THE DEVELOPMENT OF THE CHILD INTERPERSONAL RELATIONSHIP AND ATTITUDES ASSESSMENT FOR CHILD CENTERED PLAY THERAPY

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The purpose of this study was to develop a parent report form instrument congruent with the philosophy of child-centered play therapy. The study sought to develop an instrument with acceptable levels of construct validity, reliability, sensitivity to clinical attitudes and relationships, and responsiveness to intervention. The Child Interpersonal Relationships and Attitudes Assessment (CIRAA) and the Child Behavior Checklist (CBC) and the Parenting Stress Index (PSI) were administered to 136 parents of children aged 3 to 10. The children of the parents sample consisted of 90 males and 46 females.

Exploratory factor analysis was conducted for construct validity. Parallel analysis was conducted to determine the number of factors to retain. The factor solution explained 53.86% of the variance, which is an acceptable amount of the variance. Cronbach’s alpha was conducted for total scale and all subscales. Reliability scores for the total score and subscales were acceptable, with an overall reliability coefficient of .93. A Pearson's $r$ was conducted for concurrent validity between the instrument, the CBC, and the PSI, with Pearsons’ $r$ of .75 and .74 respectively. Paired-sample $t$-tests using the pretest and posttest scores of the instrument in development examined the responsiveness of the instrument to play therapy intervention at the same level as the CBC and PSI.

ROC curve analysis, indicated acceptable discrimination of clinical scores and adaptive scores, with a clinical score being generated from the analysis. It is the first parent-report form developed for child-centered play therapy, and provides an efficient and philosophically consistent instrument for child centered play therapists to use in clinical and research settings.
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CHAPTER 1

INTRODUCTION

The first use of play in mental health interventions dates to the case of Little Hans (Freud, 1909/1959). Play continues to be widely used for children experiencing a variety of difficulties stemming from domestic violence, chronic illness, and adjustment difficulties (Jones & Landreth, 2002; Kot, Landreth, & Giordano, 1998; McGuire, 2000). Play therapy has been studied in treatment with a wide range of mental health diagnoses, such as conduct disorder, separation anxiety, depression, attention deficit, and various other disorders (Brandt, 1999; Milos & Reiss, 1982; Ray, Schottelkorb, & Tsai, 2007; Seeman, Barry, & Ellinwood, 1964). Widespread use alone does not substantiate claims of the efficacy of particular therapeutic interventions, and an intervention needs to be examined for the ability to reliably produce results in research settings.

The American Psychological Association (APA, 2008) produced a report on the role of empirically validated treatment in psychology and outlined criteria for empirically validating treatments. APA’s criteria for categorizing a treatment as well-established have the following requirements: a treatment manual for the intervention, a well-specified client sample, and two good group-design studies conducted by different investigators demonstrating efficacy by determining treatment to be superior to a placebo or equivalent and to an already established treatment using appropriate statistical power. Additionally, a treatment may meet the criteria through a large series of single-case design studies and comparing those results with the results of another established treatment. Probably efficacious treatments require one of the following: (a) two studies indicating a treatment, which is more effective than wait-list control groups; (b) two studies, that utilize good group design, have a treatment manual, and have a clearly specified
client sample; (c) two good studies that may have a flawed heterogeneity of client samples; or (d) a small series of case designs otherwise meeting the criteria for well-established treatments. Play therapy does not currently meet the requirements set forth by the APA for well-established or probably efficacious treatments. To further child-centered play therapy (CCPT) research, an instrument that is theoretically compatible and developed specifically for the assessment of play therapy efficacy and progress is needed to help enhance future research studies.

Researchers conducting studies of play therapy use a variety of different instruments, such as the Child Behavior Checklist (CBC; Achenbach & Rescorla, 2001), the Child Depression Inventory (Kovacs, 1992), the Attention Deficit Disorder Evaluation System (McCarney & Arthaud, 2004), and the Piers-Harris Self-Concept Measure (Piers & Herzberg, 2002). Often multiple measures are used to determine the outcome of play therapy (Post, 1999; Ray et al., 2007). None of the instruments currently used in play therapy assessment were specifically designed for use in evaluating play therapy. Assessing an instrument’s role in identifying constructs and data collection constitutes a vitally critical activity for the researcher (Heppner, Wampold, & Kivlighan, 2008). The establishment of a standard measure of assessment for CCPT is important for future research.

Statement of the Problem

Currently, CCPT research has no assessment instrument to measure the effectiveness of the mental and emotional factors that match the objectives of CCPT. One of the many problems with child psychotherapy research is the use of global outcome measures (Kazdin, Bass, Ayers, & Rodgers, 1990). Kazdin (2005) stated that some of the complexities surrounding evidence-based assessment include the lack of a “gold standard” to differentiate functional and dysfunctional behavior, the use of multiple measures to capture complex facets of clinical issues,
and the necessity of involving multiple respondents (i.e., parents/caretakers, teachers, counselors, etc.). There is a considerable lag between progress achieved in research on child psychotherapy outcomes and progress achieved in research in adult psychotherapy outcomes. One of the reasons for this divide is the lack of an instrument with sufficient psychometric properties to regularly measure clinical progress and outcomes (Faust & Burns, 1991).

Kazdin (2005) emphasized that treatment goals specify the constructs which selected measurements should assess. Landreth (2002) did not identify overall goals for CCPT but stated the following:

The objectives of child-centered play therapy are to help the child do several things: (1) develop a more positive self-concept; (2) assume greater self-responsibility; (3) become more self-directing; (4) become more self-accepting; (5) become more self-reliant; (6) engage in self-determined decision making; (7) experience a feeling of self-control; (8) become sensitive to the process of coping; (9) develop an internal source of evaluation; and (10) become more trusting of himself. (p. 88)

Rather than having one specific instrument to measure all of the constructs identified by CCPT philosophy, researchers have used different measures for each different construct (Baggerly, 2004; Fall & McLeod, 2001; Post, 1999; Ray et al., 2007). For the quality and quantity of research on CCPT to improve, a psychometrically sound instrument to measure the factors that play therapy is purported to affect must be developed in a philosophically consistent manner.

**Purpose of the Study**

Several objectives were met through conducting of this study. The first objective was to develop an assessment instrument to assess the effectiveness and therapeutic progress of children participating in individual CCPT sessions. The second objective was to establish reasonable reliability and validity for an instrument that is usable and accepted in a wide range of applications. The third objective was to provide a tool for CCPT researchers to establish a global
instrument of CCPT efficacy that allows play therapy to be more easily researched. The fourth objective was to produce an instrument with clinical utility that provides CCPT practitioners with accurate and timely information about their clients’ progress.

Definition of Terms

*Child-centered play therapy* (CCPT) is defined by Landreth (2002) as follows:

A dynamic interpersonal relationship between a child (or person of any age) and a therapist trained in play therapy procedures who provides selected play materials and facilitates the development of a safe relationship for the child (or person of any age) to fully express and explore self (feelings, thoughts, experiences, and behaviors) