hope (YCHS-Obs), increasing children's social competence (SCBE-30), and decreasing children's anxiety-withdrawal (SCBE-30),

according to teacher report. There was also a significant effect of group on teacher report of children's school liking (SLAQ), with a trend for the CBP Intervention group and the free play control group to like school more than children in the puzzles/coloring control group.

Based on parent report, contrary to the hypotheses, there was a significant increase in social competence (SCBE-30) for children in the free play control group as compared to children in the CBP Intervention group. There was also a significant group effect on parent report of anxiety-withdrawal (SCBE-30), with a trend for the CBP Intervention group and the free play control group to have lower anxiety-withdrawal scores than the puzzles/coloring control group. There were no significant differences on any of the child measures from baseline to outcome.

To control for chance findings, the Bonferroni method (Rosenthal & Rubin, 1984) of correcting p-values for the contrasts was implemented. The significance level, .05, was divided by the number ANOVAs, 13, to produce an adjusted p-value of .004. The significance level of .05 was divided by the number of contrasts, 26, to produce an ensemble adjust p-value of .002. When the Bonferroni correction was applied to the p-values, the group effects for teacher report of hope, teacher report of social competence, and teacher report of school liking remained significant. The group effect for parent report of social competence, teacher report of anxiety-withdrawal, and parent report of anxiety-withdrawal were no longer significant, using the criteria of alpha less than .004. Using the adjusted p-value of .002, none of the individual contrast effects remained significant.

Correlational Analyses

The relationship between the different informants (child, parent, and teacher) for the Young Children's Hope Scale and the Young Children's Hope Scale-Observer Rating Form was examined. At baseline, children's self-report of their own hope did not relate to parent and teacher ratings of children's hope. However, there was a significant, positive relationship between parent and teacher ratings of children's hope ($r = .36$, $p < .05$).

Because the PIPS Item 1 was administered in the typical manner (with children giving responses verbally) and the PIPS Item 2 was administered in an experimental format (with children responding through play), the relationship between the two items was explored. At baseline, there was a significant, moderate correlation between the number of solutions given for each of the two problems ($r = .40$, $p < .05$).

The relationships between the different informants (child, parent, and teacher) and the different scales (social competence, anxiety-withdrawal, and anger-aggression) of the SCBE-30 were explored. (See Table 7.)

Also, the relationships between informants on the SLAQ was examined. (See Table 8.) Children's report of school liking did not relate to parent or teacher reports of school liking, nor did children's report of school avoidance relate to parent or teacher reports of school avoidance. Children's self-report school liking scores and school avoidance scores were uncorrelated to one another, unlike the validation sample in which there was a significant inverse relationship.

The relationship between hope and other constructs was examined. (See Table 9.) Children's self-report of hope (YCHS) positively related to school liking (SLAQ) and perceived competence (PSPCSA). Children's self-report of hope (YCHS) was negatively

related to problem solving (PIPS Item 2), organization in play (APS), and parent report of social competence (SCBE-30).

Parent report of hope (YCHS-Obs) related positively to comfort in play (APS) and parent report of social competence (SCBE-30). The relationship between parent report of hope (YCHS-Obs) and problem solving (PIPS Item 2) was marginally significant.

Teacher report of hope (YCHS-Obs) related positively to problem-solving (PIPS Items 1 & 2), teacher report of school liking (SLAQ), and teacher report of social competence (SCBE-30). Teacher report of hope (YCHS-Obs) was significantly, negatively related to teacher report of anxiety-withdrawal (SCBE-30) and teacher report of anger-aggression (SCBE-30).

The relationship between problem-solving and constructs other than hope was examined. In addition to hope, problem solving (PIPS) was positively related to positive affect in play (APS), imagination in play (APS), and teacher report of social competence (SCBE-30). Problem solving (PIPS) was negatively related to children's school liking (SLAQ). (See Table 10.)

The intercorrelations between play variables was explored. (See Table 11). Finally, the relationship between play variables and other constructs was explored. (See Table 12.) Imagination in play and positive affect in play (APS) were both significantly positively related to problem solving ability (PIPS). Comfort in play (APS) was positively related to parent report of hope (YCHS-Obs). Organization in play (APS) was negatively related to children's self report of hope (YCHS). Additionally, there was a

negative relationship between comfort in play (APS) and teacher report of anxiety (SCBE-30) which was marginally significant.

Exploratory Analyses

ANCOVAs with additional comparisons between the two control conditions were conducted to explore any differences between the two groups. Age was entered as a covariate, given the significant mean difference in age between the two control groups. For all of the contrasts, age was not a significant covariate. There was a significant difference between the two control groups on teacher report of anxiety-withdrawal (SCBE-30). The contrast of the free play control group versus the puzzles/coloring control group revealed that the free play group had significantly lower anxiety-withdrawal than the puzzles/coloring control group [$F (1, 43)= 4.63$, $p< .05$] according to teacher report. The pattern of data suggested a trend in which the free play control group had higher parent report of social competence scores [SCBE-30; $F (1, 40)= 2.45$, $p= .13$]. It is important to realize that these contrasts were not specified a priori and it is possible that the results are due to chance findings.

To determine whether change in hope processes or changes in play processes accounted for changes in measures of adjustment in the CBP Intervention group, three multiple regression analyses were conducted. For all of the regression analyses, change scores from baseline to outcome for: teacher report of hope (YCHS-Obs), problem solving (PIPS Items 1 & 2), imagination (APS), organization (APS), comfort (APS), and affect (APS) were entered as predictor variables.

A stepwise multiple regression procedure was performed with change in teacher report of anxiety-withdrawal (SCBE-30), from baseline to outcome, as the dependent

variable and the above mentioned variables as simultaneous predictors. Only one of the predictor variables, change in teacher report of hope, contributed significantly to change in teacher report of anxiety-withdrawal. R was significantly different from zero after adding hope. [$\underline{R}$= .52, $\underline{R^2}$= .27, F (1, 14)= 5.09, p< .05]. For children in the CBP Intervention group, change in teacher report of hope accounted for 27% of the variance in change in teacher report of anxiety.

A stepwise multiple regression procedure was performed with change in teacher report of social competence (SCBE-30) as the dependent variable and the same simultaneous predictor variables as the previous regression. $\underline{R}$ was significantly different from zero after adding change in teacher report of hope [$\underline{R}$= .66, $\underline{R^2}$= .44, F (1, 14)= 10.81, p< .01]. After adding change in imagination and keeping change in teacher report of hope in the equation, additional variance could be accounted for [$\underline{R}$= .79, $\underline{R^2}$= .63, F (2, 13)= 11.00, p< .01]. For children in the CBP Intervention group, change in hope accounted for 44% of the variance and an additional 19% of the variance was accounted for by change in imagination. Therefore, changes in teacher report of hope and changes in imagination accounted for 63% of the change in teacher report of social competence.

A stepwise multiple regression procedure was performed with change in teacher report of school liking (SLAQ) as the dependent variable and the same simultaneous predictor variables as the other regressions. None of the variables significantly accounted for changes in teacher report of school liking.

Other exploratory analyses were conducted to determine whether the intervention was differentially effective for children whose baseline scores were in the lowest or highest quartiles on any of the measures. Analyses revealed a differential effect for

children with the lowest scores on Item 2 of the PIPS. To determine this, cases were selected from the CBP Intervention group or the puzzles/coloring control group if they had a PIPS Item 2 score of less than or equal to two, indicating that those children were in the 25^{th} percentile on problem-solving ability. Based on this selection criteria, there were four children from the CBP Intervention and five children from the puzzles/coloring condition. A t-test for differences between the means indicated a trend in the data, in which the CBP Intervention group's problem solving ability was higher, post intervention, than the puzzles/coloring control group ($t= 1.78$, $p= .12$). A similar pattern of results was found when selecting cases based on the PIPS Total Score and using that score as an outcome measure.

Discussion

The main objective of this study was to determine whether a Cognitive Behavioral Play Intervention would be effective at enhancing hope and increasing adjustment to school in preschool aged children. Children in the Cognitive Behavioral Play Intervention group were compared to children in two different control conditions: a free play control condition and a puzzles/coloring condition. The major results of the study were that, post-intervention, the CBP Intervention group, as compared to the puzzles/coloring control group, had significantly higher hope, higher social competence, and less anxiety-withdrawal symptoms, according to teacher report. Further, there was a trend which indicated that both the CBP Intervention group and the free play control group had more positive feelings about school than the puzzles/coloring control group, according to teacher report.

This is the first study to provide empirical support for Cognitive Behavioral Play strategies. Based on Knell's (1993, 1998) Cognitive Behavioral Play Therapy, the CBP Intervention used a combination of strategies used by Knell (e.g. using dolls to practice behaviors, choosing a scenario based on the target issue, and using praise and modeling.) In addition, the CBP Intervention involved a number of unique components, which focused specifically on increasing the willpower and waypower aspects of hopeful thinking. Guiding children to increase their hopeful thinking skills in the play scenarios was expected to lead to increased hope and lead to positive changes in adjustment in school.

Children in the CBP Intervention were guided in their play to have their dolls use will-power thinking statements such as "I can do this" and "I'm good at lots of different things." In having their dolls increase the amount of willpower thinking statements they made, the children were also gaining practice in using high-agency self talk and thoughts, themselves. Specifically, in making the dolls use high willpower statements, children practiced noticing when they were capable of something, which in turn could lead to a sense of greater agency (willpower). In the second component of the CBP Intervention, children were guided in their play to think about solving problems in a step-by-step manner meant to increase way-power thinking. When the child's doll was experiencing a problem, the Investigator's doll encouraged the child's doll to think of as many ways as possible to solve the problem before choosing the best solution. In having the dolls generate many different solutions to their problems, the children likely internalized the idea that when they, too, have problems it will be helpful to come up with many different ideas rather than to think narrowly about a solution.

It is theoretically consistent that, post-intervention, children in the CBP Intervention were viewed by their teachers as having greater hope. The measurement of hope that the teachers rated the children on specifically assesses willpower and waypower thoughts. The CBP Intervention appears to have helped the children to use high-agency thoughts and to think about solving problems in a high waypower manner. The teachers clearly saw an increase in hopeful thinking, which was the primary target of the intervention.

Given that children in the CBP Intervention learned how to increase their hopeful thinking skills, one would expect that teachers would also observe a decrease in their anxiety-withdrawal symptoms, as they did. If a child feels hopeful in the face of a problem (e.g. they sense that they will be able to cope with the problem successfully) then there is less reason to be anxious.

Teachers also reported an increase in children's social competence. The items which measured social competence, referred to the children's ability to get along with other children (for example, helping with tasks and compromising) as well as taking pleasure in their accomplishments. It is likely that the increase in willpower thinking is related to the child becoming more helpful in class. If a child thinks that she is more able to do things (high willpower thoughts) this may lead to an increase in trying to do more. Taking pleasure in one's accomplishments is directly relevant to what was targeted in the CBP Intervention. For example, the Investigator gave praise whenever a doll accomplished a task. This could lead to children in the CBP Intervention becoming more aware and more pleased by their own accomplishments. Finally, the increase in positive feelings about school could be due to at least two reasons. First, feeling capable (high

willpower) and feeling able to come up with solutions to problems (high waypower) should lead to a general sense of well-being. It makes sense that this would carry over to feeling more positively about school. Another possibility is that children enjoyed the experience of the intervention, itself, which could lead to feeling more positively about school

It is important to note that the intervention appeared to be especially effective in the school setting, as there was a significant effect of group on all four of the teacher report variables. The play scenarios within the intervention all involved situations related to school (for example, a doll being teased during school or a doll missing mommy while at school). Therefore, children in the CBP Intervention practiced using willpower thoughts and their new method for solving problems in situations related to school. It is understandable that the children would find it easiest to translate the skills learned in the CBP scenarios into changes in behaviors in the setting closest to those scenarios: school.

Both the CBP Intervention and the free play control condition were effective at reducing children's symptoms of anxiety-withdrawal and increasing children's social competence. There was an effect of group status on parent report of children's anxiety-withdrawal, with a trend showing that children in both the CBP Intervention group and the free play control group had less anxiety-withdrawal symptoms than children in the puzzles/coloring control group. The free play control condition also had an effect on both parent report of social competence and teacher report of social competence. These findings suggest that the effect of engaging in pretend play (even when skills are not explicitly taught) can be helpful in reducing anxiety and stress and in improving social

skills. This is consistent with previous research (Barnett, 1984; Russ, 2004) and has important implications for the field of play therapy and for early childhood education.

The intervention had no effect on parent report of hope or parent report of school liking. The hypothesis that the CBP Intervention group would have significantly higher parent report of social competence in comparison to the control groups was not supported. Instead, the free play control group had higher social competence scores (according to parent report) than the CBP Intervention group. Overall, the CBP Intervention did not have any effects on any of the child measures.

Fidelity

In order to understand the finding that the CBP Intervention was effective at increasing children's hope and adjustment to school it is necessary to know what specifically occurred within the intervention as compared to the control groups. Scripts and standardized prompts were used to insure that children across conditions were given equal amounts of praise and positive attention, while maintaining the integrity of each condition.

Fidelity analyses indicated that the Investigator treated the children in the same warm manner across conditions. There were no significant differences in the Investigator's levels of attention, distraction, warmth, harshness, or amount of praise across conditions. Therefore, no bias was observed in how the Investigator treated children in the CBP Intervention, as compared to children in the control groups. It appears that children were treated equally across conditions.

Fidelity analyses also revealed that, as planned, children in the CBP Intervention group received significantly more hopeful thinking prompts and play-related affect

prompts. As planned, the Investigator described the child's play (but did not guide the play directly) significantly more in the free play control group. Finally, as planned, children in the puzzles/coloring control group received significantly more prompts involving the puzzles or picture book stimuli. Therefore, the intervention appears to have been free from method-contamination.

Surprisingly, the fidelity rater found that the Investigator had to redirect children in the free play control group significantly more than children in the other groups. Because the free play control condition was the least structured of all three conditions, what the children were meant to do was less clearly defined. It appears that this relative lack of structure caused some children to become off-task, which then led to the Investigator's need to redirect them back to the play materials. In the CBP Intervention, because the Investigator was guiding the play, it was easier to keep the child on-task initially so that no redirection was necessary. The puzzles/coloring condition was structured in such a way so that whenever the child finished one puzzle or coloring sheet, he/she would be prompted to choose another one, so there was also little opportunity for the child to become off-task.

The fidelity rater also observed the Investigator "following the child's lead" more in the CBP Intervention than in the other conditions. It was expected that the Investigator would follow the child's lead equally across the play groups or, perhaps, more in the free play condition than the CBP Intervention. After discussing this finding with the fidelity rater, it appears that because the CB play was more structured than the free play, it was easier for the rater to observe the Investigator following the child's lead. Therefore, it is likely that the Investigator may have been following the child's lead more subtly in the

free play condition but the rater did not observe this due to the nebulous nature of the free play.

Differences Between Informants

It is a well known finding that the same child may be viewed in multiple ways by different people involved in the child's life (Achenbach, McConaughy, & Howell, 1987; Renk, 2005). The way a parent views her child may be very different than the way a teacher views the same child. This could be because of the different relationship between the individuals or due to the different environments in which the child is seen. For example, school tends to be a more structured environment than home; therefore, the situational specificity of each environment may lead to an informant observing different behaviors from the same child. This is one of the reasons that multiple-informants were used in the study. It is not surprising that the different respondents in the study reported differing information. Previous studies have found different informants (from different settings) to have a fairly low degree of association with another. For example, in a meta-analysis, Achenbach et al. (1987) found the mean correlation between parents and teachers to be .27, and the mean correlation between children and other informants to be .22. Low correlations between informants do not, necessarily, mean that some informants are unreliable; each type of informant may be contributing unique information (Achenbach et al., 1987; Renk, 2005). Renk (2005) notes that although it is the "gold standard" to collect information from multiple informants, it is still unclear how to combine the different information and which informants are the most accurate for which kinds of information.

At the start of the study, parents and teacher reports on all of the measures were significantly positively correlated. This means that the way that parents saw their child corresponded to the way that teachers viewed the same child. Children's self-report scores never related to parent or teacher report, which is one possible indication that the children were invalid respondents. Alternatively, children may just view themselves very differently than parents and teachers view them. By the end of the children's participation in the study, parents' and teachers' reports were no longer significantly related. Teachers reported that the Cognitive Behavioral Play Intervention was effective at increasing children's hope and adjustment to school, whereas parents did not.

What can we make of this different pattern? The play scenarios in the CBP Intervention and the free play control condition involved problems that a child might face in the school setting. Children in the CBP Intervention were not only presented with different problem situations they might face in school, they were then taught specific ways to think about their problems. It appears that children in the CBP Intervention group were able to generalize what they learned in the play intervention into the classroom setting. In contrast, perhaps the children were less able to generalize what they had learned in the intervention outside of school, since the context was more dissimilar. Nonetheless, the purpose of the study was to increase children's hope and adjustment to school, not adjustment to settings in general.

According to parent report, children in the free play group had a significant increase in social competence, as compared to children in the other two conditions. Because social competence was not targeted in the free play control group, it is possible

that this was a chance finding. Alternatively, the act of engaging in pretend play may have been helpful for children in some unspecified way.

What can we make of the finding that children's self-report was unrelated to parent and teacher report? It may be the case that preschool aged children cannot respond validly to questions about their feelings and self-concept. The Young Children's Hope Scale has been under construction for many years, because it has been difficult to validate with such young responders. Similarly, in previous studies, the Pictorial Scale for Perceived Social Competence has shown limited evidence of validity (Byrne, 1996). Finally, the School Liking and Avoidance Questionnaire was validated on a kindergarten sample of children, who were slightly older than this sample. Therefore, it is unclear if this measure is valid for a preschool age sample.

The pattern of correlations among the child measures suggest that the children may have been invalid responders. For example, it was expected that the PIPS would be positively related to children's hope (which it was when using parent and teacher report) but it was significantly, negatively related to children's self-report of hope. Also, children's school liking and school avoidance scores were unrelated to one another, unlike previous studies (and parent and teacher report in the current study) in which there are inverse relationships between school liking and school avoidance. Therefore, considering both the relationship of children's responses to other informants' responses and the pattern of children's self-report responses, it seems likely that the children's self-report responses may be invalid.

Differences Between Control Groups

Although no specific hypotheses were made regarding the relationship between the two control groups, it was thought that there might be relative effects of the free play control condition as compared to the puzzles/coloring condition. This is because the free play control condition was controlling for the effects of more components (both pretend play and positive attention) as opposed to the puzzles/coloring control which was controlling for only one component (positive attention). Thus the free play control condition had more elements within its protocol that potentially could lead to change. Analyses revealed that the free play control condition did have some active change ingredients within it. The free play control group had significantly less anxiety-withdrawal symptoms (according to teacher report), as compared to the puzzles/coloring control group. There were trends in the data which showed that children in the free play group had more positive feelings about school (according to teachers) and more social competence (according to parents) than children in the puzzles/coloring control group. Therefore, it appears that engaging in pretend play, even when specific skills are not taught, can be helpful to children.

Change Processes

When conceptualizing the CBP Intervention, it was expected that changes in hopeful thinking processes and changes in play processes would be the mechanisms of change that would lead to changes in adjustment. In order to explore the mechanisms of change within the CBP Intervention, multiple regression analyses were conducted. Changes in teacher report of hope accounted for a significant amount of the variance in changes in teacher report of anxiety-withdrawal. Changes in teacher report of hope and changes in imagination on the Affect in Play Scale accounted for a significant amount of

the variance in changes in teacher report of social competence. These findings lend support to the idea that the processes leading to change in the CBP Intervention group were changes in hope and changes in imagination. Caution is warranted in making a statement of causality, however. In order to determine whether changes in hope and changes in imagination caused changes in anxiety, another experiment would have to be performed manipulating only these variables, while holding as many other variables as possible constant.

Individual Differences

An important question was whether the intervention would be more effective for children who had low hope before beginning the intervention as compared to children who had relatively normal levels of hope (as compared to other children in the current sample). To investigate this question, children from the lowest quartile of scores on the problem solving measure were selected. These children had low problem-solving ability, which indicated that they likely had low levels of the waypower aspect of hope. Because there were very few children who met the criteria, it is unlikely there was a large enough N to yield an effect. However, a trend in the data indicated that for children who began the intervention with low problem-solving ability, the CBP Intervention was effective at improving problem-solving ability when compared to the puzzles/coloring control group. This has important implications, as the results of the study may have been somewhat attenuated by the high levels of problem-solving ability that children started with pre-intervention. If the CBP Intervention was conducted in an at-risk sample of children with low problem-solving ability, the effects of the intervention might be of an even greater magnitude.

Relationships Between Measures

Because the YCHS is still under construction, other measures that were expected to relate to hope were used in the study as an alternative measure of children's hope. The PIPS measures problem-solving ability which is theoretically similar to the waypower aspect of hope. The PSPCS measures perceived competence which is theoretically similar to the willpower aspect of hope. As expected, there was a significant, positive relationship between the PIPS problem solving scores and teacher and parent reports of hope. This finding adds to the construct validity of the YCHS-Observer Rating Form. There was also a significant, moderate relationship between perceived competence and children's self-report of hope. This suggests that children who see themselves as competent also see themselves as hopeful. Although the children's hope scores were unrelated to parent and teacher report of hope, the positive relationship between the PSPCS and the YCHS further adds to the construct validity of both measures.

This was the first study to use the Affect in Play Scale-Preschool-Brief Rating Version. Using the APS-P-BR enabled researchers to assess children's play without the use of a video camera, unlike the original version of the APS. Given that the APS-P-BR is still under construction and hasn't been fully validated, this study was an important initial step in exploring its validity. Importantly, the scores of the APS-P-BR related to other variables which made theoretical sense. Additionally, in the CBP Intervention group, changes in imagination were associated with changes in social competence.

Imagination and problem solving were significantly, positively related to one another. This is consistent with Russ' (2004) suggestion that divergent thinking (the ability to come up with many different ideas) may be the link between the constructs of

imagination and problem solving. Divergent thinking could lead to more fantastical ideas being expressed in play (which would increase the imagination score) and divergent thinking would lead to a child being able to come up with many different ways of solving problems.

There was also a positive relationship between positive affect in play and problem solving. Russ (1993) has suggested that divergent thinking is not only associated with problem solving and imagination, but it is also linked to the ability to access affect-laden thoughts. There is another explanation for the relationship between positive affect in play and problem solving. Fredrickson's (2001) Broaden-and-Build theory of positive emotions states that positive emotions all "share the ability to broaden people's momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources (p. 219)." Whereas negative emotions seem to call for a specific action (e.g. fear calls for the urge to escape and anger calls for the urge to attack), positive emotions are associated with generalized approach behaviors. Fredrickson (2001) reviews a body of literature showing that positive affect is associated with more creative, flexible cognitions. Those flexible cognitions include problem-solving strategies.

Comfort in play was positively related to parent report of hope, which may indicate that children who feel capable in different situations are able to more easily immerse themselves in new experiences (such as the play task). There was a marginally significant negative relationship between comfort in play and teacher report of anxiety-withdrawal, indicating that children who were viewed by their teachers as more anxious were less comfortable in the play activity. This seems to indicate that children who

experience anxiety found it difficult to engage in a new play task. Finally, it was found that there was a negative relationship between organization in play and children's self report of hope. It is likely that this is a chance finding, given that children's self-report of hope related to other constructs in unexpected ways, which were suggestive of invalid responding. Given that the organization score did not relate to parent or teacher report of hope it is likely that organization in play does not relate to hope in a meaningful way.

Limitations

There are several limitations to the current study. The first limitation is that due to recruiting difficulties, time limitations, and unforeseen emergencies (e.g. a research assistant becoming very ill in the midst of the study), the sample size was small. This limited the power to detect results. Although the sample was ethnically and religiously diverse, it was rather homogeneous with respect to socioeconomic status. The children came from very well-educated families, which may limit the generalizability of the results.

Another limitation of the study is that the Investigator (who generated the hypotheses of the study) conducted the intervention and control group sessions. Many steps were taken to prevent bias from occurring, including the use of scripts and inclusion of a fidelity rater. Based on the fidelity analyses, it appears that no Investigator bias occurred. Nevertheless, it is possible that a subtle form of bias did occur which was not detected.

A strength of the current study is that multiple informants were used in order to provide a well-rounded view of each child. Because of this, however, there were a large number of hypotheses made (because each informants scores' were treated as a separate

hypothesis, rather than combining scores into a composite.) Therefore, there is an increased likelihood of finding an effect due to chance. Although all contrasts were specified a priori, a conservative approach to reducing the likelihood of finding an effect due to chance was taken. The Bonferroni correction was implemented. Even using adjusted p-values, many of the group effects remained significant including teacher report of hope, teacher report of social competence, and teacher report of school liking. None of the individual contrasts remained significant. Importantly, however, the effect sizes for all of the group effects as measured by partial eta squared were all large. For the CBP Intervention vs. puzzles/coloring control group contrasts the effect sizes were all in the medium range. (See Table 6.) For example, 54% of the variance in the outcome measure of teacher report of hope was accounted for by group. Given the level of the effect sizes, although all of the corrected p-values do not meet the threshold for statistical significance, we would assume that, with a larger N, effects of this magnitude would likely meet the criteria for significance. Therefore, although there were a large number of hypotheses made, given the small sample size, and the magnitude of the effects, it is unlikely that the results were due to chance.

Another limitation of the study involves the use of the child measures. First, due to the children's young age, it is likely that they could not validly respond to the self-report measures, for developmental reasons. There were also two measures used in the study that were behavioral rather than self-report (the PIPS and the APS-P-BR). Including another methodology in the study should have made the child informants' responses more useful (in the event that the self-report responses were invalid). However, the APS-P-BR was a relatively new measure and due to limitations regarding

videotaping, it is unclear whether the children's play abilities were assessed adequately. Given the pattern of relationships among the APS-P-BR variables and other measures, however, the APS-P-BR does appear to be a promising new measure.

The decision was made to use only Item 1 of the PIPS to limit administration time. After the study had already begun, the decision was made to administer the second item in an experimental format (using play rather than verbal responses). Because of this, some children never received the second item. Therefore, the PIPS would have been more robust and more able to detect effects of the intervention, if it had been used in its standardized format and if all children had received both items.

A final limitation of the study is that real-world factors interfered with some aspects of standardization in administering the intervention. For example, children were supposed to be seen one time per week for five weeks, including baseline and outcome assessment sessions. In reality, due to absences, field trips, and other scheduling difficulties, few children in the study actually were seen once a week. Many children had sessions condensed into fewer days or had sessions spread out longer than the five weeks. Therefore, it is impossible to draw inferences regarding the effectiveness of spacing out sessions in the manner initially proposed.

Implications & Future Directions

The results of the study have important implications for those interested in helping young children to have a better adjustment to school. The CBP Intervention was effective at improving a number of indicators of adjustment. The protocol for the intervention could be refined and used in early childhood prevention programs such as Head Start. If teachers or therapists were trained in the intervention, it could be delivered

to at-risk children at the end of the summer prior to preschool or kindergarten, to help with that significant transition. The CBP Intervention could also be used for children who were seen to be exhibiting problems with adjustment at the start of the school year, as a very simple, time-sensitive way of intervening.

The finding that the free play control condition had effects on anxiety and social competence has important implications for early childhood education curriculum. In the past, early childhood educators valued pretend play and pretend play was often an integral part of the school day. Today, because of policy changes and an increased focus on "academic readiness," time for pretend play has been squeezed out of the school day. The current study echoes previous research which shows that engaging in pretend play (even if explicit skills are not being taught) has tremendous implications for children's development and well-being. Educators should include time for play as an essential component of the school experience.

Of course, before any of the suggestions mentioned above can be implemented, future research is needed. In pursuing future research, it will be essential to use well-validated behavioral measures of children's abilities/feelings/ processes. The APS-P-BR is a promising new measure which should be investigated further in other construct validity studies. An important next step would be for two raters to assess children's play processes, with one rater assessing the child in person using the BR version, and another rater assessing the child from a video-recording using the APS-P scoring system.

An important next step following this study is the replication of the CBP Intervention with a larger, more socioeconomically diverse sample in comparison to another efficacious treatment. Before replication can occur, the protocol used in the

intervention should be refined in several ways. In the current study, two of the scenarios from the first session were repeated in the third session. An initial refinement of the protocol would be to create additional problem scenarios to be used in the intervention. Additionally, experience in the current study led the Investigator to believe that it might be beneficial to teach the problem solving method as early as the first session, rather than waiting to teach it in the second session, as it was in the current study. A further refinement to the protocol would be to add another character to the scenarios. Instead of including only the child's doll and the coping model (the Investigator's doll), it might be advantageous to include a doll-character who acts as a contrast, by modeling low hope and experiencing negative consequences. This would enable the child to see that positive consequences come from using high hope thoughts and problems come from exhibiting low hope. Finally, experimenting with the number of sessions and with the spacing of sessions will be important in future research. Would the intervention be as effective with only two sessions? Would it be even more effective with four sessions? Would the intervention work differently if it was condensed into a shorter time-frame?

In addition to this CBP Intervention targeting school adjustment, the principles and strategies of Knell's (1993; 1998) Cognitive Behavioral Play Therapy should be used to develop other CBP Interventions, targeting other specific issues, for example coping with medical interventions, parents' divorce, bereavement, or test anxiety.

Given the importance of accountability in today's world, it is not sufficient to assume that our attempts to help children are working. We must rigorously test our interventions and explore the mechanisms of change which lead to changes in behaviors. This study was an important first step in reaching those standards. The current study

involved the first intervention aimed at increasing preschool children's hope and was the first validation study of cognitive behavioral play strategies.

Table 1

Procedure

	Cognitive Behavioral Play Intervention	Free Play Control Group	Puzzles/Coloring Control Group
Time 1	Baseline Assessment	Baseline Assessment	Baseline Assessment
Time 2	Session 1	Session 1	Session 1
Time 3	Session 2	Session 2	Session 2
Time 4	Session 3	Session 3	Session 3
Time 5	Outcome Assessment	Outcome Assessment	Outcome Assessment

Table 2

Constructs, Measures, and Scores

Construct	Measure	Score	Source
Hope	Young Children's Hope Scale	Total Hope	Child self report
Hope	Young Children's Hope Scale- Observer Rating Form	Total Hope	Parent/Teacher report
Problem Solving (Waypower)	Preschool Interpersonal Problem Solving Test	Total Solutions	Child task
Perceived Competence (Willpower)	Pictorial Scale of Perceived Competence and Social Acceptance for Young Children	Perceived Competence	Child self report
Adjustment	Social Competence and Behavior Evaluation Scale-30	Social Competence	Parent/Teacher report
Adjustment	Social Competence and Behavior Evaluation Scale-30	Anxiety-Withdrawal	Parent/Teacher report
Adjustment	School Liking and Avoidance Questionnaire	School Liking	Child/Parent/Teacher report
Play Processes	Affect in Play Scale-P-BR	Imagination	Child play task
		Organization	Child play task
		Comfort	Child play task
		Positive Affect	Child play task
		Negative Affect	Child play task
		Undefined Affect	Child play task
		Total Affect	Child play task

Table 3

Demographic Variables of the Groups

	CBP Intervention Group	Free Play Control Group	Puzzles/Coloring Control Group
Boys	N=8	N=8	N=11
Girls	N=8	N=8	N=5
Age	mean=4.70 years, sd= .36	mean= 4.80 years, sd= .35	mean= 4.48 years, sd= .30

Table 4

Means, Standard Deviations, and Ranges for Baseline Measures

Dependent Variable	N	Min	Max	Mean	Standard Deviation
Hope Total-Self Report (YCHS)	48	10	18	15.56	2.20
Hope Total-Parent Report (YCHS-Obs)	46	12	18	15.11	1.74
Hope Total- Teacher Report (YCHS-Obs)	48	9	18	14.79	2.65
Problem Solving Item 1 (PIPS)	48	1	7	3.79	1.22
Problem Solving Item 2 (PIPS)	33	0	6	2.97	1.24
Perceived Competence Total (PSPCSA)	48	33	48	40.40	4.30
School Liking Score- Self-Report (SLAQ)	48	4	18	13.88	4.11
School Liking Score- Parent Report (SLAQ)	46	13	25	21.67	2.65
School Liking Score-Teacher Report (SLAQ)	48	22	35	30.31	3.56
School Avoidance Score- Self Report (SLAQ)	48	0	10	6.33	2.77
School Avoidance Score- Parent Report (SLAQ)	48	5	15	7.07	2.82
School Avoidance Score- Teacher Report (SLAQ)	48	6	18	7.65	2.43
Social Competence- Parent Report (SCBE-30)	46	31	54	42.30	6.05
Social Competence- Teacher Report (SCBE030)	48	24	57	41.71	8.38
Anger-Aggression- Parent Report (SCBE-30)	46	17	38	25.35	5.70
Anger-Aggression- Teacher Report (SCBE-30)	48	10	53	21.79	10.15
Anxiety-Withdrawal- Parent Report (SCBE-30)	46	12	52	21.46	7.40
Anxiety-Withdrawal Teacher Report (SCBE-30)	48	10	40	21.42	6.59
Imagination (APS-P-BR)	48	1	4	2.81	1.04
Organization (APS-P-BR)	48	1	4	2.31	1.06
Comfort (APS-P-BR)	48	1	4	3.54	0.71
Positive Affect (APS-P-BR)	48	0	19	5.25	4.78
Negative Affect (APS-P-BR)	48	0	21	3.33	4.16
Undefined Affect (APS-P-BR)	48	0	14	3.60	3.67
Total Affect (APS-P-BR)	48	0	33	12.19	8.57

Table 5

Means, Standard Deviations, and Ranges for Outcome Measures

	CBPT Intervention Group				Free Play Control Group				Puzzles/Coloring Control Group			
Dependent Variable	N	Min	Max	Mean (SD)	N	Min	Max	Mean (SD)	N	Min	Max	Mean (SD)
Hope (child)	16	11	18	14.56 (2.00)	16	9	18	14.75 (2.74)	15	12	18	15.31 (2.12)
Hope (parent)	15	12	18	15.27 (1.91)	14	12	18	15.21 (2.19)	15	12	18	15.60 (1.45)
Hope (teacher)	16	12	18	16.75 (1.73)	16	12	18	15.94 (2.14)	16	12	18	15.13 (2.25)
PIPS Item 1	16	2	9	4.19 (1.87)	16	2	10	4.69 (1.92)	15	2	6	3.69 (1.14)
PIPS Item 2	11	1	5	3.09 (1.22)	16	0	5	3.19 (1.51)	15	1	6	3.20 (1.37)
Perceived Competence	16	31	48	38.94 (4.04)	16	31	46	39.81 (4.58)	15	27	48	40.06 (4.96)
School Liking (child)	16	2	17	11.50 (4.73)	16	5	18	12.50 (4.99)	15	6	18	12.67 (4.47)
School Liking (parent)	16	13	25	21.25 (3.44)	14	17	25	21.14 (2.51)	15	14	25	22.07 (2.94)
School Liking (teacher)	16	25	35	32.63 (2.78)	16	27	35	31.94 (2.72)	16	26	35	30.81 (2.88)
Social Competence (parent)	16	29	53	41.75 (5.74)	14	30	55	44.14 (8.65)	15	32	56	43.13 (6.82)
Social Competence (teacher)	16	36	57	48.56 (6.31)	16	36	58	47.94 (7.18)	16	30	55	42.75 (7.47)
Anxiety-Withdrawal (parent)	16	14	34	20.19 (5.42)	14	11	31	19.93 (6.22)	15	11	41	23.20 (6.94)
Anxiety-Withdrawal (teacher)	16	10	30	17.88 (5.85)	16	10	29	17.94 (5.07)	16	12	33	20.63 (5.80)
Imagination	16	1	4	2.81 (.83)	16	1	4	2.81 (1.22)	15	1	4	2.87 (.92)
Organization	16	1	4	2.44 (1.03)	16	1	4	2.38 (1.31)	15	1	4	2.40 (1.18)
Comfort	16	2	4	3.56 (.63)	16	2	4	3.75 (.58)	15	1	4	3.27 (1.03)
Positive Affect	16	0	23	6.06 (6.63)	16	0	21	5.63 (6.63)	15	0	15	4.60 (5.26)
Negative Affect	16	0	15	5.69 (4.35)	16	0	18	5.13 (5.69)	15	0	8	3.00 (2.73)
Undefined Affect	16	0	10	3.13 (2.94)	16	0	17	3.13 (5.04)	15	0	11	3.67 (3.81)
Total Affect	16	1	26	14.88 (7.57)	16	0	29	13.88 (10.39)	15	0	30	11.27 (9.48)

Table 6

Effect Sizes and Estimates of Power for CBP Intervention vs. Puzzles/Coloring Control Contrasts[a,b]

Dependent Variable	Partial Eta Squared	Power Estimate
Hope- Teacher Report (YCHS-Obs)	0.08	0.49
Social Competence- Teacher Report (SCBE-30)	0.09	0.54
Anxiety-Withdrawal- Teacher Report (SCBE-30)	0.09	0.55
School Liking- Teacher Report (SCBE-30)	0.06	0.34

[a] *Note.* Effect sizes/estimates of power are only shown for contrasts with significance levels of $p < .10$

[b] According to Green et al. (2000), Partial Eta Squared effects can be broadly cateogrized as follows: .01= small, .06= medium, .14= large

Table 7

Baseline Correlations Among the Different Informants and Different Scales of the Social Competence and Behavior Evaluation Scale-30

	SC (parent)	SC (teacher)	AW (parent)	AW (teacher)	AA (parent)	AA (teacher)
Social Competence (parent)	_	r= .37*	r= - .33*	r= - .33*	r= - .37*	r= - .12
Social Competence (teacher)		_	r= - .05	r= - .31*	r= - .05	r= - .61***
Anxiety-Withdrawal (parent)			_	r= .49	r= - .03	r= - .40**
Anxiety-Withdrawal (teacher)				_	r= .07	r= - .11
Anger-Aggression (parent)					_	r= .26
Anger-Aggression (teacher)						_

*p< .05, two-tailed. **p< .01, two-tailed. ***p< .001

Table 8

Baseline Correlations Among the Different Informants and Different Scales of the School Liking and Avoidance Questionnaire

	SL (teacher)	SL (parent)	SL (child)	SA (teacher)	SA (parent)	SA (child)
School Liking (teacher)	_	r= .27	r= .14	r= - .64***	r= .23	r= -0.10
School Liking (parent)		_	r= .05	r= -.29	r= -.50***	r= - .11
School Liking (child)			_	r= - .08	r= - .06	r= -.16
School Avoidance (teacher)				_	r= .34*	r= .16
School Avoidance (parent)					_	r= .16
School Avoidance (child)						_

*p< .05, two-tailed. **p< .01, two-tailed. ***p< .001

Table 9

Baseline Pearson Correlations Among Hope and Other Constructs

	YCHS (child)	YCHS-Obs (parent)	YCHS-Obs (teacher)
PIPS Item 1			r= .30*
PIPS Item 2	r= - .45**	r= .36	r= .54***
Anxiety-Withdrawal (teacher)			r= - .32
Anger-Aggression (teacher)			r= - .36
Social Competence (teacher)			r= .69***
Social Competence (parent)	r= - .34*	r= .50***	
School Liking (teacher)			r= .31*
School Liking (child)	r= .39**		
Perceived Competence	r= .32*		
Organization in Play	r= - .29*		
Comfort in Play		r= .39*	

Table 10

Baseline Pearson Correlations Among Problem Solving and Other Constructs[a,b,c]

	PIPS Item 1	PIPS Item 2	Hope (teacher)	PA	Imagination	SL (self)	SC (teacher)
PIPS Item 1	_	r= .40*	r= .30*	r= .31*	r= .26	r= -.29*	
PIPS Item 2		_	r= .54***		r= .42*		r= .42*
Hope Total (teacher)			_				
PA				_			
Imagination					_		
SL (self)						_	
SC (teacher)							_

[a]*Note.* (PA= Positive Affect in play, Imagination= Imagination in play, SL= School Liking, SC= Social Competence)

[b]Correlations shown only for significance level of p< .10

[c]*p< .05, two-tailed. **p< .01, two-tailed. ***p< .001

Table 11

Baseline Pearson Correlations Among the APS-P-BR Variables

	Imagination	Organization	Comfort	Positive Affect	Negative Affect	Total Affect	Undefined Affect
Imagination	_	r= .73***	r= .57***	r= .64***	r= .69***	r= .70***	r= .19
Organization		_	r= .47***	r= .60***	r= .59***	r= .60***	r= .10
Comfort			_	r= .77***	r= .45**	r= .69****	r= .36*
Positive Affect				_	r= .48***	r= .85***	r= .28
Negative Affect					_	r= .71***	r= .11
Total Affect						_	r= .58***
Undefined Affect							_

*p< .05, two-tailed. **p< .01, two-tailed. ***p< .001

Table 12

Baseline Pearson Correlations Among Play Variables and Other Constructs

	Play Variables			
	Imagination	Organization	Comfort	Positive Affect
PIPS Item 1	r= .26			r= .30*
PIPS Item 2	r= .42*			
Hope (Parent report)			r= .39**	
Hope (Child report)		r= - .29		
Anxiety-Withdrawal (Teacher report)			r= - .24	

*p< .05, two-tailed. **p< .01, two-tailed. ***p< .001

Correlations shown only for significance level of p< .10

Appendix A: Session Scripts & Fidelity Rating Forms

Script for Play Intervention Session 1- Making Friends:

(Boy version. Girl version will be Sara.)

This boy's name is Matt. Matt has never been to school before. He is a little scared of the other kids. He wants to make new friends but he's not sure the other kids will like him. I'll be Matt and you be Matt's cousin who has some ideas about how to help Matt. Let's pretend this is the playground and those are some other kids from Matt's class (other dolls). Go ahead and show me what Matt could do to make friends with the kids… While child is playing out scenes, **cousin-doll will model will-power thinking statements.**

Script for Play Intervention Session 1- Missing Mommy:

(Josh or Rebecca.)

This boy's name is Josh. Josh has never been to school before. He is missing his mommy a little bit. He wants to feel better but he's not sure how. You be Josh and I'll be Josh's cousin who has some ideas about how to help Josh. Let's pretend this is Josh's classroom and those are some other kids from Josh's class (other dolls). Go ahead and we'll pretend that you're Josh trying to feel better about missing his mommy… While child is playing out scenes, **cousin-doll will model will-power thinking statements.**

Script for Play Intervention Session 1- Being Teased:

(David or Jessica.)

This boy's name is David. David is coloring a picture and some other kids just started teasing him. They said "Ewww David! Your picture is yucky. You don't know to do color good pictures!" You be David and I will be David's cousin who has some ideas about how to help David. Let's pretend this is David's class and those are some other kids from David's class (other dolls). Go ahead and pretend to be David trying to feel better about being teased. While child is playing out scenes, **cousin-doll will model will-power thinking statements.**

Session 1 Prompts for <u>Cognitive Behavioral Play Intervention</u>:

While child is playing out scenes, **cousin-doll will model will-power thinking statements.** For example:
- I think I can, I think I can_____
- If I try, I can do this_____
- It's hard to do new things, but it will get easier_____
- I know lots of ways to fix problems_____
- Wow, I'm a good friend_____
- I did a good job trying something I was scared of_____
- It will get easier if I keep trying_____
- I'm a good sharer so other kids will like me_____
- I just have to keep doing my best_____
- I know how to do lots of things_____
- Tomorrow I will try again and it will be even easier_____
- I'm scared but my mommy says I can do it_____

Others:_____

Praise for Hopeful thinking Statements _____
Reflect feeling labels (e.g. Matt seems scared; I can tell you're happy he said he would play with you.) _____
Ask how is he/she feeling? (I will ask this about the other characters in the story in addition to the main character)_____
Ask and state causation of feelings (Matt is feeling sad *because* he asked someone to play with them and she said no; Why is Matt feeling scared?)_____
Model feelings (My doll-character will show feelings by tone of voice, body movements of the doll (i.e. jumping up and down with excitement, holding head down when sad), and words used.
Imitate/Follow Child's Lead: (My doll will do what child's doll does)_____
Describe: (I will narrate what dolls are doing)_____

Any Problems: (Amount of time/Staying on task/etc.)_____

Script for Play Intervention Session 2- Feeling Sick:

(Brian or Samantha)

This boy's name is Brian. Brian is at school and he's feeling sick. His tummy just started hurting. This is Brian's cousin who has some ideas about how to help Brian. Let's pretend this is Brian's class and those are some other kids from Brian's class (other dolls). You be Brian and I will be Brian's cousin. Go ahead and pretend to be Brian trying to feel better. While child is playing out scene, **cousin-doll will model a problem-solving approach.**

Script for Play Intervention Session 2- Losing a Toy:

(Mark or Hilary)

This boy's name is Mark. Mark brought his favorite toy to school today but he lost it. He's feeling sad about losing his favorite toy. This is Mark's cousin who has some ideas about how to help Mark. Let's pretend this is Mark's class and those are some other kids from Mark's class (other dolls). Go ahead and pretend to be Mark trying to feel better about losing his toy. While child is playing out scene, **cousin-doll will model a problem-solving approach.**

Script for Play Intervention Session 2- Feeling Hungry:

(Todd or Amy)

This boy's name is Todd. Todd is at school and his tummy just started grumbling. He is feeling very hungry. This is Todd's cousin who has some ideas about how to help Todd. Let's pretend this is Todd's class and those are some other kids from Todd's class (other dolls). Go ahead and pretend to be Todd trying to feel better about being hungry. While child is playing out scenes, **cousin-doll will model a problem-solving approach.**

Session 2 Prompts for <u>Cognitive Behavioral Play Intervention</u>:

While child is playing out scenes, **cousin-doll will model a problem-solving approach.**

1) *Statement of Problem*- "Brian what's making you feel sad? Oh- your problem is you're feeling sick/you lost your favorite toy/you're feeling hungry." (Statement of Problem) _____

2) *Generate Possible Solutions*- "Now that we know what the problem is, let's fix it. What can you do to feel better?" (Have child generate ideas)_____

3) *Evaluate Solutions*- "Hmmm- you said you could do some coloring, talk to the teacher, or play with a friend (use whatever ideas child has). Which one do you think will work the best?"_____

4) *Try it*- "Those were great ideas! Now it's time to try it. Brian, go show me how to X (color, talk to the teacher, etc.) _____

Praise for Hopeful thinking Statements _____
Reflect feeling labels (e.g. Brian seems scared; I can tell you're happy he said he would play with you.) _____
Ask how is he/she feeling? (I will ask this about the other characters in the story in addition to the main character)_____
Ask and state causation of feelings (Brian is feeling sad *because* he asked someone to play with them and she said no; Why is Brian feeling scared?)_____
Model feelings (My doll-character will show feelings by tone of voice, body movements of the doll (i.e. jumping up and down with excitement, holding head down when sad), and words used.
Imitate/Follow Child's Lead: (My doll will do what child's doll does)_____
Describe: (I will narrate what dolls are doing)_____
Any Problems: (Amount of time/Staying on task/etc.)_____

Script for Play Intervention Session 3- Feeling Awake at Naptime:

(Andy or Lisa)

This boy's name is Andy. Andy is at school and his teacher just said "It's time for naptime. Everyone lay down." But Andy is feeling wide awake. He doesn't want to take a nap. Let's pretend this is Andy's class and those are some other kids from Andy' class (other dolls). Go ahead and pretend to be Andy trying to feel better about not wanting to take a nap. While child is playing out scenes, **cousin-doll will model will-power statements and will model a problem-solving approach.**

Script for Play Intervention Session 3- Making Friends:

(Matt or Sara.)

This boy's name is Matt. Matt has never been to school before. He is a little scared of the other kids. He wants to make new friends but he's not sure the other kids will like him. I'll be Matt and you be Matt's cousin who has some ideas about how to help Matt. Let's pretend this is the playground and those are some other kids from Matt's class (other dolls). Go ahead and show me what Matt could do to make friends with the kids… While child is playing out scenes, **cousin-doll will model will-power statements and will model a problem-solving approach.**

Script for Play Intervention Session 3- Being Teased:

(David or Jessica.)

This boy's name is David. David is coloring a picture and some other kids just started teasing him. They said "Ewww David! Your picture is yucky. You don't know to do color good pictures!" You be David and I will be cousin who has some ideas about how to help David. Let's pretend this is David's class and those are some other kids from David's class (other dolls). Go ahead and pretend to be David. While child is playing out scenes, **cousin-doll will model will-power statements and will model a problem-solving approach.**

Session 3 Prompts for <u>Cognitive Behavioral Play Intervention</u>:

While child is playing out scenes, **cousin-doll will model will-power statements. For example:**

- I think I can, I think I can_____
- If I try, I can do this_____
- It's hard to do new things, but it will get easier_____
- I know lots of ways to fix problems_____
- Wow, I'm a good friend_____
-Others_____

Cousin-doll will also model a problem-solving approach: For example:
1) *Statement of Problem*- "Andy, what's making you feel upset? Oh- your problem is you're feeling awake at naptime/you want to make new friends/some kids are teasing you." _____
2) *Generate Possible Solutions*- "Now that we know what the problem is, let's fix it. What can you do to feel better?" (Have child generate ideas)_____
3) *Evaluate Solutions*- "Hmmm- you said you could go find someone else to play with, ask the kids to stop teasing you, or tell the teacher (use whatever ideas child says). Which one do you think will work the best?"_____
4) *Try it*- "Those were great ideas! Now it's time to try it. Andy, go show me how to X (talk to the teacher, etc.)" _____

Praise for Hopeful thinking Statements _____
Reflect feeling labels (e.g. Andy seems scared; I can tell you're happy he said he would play with you.) _____
Ask how is he/she feeling? (I will ask this about the other characters in the story in addition to the main character)_____
Ask and state causation of feelings (Andy is feeling sad *because* he asked someone to play with them and she said no; Why is Andy feeling scared?)_____
Model feelings (My doll-character will show feelings by tone of voice, body movements of the doll (i.e. jumping up and down with excitement, holding head down when sad).
Imitate/Follow Child's Lead: (My doll will do what child's doll does)_____
Describe: (I will narrate what dolls are doing)_____
Any Problems: (Amount of time/Staying on task/etc.)_____
_____

Free Play Script/Prompts:

Story Prompts are the same as the Cognitive-Behavioral Play Intervention.

Like the CBP Intervention, the Investigator states: "Let's pretend this is the (playground/classroom/etc.) and those are some other kids from the class (other dolls)."

The prompt's ending is different: Instead of stating "You be X and I'll be X's cousin," **the Investigator states:**

"Go ahead and make up a story about X trying to feel better about X."

Praise: (General/Nonspecific)
_____

Imitate: (Investigator's doll does what child's doll does)_____

Describe: (Investigator narrates what dolls are doing)_____

Follow Child's Lead: (Investigator asks- "what should my doll do/say?"
_____

Any Problems: (Amount of time/Staying on task/etc.)_____

_____

Script for Puzzles/Coloring Control Group:

I have some puzzles and coloring sheets and crayons for you to play with. I want you to pick something to start out with and when you are finished you can do something different. You can talk out loud about the colors in the picture and what you see.

Puzzle/ Coloring Prompts

What is in the picture?_____

What piece is that?_____

What color is that?_____

How many pieces are there?_____

Praise_____

Help_____

Fidelity Checklist ID_____
Date_____

<u>Fill out after Session</u>: Session #_____ CBPI or Free Play or Puzzles/Coloring

Interventions:

Category:	Check Off Each Time Beth does this:
Praise/Positive Reinforcement (Vague) (Including head nodding, agreeing w/child, etc.)	
Praise for hopeful thinking	
Praise for playing	
Reflect child's statement/Mirror	
Ask how feeling	
Ask/state causation of feelings	
Model Feelings	
Describe (Just like a sports announcer) "He's doing X"	
Follow child's lead/Imitate	
Will-power Statements	
Statement of Problem	
Generate Possible Solutions	
Evaluate Solutions	
Try It	
What's in the picture?	
What piece is that?	
What color is that?	
How many pieces are there?	
Help	

Descriptions of Intervention-Categories for Fidelity Rater:

Praise Vague: (Great Job! Good idea! Cool! I love how you…)

Praise for hopeful thinking: (Praise specifically for trying lots of ideas or for will-power statements or for going thru the steps of problem-solving)

Praise for playing: (Praise specifically for pretending. I.e. I like how you used the block to be a pillow)

Reflect feeling labels (e.g. Matt seems scared; I can tell you're happy he said he would play with you.)

Ask how is he/she feeling? (I will ask this about the other characters in the story in addition to the main character)

Ask and state causation of feelings (Matt is feeling sad *because* he asked someone to play with them and she said no; Why is Matt feeling scared?)

Model feelings (Beth's doll-character will show feelings by tone of voice, body movements of the doll {i.e. jumping up and down with excitement, holding head down when sad}, and words used.)

Imitate: (Beth's doll will do what child's doll does)

Describe: (I will narrate what dolls are doing- e.g. "She's playing with the blocks"

Follow Child's Lead: (Ask- "what should my doll do/say?")

Statement of Problem- (Ex. "David, what's making you feel upset? Oh- your problem is some kids are teasing you.")

Generate Possible Solutions- (Ex. "Now that we know what the problem is, let's fix it. What can you do to feel better?")

Evaluate Solutions- (Ex. "Hmmm- you said you could go find someone else to play with, ask the kids to stop teasing you, or tell the teacher (use whatever ideas child has). Which one do you think will work the best?")

Try it- (Ex. After listing the possible solutions- "Now it's time to try it. Go show me how to X (talk to the teacher, etc.)"

Examples of Will-power Statements for Fidelity Rater:

- I think I can, I think I can

- If I try, I can do this

- It's hard to do new things, but it will get easier

- I know lots of ways to fix problems

- Wow, I'm a good friend (good anything)

- It's hard to do new things, but it will get easier

- I did a good job trying something I was scared of

- It will get easier if I keep trying

- I'm a good sharer (good at anything) so other kids will like me

- I just have to keep doing my best

- I know how to do lots of things

- Tomorrow I will try again and it will be even better

- I'm scared but my mommy says I can do it

Fidelity Rating of Investigator's Behavior:

1. How much redirecting behavior does the Investigator incorporate?

1	**2**	**3**	**4**	**5**
Beth does not attempt to redirect child's behavior		Beth makes some effort to redirect child's behavior		Beth makes a great effort to redirect child's behavior

2. How much does the Investigator acknowledge the child's behavior during the task?

1	**2**	**3**	**4**	**5**
Beth is not at all focused on the child		Beth is focused but with periods of distraction		Beth is entirely focused on the child

3. How much verbal praise does the Investigator give the child?

1	**2**	**3**	**4**	**5**
No praise given		Some praise given (1-2 remarks per story)		Much praise is given (3+ remarks given per story)

4. How much warmth does the Investigator exude?

1	**2**	**3**	**4**	**5**
No warmth: Beth is visually displeased		Some warmth: Smiling, nodding		Great deal of warmth: Much smiling & nodding

5. How harsh is the Investigator towards the child?

1	**2**	**3**	**4**	**5**
Not at all harsh: (No visible hostility)		Somewhat harsh (Some criticism and hostility)		Very harsh (Excessive criticism and hostility)

Appendix B: Letters of Consent & Verbal Assent

Recruitment Letter for Parents

Dear Parent:

Preschool is an exciting, important time for children! Adjustment to school in the early years effects later academic achievement and success. The purpose of this letter is to tell you about a research study. The study is not sponsored by your child's school, it is sponsored by Case Western Reserve University. We have the school's approval to tell you about it and to do the study at the school. We are exploring three different activities that may help children adjust to school more easily. If you are interested in learning more about this study and might consider your child participating in the study, please read the included letter and consent form.

Thank you,

Beth Pearson, M.A.
Graduate Student
Clinical Psychology

Sandra Russ, Ph.D
Professor of Psychology

Letter of Consent for Parents

Dear Parent: You and your child are being asked to participate in a research study that compares three activities that may help children have an easier time adjusting to school. We are contacting all children in the pre-K classes at the Cleveland Music School Settlement and asking them to consider participating. Please read this form. If you have any questions, contact us.

We are a graduate student (Beth Pearson) and professor of psychology (Sandra Russ) at Case Western Reserve University. Beth Pearson is the person who will be meeting with the children regularly. Beth is a master's level children's therapist who previously taught nursery school. There are also two other graduate students in clinical child psychology who will be assisting with the project.

Background Information

The purpose of this research is to compare three activities that may help children have an easier time adjusting to school. In the hopeful thinking/play activity Beth Pearson will tell the children stories about dolls learning to adjust to school. Examples of stories include: a doll having trouble making friends, a doll missing mom/dad, and a doll being teased. After Beth tells the story, children in this group will have the chance to play with the dolls and try to help the doll feel better. The purpose in each story will be to help the doll to feel better so that the child learns hopeful thinking skills. Hopeful thinking skills include 1) knowing how to solve problems and 2) feeling confident about solving problems.

Children in the free play activity will be told the same stories as the children in the hopeful thinking activity. They will be asked to play with the dolls and toys in any way they want. Beth will not teach them hopeful thinking skills. She will encourage their playing.

Children in the puzzles/coloring activity will not hear stories. They will be asked to play with puzzles and color on coloring sheets. Beth will encourage their efforts.

Procedures

If you agree to be a participant in this research, we would ask you to do the following things: First, we are asking you to sign this consent form and indicate whether or not you will allow your child to participate. Then, please return the signature-sheet to your child's teacher.

If you say yes, your child will be randomly assigned to one of the three groups. A description of each group is described below. For children in all groups- there will be questions sent home to parents and to teachers. Parents will be asked to complete a form with background information about the child (e.g. age, number of years in school, etc.) before the intervention begins and a form about their child's hopeful thinking, and a form

about their child's experiences of school both before and after the research activity. This should take no more than 30 minutes of your time. Teachers will also be asked to complete a form about the child's hopeful thinking and the child's experiences of school before and after the research activity.

Play/Hopeful Thinking Activity

Children in the play group will meet with Beth Pearson three times and a graduate student research assistant two times for a half-hour each time. (Total time= approximately 2.5 hours). Each session will be individual (without other children). The child will meet with Beth during school hours, at a time that is convenient for teachers. In the first session, the research assistant will ask the children questions about his/her hopeful thinking, questions about how he/she solves problems, and questions about how he/she feels about school. She will observe him/her playing with small toys and play animals for five minutes. In sessions 2, 3, and 4 Beth will play with the child with dolls and toy props and make-up a story about a child at school. Sometimes a research assistant will observe the play sessions. In session 5 a research assistant will ask the child the same questions that she asked in the first session. She will again observe the child playing with small toys and play animals for five minutes.

Free Play Activity

Children in the support activity will meet with Beth Pearson three times and a graduate student research assistant two times for a half-hour each time. (Total time= approximately 2.5 hours). Each session will be individual (without other children). The child will meet with Beth during school hours, at a time that is convenient for teachers. In the first session, the research assistant will ask the children questions about his/her hopeful thinking, questions about how he/she solves problems, and questions about how he/she feels about school. She will observe him/her playing with small toys and play animals for five minutes. In sessions 2, 3, and 4 Beth will tell the child a story about a doll at school and observe the child playing with small toys and dolls. She will be encouraging of the child's play. In session 5 a research assistant will ask the child the same questions that she asked in the first session. She will again observe the child playing with small toys and play animals for five minutes. Children in this group will not be taught hopeful thinking skills. This will allow researchers to understand what effect time and individual attention has on school adjustment.

Puzzles/Coloring Activity

Children in the puzzles/coloring activity will meet with Beth Pearson three times and a graduate student research assistant two times for a half-hour each time. (Total time= approximately 2.5 hours). Each session will be individual (without other children). The child will meet with Beth during school hours, at a time that is convenient for teachers. In the first session, the research assistant will ask the children questions about his/her hopeful thinking, questions about how he/she solves problems, and questions about how he/she feels about school. She will observe him/her playing with small toys and play animals for five minutes. In sessions 2, 3, and 4 Beth will observe the child playing with

puzzles and coloring. She will be encouraging of the child's efforts. In session 5 a research assistant will ask the child the same questions that she asked in the first session. She will again observe the child playing with small toys and play animals for five minutes. Children in this group will not be taught hopeful thinking skills and they will not engage in imaginative play. This will allow researchers to understand what effect time and individual attention has on school adjustment.

Risks and Benefits to Being in the Study

This research has the following risks: Many children have participated in similar studies and found them to be enjoyable. However, there is a slight risk that some children may find it boring or uncomfortable to participate in the study. It will be made clear to the children each time they meet that they may stop at any time they choose.

In order to participate, the child will have to miss approximately 2.5 hours of school. However, we have worked very closely with the school's director to make sure that the time spent out of class will not be problematic for the children. We will spread the time out over the course of 5 weeks and we will only choose times that teachers approve of. If a child does not want to miss class at any time, he/she will not have to.

The benefits of participation are first, that the child may learn ways of improving their hopeful thinking skills (problem solving and confidence). Second, researchers may determine whether the play activity group or the support activity group is effective at helping with school adjustment. This information will be shared with the school and may be used to help with children's adjustment to school in the future.

Compensation

All children who participate in the study will receive a small token of appreciation (e.g. a pencil or sticker) each day that they participate. Children will receive these items even if they stop early or choose not to continue participating.

Confidentiality

The records of this research will be kept private. No information about individual children will be shared with the children, parents, teachers, or other school administrators. However, if a child tells us that they have been abused, we must report that to the school authorities. The records will be kept in a locked file and any report we publish will not include any information that will make it possible to identify a participant. Access to research records will normally be limited to the researchers. However, the University's Institutional Review Board (IRB) may review the research records to ensure that the rights of human subjects are being adequately protected.

Voluntary Nature of the Study

Your participation is voluntary. If you choose not to participate, it will not affect your current or future relations with the University or with the Cleveland Music School Settlement. There is no penalty or loss of benefits for not participating or for discontinuing your participation.

Contacts and Questions

The researchers conducting this study are Sandra Russ and Beth Pearson. If you have any questions, please call them at (216) 368-8869, voicemail 6.

If you would like to talk to someone other than the researcher(s) about; (1) concerns regarding this study, (2) research participant rights, (3) research-related injuries, or (4) other human subjects issues, please contact Case Western Reserve University's Institutional Review Board at (216) 368-6925 or write: Case Western Reserve University; Institutional Review Board; 10900 Euclid Ave.; Cleveland, OH 44106-7015.

Please keep a copy of this form for your records.

Thank You For Your Time and Consideration.

Statement of Consent

I have read the above information. I have received answers to the questions I have asked. I am at least 18 years of age.

Please check one:

I consent to participate in this research and consent to my child's participation in this research:

Yes_____ No_____

Print Name of Participant: _____
(Child's name)

Signature of Parent or Guardian _____Date: _____

Signature of Person Obtaining Consent: _____Date: _____
(Will be signed when the form is returned to Beth Pearson.)

Letter of Consent for Teachers

Dear Teacher: Several of the students in your class may be participating in a research study that we are conducting at your school. In order to carry out this study, we will be asking you to fill out two questionnaires about each child's behavior in class.

We are a graduate student (Beth Pearson) and professor of psychology (Sandra Russ) at Case Western Reserve University. We are interested in helping children have an easier adjustment to school. We are comparing two groups. In the hopeful thinking activity, children will play out stories about dolls adjusting to school and Beth will help the children learn hopeful thinking skills. Examples of stories include: a doll having trouble making friends, a doll missing mom/dad, a doll being teased. In the support activity, children will be told the same stories as the children in the hopeful thinking activity and will be asked to play with the dolls and toys in any way they want. Beth will not teach them hopeful thinking skills. She will encourage their playing.

Procedure

First, we will ask you to fill out three questionnaires about each child in your class who participates in the study. Then we will meet with each child three times for the intervention. Then we will ask you to complete the same three questionnaires again. This will help us evaluate if the interventions helped the children's hopeful thinking skills and school adjustment. The hopeful thinking scale is 6 items, the scale about liking/avoiding school is 13 items, and the school adjustment scale is 30 items. It should take you approximately 20 minutes total per child to fill out (10 minutes before the intervention and 10 minutes after the intervention).

Risks and Benefits to Being in the Study

There are no foreseeable risks to being in this study.

There are no foreseeable benefits to you for being in this study. The children who participate may learn ways of improving their hopeful thinking skills (problem solving and confidence). Second, researchers may determine if the intervention is effective at helping with school adjustment. This information will be shared with the school and may be used to help with children's adjustment to school in the future.

Compensation

You will be paid fifteen dollars per hour for your participation. You will be paid at the conclusion of the study or at the end of the 2006-2007 academic year (whichever comes first).

Confidentiality

The records of this research will be kept private. They will be kept in a locked file and any report we publish will not include any information that will make it possible to identify a participant. No information about individual children will be shared with the school, parents, or children. Access to research records will normally be limited to the

researchers. However, the University's Institutional Review Board (IRB) may review the research records to ensure that the rights of human subjects are being adequately protected.

Voluntary Nature of the Study

Your participation is voluntary. If you choose not to participate, it will not affect your current or future relations with the University or with _____ School. There is no penalty or loss of benefits for not participating or for discontinuing your participation.

Contacts and Questions

The researchers conducting this study are Sandra Russ and Beth Pearson. If you have any questions, please call them at (216) 368-8869, voicemail 6.

The researchers must report to the authorities if they suspect that a child has suffered or faces threat of any physical or mental wound, injury, disability or condition that reasonably indicates child abuse or neglect.

If you would like to talk to someone other than the researcher(s) about; (1) concerns regarding this study, (2) research participant rights, (3) research-related injuries, or (4) other human subjects issues, please contact Case Western Reserve University's Institutional Review Board at (216) 368-6925 or write: Case Western Reserve University; Institutional Review Board; 10900 Euclid Ave.; Cleveland, OH 44106-7015.

You will be given a copy of this form for your records.

Thank You For Your Time and Consideration.

Statement of Consent

I have read the above information. I have received answers to the questions I have asked. I am at least 18 years of age.

Please check one:

I consent to participate in this research:

Yes_____ No_____

Print Name: _____

Signature:_____ Date: _____

Oral Child Assent:

Hi, my name is Miss Beth. I am trying to find ways to help kids have an easier time at school. I would like to watch you play with puzzles or do some coloring. If you say yes, we will start today and see each other two more times. Then another lady will ask you some more questions and watch you play for a few minutes. At the end you can pick a small prize. It is OK if you do not want to do any of this. If you say yes, you can stop at any time. Just say, "I want to stop now." Nothing bad will happen to you. You will still get your prize. Your parent(s) know that I am asking you to do these things. Would you like to answer my questions and play with the toys?

Appendix C: Measures

Participant ID #_____
Date:_____
Please Circle One: *Baseline* or *Outcome*

Young Children's Hope Scale:

I have some questions I want you to answer. These questions are all about you! There are no right or wrong answers- I just want to know about you. We're going to use these circles to help us. When I ask you a question, I want you to point to the circle that answers the question. This circle says "Never"- Point to this circle if your answer is never, no, not at all! This circle says "Sometimes"- point to this circle if your answer is sometimes or a little bit. This circle says "Always"- point to this circle if your answer is always, yes, yep!

Let's practice if I said is your name:_____ You would point to "Always" because your name is ALWAYS, every single day, _____
If I said do you have _____ colored hair- which one would you point to? (Help as necessary)
If I said- can you fly in the sky all by yourself- which one would you point to? (Help as necessary)
If I said- do you come to school- which one would you point to? (If child says always- say- "Do you come on the week-ends? No, so you come on some days but not on other days. That's what sometimes means. So which one should you point to for do you come to school?)
Ok, now you know how to do it! Point to these circles to answer my questions:

1. You think you're doing pretty good.	Never	Sometimes	Always
	1	2	3
2. You can think of lots of ways to get what you want.	Never	Sometimes	Always
	1	2	3
3. You're doing just as good as the other kids in your class.	Never	Sometimes	Always
	1	2	3
4. When you have a problem, you can come up with lots of ways to fix it.	Never	Sometimes	Always
	1	2	3
5. Things you've done before will help you when you do new things.	Never	Sometimes	Always
	1	2	3
6. You can find ways to fix a problem even when other kids give up.	Never	Sometimes	Always
	1	2	3

Participant ID #_____
Date:_____

Please Circle One: *Baseline* or *Outcome*

Pictorial Scale for Perceived Competence & Acceptance for Young Children

(Get out your manual & make sure the pictures match the child's gender)

1. Good at puzzles _____

3. Good at swinging_____

5. Gets stars on papers_____

7. Good at climbing_____

9. Knows names of colors_____

11. Can tie shoes_____

13. Good at counting_____

15. Good at skipping_____

17. Knows alphabet_____

19. Good at running_____

21. Knows first letter of name_____

23. Good at hopping_____

PIPS Overview:
(Summary created by Beth Pearson to train research assistants based on PIPS Test Manual-2nd Edition; Shure, 1990)

- The PIPS is designed to measure young children's ability to come up with multiple solutions to problems

- To score you must get original responses, rather than repetitions of earlier responses

  - For each item, you show child a picture of a boy or girl (to match child's gender), a toy that another child has, and then the other boy or girl (to match child's gender) For example: "Here's John. This is Dennis. Can you tell me what this toy is? Yes, a truck. Now John has been playing with this (not his) truck for a long time and Dennis wants a chance to play with it. But John keeps on playing with it. Who's been playing with the truck for a long time? You can point. That's right, John. Who wants to play with it? That's right, Dennis. What can Dennis do so he can have a chance to play with the truck?"

  - After first relevant solution is given, follow with: "That's one way. Now the idea of this game is to think of lots of ways to get a chance to play with toys, OK? Then move on to the next set of pictures.

  - Probing: To get good original answers, it will be probably be necessary to probe. Any response not offering a new, relevant solution gets probed. Responses to be probed include repetitions, enumerations, no-solution responses, etc. (See pages 25-33 for examples). For each toy and each broken item (the other situation) you must give the child a total of 4 chances per story. So, first ask the question. Then, examiner may probe 3 times for that story. If child doesn't give new relevant solution after four chances- continue to next story

    - Examples of Probing:
      1) Can Dennis DO something to get to play with the truck?
      2) What can Dennis SAY so he can get a chance to play with the truck?
      3) He (point) has this truck. He (point) wants it. How can he get John to let him play with this truck? (Don't say "have a turn" or "how can he get the truck"

Read through pgs 25-50 for specifics on probing. Pgs 49 & 50 have summary of rules

Discontinuing: If after child is shown 3 toys she/he remains silent, doesn't name the toys, or continues to say "I don't know"- discontinue/stop the PIPS. If the child is talking, at least repeating the story root or giving No-Solution responses, continue testing.

Extra Stories: Each child is presented with the first 7 stories- if- and only if- the child offers 7 new, relevant solutions extra stories are presented. Starting with story 8 (and still using prompting rules) testing stops at the first extra toy for which no new solution is given

PIPS-Item 2- Modified Version- Children Play out their responses w/dolls

All children get 5 stories…

Now we're going to play another game. We're going to make up some stories about children and their mommies. These are just pretend stories, OK?

1) Here's Katie/John. This is K/J's mommy. (Dramatically) Let's pretend that K/J just broke his/her mommy's favorite flower pot and he/she is afraid his/her mommy might be made at him/her. What did K/J do? (Let child respond). Yes, s/he broke his/her favorite flower pot. Take K/J (Hand child doll) and show me what s/he could do so her mommy won't be mad at him/her. You can show me by playing w/the dolls.

2)) Here's Sophie/Steve. This is S's mommy. (Dramatically) Now let's pretend that S scratched his/her mother's wooden table and it made a big scratch on the table. (Take child-doll and simulate the scratch very dramatically). His/her mommy might be mad about that. (Judge need for memory cue.) Take S (Hand child doll) and show me what s/he could do so her mommy won't be mad at him/her. You can show me by playing w/the dolls.

3) Here's Isabel/Ethan. This is I/E's mommy. (Dramatically) Now let's pretend that I/E burned a hole in his mother's best dress and s/he is afraid that his/her mother might be mad at him/her. (Judge need for memory cue.) Take I/E (Hand child doll) and show me what s/he could do so his/her mommy won't be mad at him/her. You can show me by playing w/the dolls.

4) Here's Jenny/Jamie. This is J's mommy. (Dramatically) One day J tore some pages in his/her mother's favorite book and s/he was afraid his/her mother might be mad. (Judge need for memory cue.) Take J (Hand child doll) and show me what s/he could do so her mommy won't be mad at him/her. You can show me by playing w/the dolls.

5) Here's Gwen/Danny. This is G/D's mommy. (Dramatically) G/D was playing ball. The ball hit a window and the window…. (Let the child say "broke"). Yes, the window broke. S/he was afraid his/her mommy might be mad. Take G/D (Hand child doll) and show me what s/he could do so her mommy won't be mad at him/her. You can show me by playing w/the dolls.

<u>Extra Stories:</u>

Only go on if 5 different solutions are given. Allow the usual question plus 3 probes but stop as soon as the child misses.

6) Molly/Marc-Broken Dish
7) Samantha/Mike-Broken Glass
8) Mickie-Broken picture frame
9) Emily/Aaron-Smashed car window

Create new acts of property damage/names as needed…

Participant ID #_____ Date:_____

Please Circle One: *Baseline* or *Outcome*

School Liking & Avoidance Questionnaire:

Now I have some questions about how kids feel about school. There are no right or wrongs answers. I just want to know what you really think. I won't tell your teachers or other kids what you say. We're going to use circles again. These circles say "Yes", "No", or "Sometimes" We'll use the circles to answer the questions. If I said, do you like to build with blocks what would you say? (Interpret what they said-Teach as necessary)

Practice: (Practice on the following items- until you're sure they understand)

A. Are you good at running fast?	Yes	No	Sometimes
B. Do you have cereal for breakfast?	Yes	No	Sometimes
C. Does your mom or dad pick you up from school?	Yes	No	Sometimes
D. Do you have hamburgers for dinner?	Yes	No	Sometimes

Ok- you really understand how to do this! Now I'm going to ask you questions about you feel about school.

Real Items:

1. Is school fun?	Yes	No	Sometimes
2. Does school make you feel like crying?	Yes	No	Sometimes
3. Do you wish you didn't have to go to school?	Yes	No	Sometimes
4. Are you happy when you're at school?	Yes	No	Sometimes
5. Would you like it if your Mommy or Daddy let you stay home from school?	Yes	No	Sometimes
6. Do you hate school?	Yes	No	Sometimes
7. Do you like to being in school?	Yes	No	Sometimes
8. Do you like to come to school?	Yes	No	Sometimes
9. Do you wish you could stay home from school?	Yes	No	Sometimes
10. Is school a fun place to be?	Yes	No	Sometimes
11. When you get up in the morning, do you feel happy about going to school?	Yes	No	Sometimes
12. Is school yucky?	Yes	No	Sometimes
13. Do you feel happier when it's time to go home from school?	Yes	No	Sometimes
14. Do you ask your Mommy or Daddy to let you stay home from school?	Yes	No	Sometimes

Affect in Play Scale-Preschool- Brief Rating Version

Examiner presents a basket of several toys then states:

I am here to learn about how children play. In this basket I have some toys that we're going to play with today. Let's see what's inside. (Show hippo) Oh look, this is a hippo. (Show bear) This is a bear. (Show big and little dog) This is a big dog and this is a little dog. (Show shark) This is a shark. I have some cups. (Present three cups) Let's count together and see how many there are. One, two, three. Good. (Show car) What is this? A car. See, it's yellow. Oh look, here are some more animals. (Show elephant) What animal is this? That's right. It's an elephant. (Show giraffe) This is a giraffe. (Show zebra) This is a zebra. (Show lion) What animal is this? That's right, it's a lion. (Show ball) This is a ball. What colors do you see? That's right. Green, blue, and purple.

That's all the toys in the basket. Now we're going to make up a story using the toys on the table. See how you can play with the toys. This is the bear. (Exaggerate voice tones) He says, "I'm really hungry! Where can I find some food? (Goes over to cups) Oh look, I found some cookies. I love cookies. Yum! Yum! Here's another cup. Oh yucky! I don't like what's inside there! Yuck!" Now you keep playing. What happens next? (After five minutes) Stop. You did a good job. Now you can help me put all the toys back in the basket.

Prompts & Other Rules:

1. If the child does not start to play, prompt the child after 30 seconds by saying, "Go ahead. Have the toys do something together." Two prompts of this sort can be given. After two minutes of no play, the task should be discontinued. Don't discontinue if the child is doing *something* such as moving the toys around (even if it's not pretend play). Only discontinue if child is distressed/not doing anything.

2. If the child plays but doesn't talk, prompt with, "Be sure to talk out loud so I can hear you." After 30 seconds. Two prompts can be given, spaced about one minute apart.

3. If a child has been playing, but stops before time is up, prompt with "you still have time left, keep on playing." Prompt a second time if needed with, "Keep on playing, I'll tell you when to stop." Most children who already played will be able to continue with prompts. If they cannot, then discontinue after two minutes of no play.

4. Be sure not to give any very reinforcement during the child's play. It is important, however, to be attentive and watch the child and be interested. After the child has finished say, "That was good!"

5. Be sure to stop after five minutes. A wristwatch with a second hand is adequate. Time in an unobtrusive manner.

Background Information:

Child's ID:_____

Dear Parent: Please complete this form to help us understand the population of children we are working with. Thank you for your time.
Please fill in the following blanks:

1. Child's gender ____ Male ____ Female

2. Child's age ____ 3. Date of Birth_____

4. Name of child's school_____

5. Current grade/year in school (i.e. 3 year-old class, kindergarten, etc.)_____

6. Number of years child has attended school: (Please list dates and name of school)

Date School
(Example) 2003-2004- 4's class at Kaplan Nursery, 2004-05- kindergarten at Smith School

The following questions are being asked for statistical purposes only. We want to know who was involved in the study in a general way. These questions are *not* being used for identifying purposes:

7. Years of education of child's parents (you and child's other parent):
Starting with elementary school (e.g. Kindergarten-12th grade= 13 years; K-4 years of college= 17 years). Mother_____ Father_____

8. How many siblings does your child have? _____

What are their ages:_____

9. What is your child's ethnic background? Check all that apply:

African-American or Black ___

Latino or Hispanic___ Native American _____

Asian or Pacific Islander___ White or Caucasian____

Middle Eastern____ Other (Please describe)_____

10.Which best describes your child's current religion? *Check all that apply.*

Catholic____ Eastern Orthodox_____ Jewish_____

Other Christian (e.g., Protestant)_____ [list type] _____

Islamic____

Hindu____ Buddhist____ Taoist____ Sikh____ New Age ____

Atheist/agnostic____

None ____ Other: (Please describe) _____

Participant ID#_____

Please write the date you're completing this:_____

YCHS-Observer Report Form

The following items have to do with your students feels about him/her self, how he/she is at solving problems, and how she/he is doing in general. For each item, please rate your student based on **this school year**.

We alternated the gender every other item. Don't worry about gender- just complete the items based on your student.

Your choices are:

	Never	Sometimes	Always
Items:			
1. She thinks she is doing pretty well.	1	2	3
2. He can think of many ways to get the things he wants.	1	2	3
3. She is doing just as well as other kids in her class.	1	2	3
4. When he has a problem, he can come up with lots of ways to solve it.	1	2	3
5. Things she has done before will help her when she does new things.	1	2	3
6. He can find ways to solve a problem even when other kids give up.	1	2	3

Participant ID#_____
Please write the date you're completing this:_____

SCBE-30:

The following items describe children's emotions and actions. For each item, please rate how much each emotion or action describes your child **now or within the past two weeks**. Your choices are:

1=never 2=rarely 3=sometimes 4=regularly 5=often 6=always

1. Maintains neutral facial expression (doesn't smile or laugh)	1	2	3	4	5	6
2. Comforts or assists another child in difficulty	1	2	3	4	5	6
3. Easily frustrated	1	2	3	4	5	6
4. Gets angry when interrupted	1	2	3	4	5	6
5. Irritable, gets mad easily	1	2	3	4	5	6
6. Helps with everyday tasks (e.g. cleans room)	1	2	3	4	5	6
7. Timid, afraid (e.g. avoids new situations)	1	2	3	4	5	6
8. Sad, unhappy, or depressed	1	2	3	4	5	6
9. Inhibited or uneasy in a group	1	2	3	4	5	6
10. Screams or yells easily	1	2	3	4	5	6
11. Works easily in a group	1	2	3	4	5	6
12. Inactive, watches others	1	2	3	4	5	6
13. Negotiates solutions to conflicts with other children	1	2	3	4	5	6
14. Remains apart, isolated from other children	1	2	3	4	5	6
15. Takes other children and their point of view into account	1	2	3	4	5	6
16. Hits, bites, or kicks other children	1	2	3	4	5	6
17. Cooperates with other children in group activities	1	2	3	4	5	6
18. Gets into conflicts with other children	1	2	3	4	5	6

Remember:
1=never 2=rarely 3=sometimes 4=regularly 5=often 6=always

19. Tired	1	2	3	4	5	6
20. Takes care of toys	1	2	3	4	5	6
21. Doesn't talk or interact in a group	1	2	3	4	5	6
22. Attentive toward younger children	1	2	3	4	5	6
23. Goes unnoticed in a group	1	2	3	4	5	6
24. Forces other children to do things they don't want to do	1	2	3	4	5	6
25. Hits you or destroys things when angry with you	1	2	3	4	5	6
26. Worries	1	2	3	4	5	6
27. Accepts compromises when reasons are given	1	2	3	4	5	6
28. Opposes your suggestions	1	2	3	4	5	6
29. Defiant when reprimanded	1	2	3	4	5	6
30. Takes pleasure in own accomplishments	1	2	3	4	5	6

Participant ID#_____
Please write the date you're completing this:_____

SLAQ- Parent/Teacher Report

The following items have to do with how your child feels about school. For each item, please rate how your child has been **this school year**. Your choices are:

	Almost Never	Not Much	Some-times	A lot	Almost Always
Items:					
1. Enjoys school activities or events	1	2	3	4	5
2. Makes up reasons to stay home from school	1	2	3	4	5
3. Looks forward to going to school	1	2	3	4	5
4.Becomes upset when it's time to go to school in the morning	1	2	3	4	5
5. Talks about school in a negative way	1	2	3	4	5
6. Asks to stay home from school	1	2	3	4	5
7. Tells me about good things that have happened at school	1	2	3	4	5
8. Complains about going to school	1	2	3	4	5
9. Tells me about school events that he/she thinks are funny or humorous	1	2	3	4	5
10. Seems to dread going to school	1	2	3	4	5

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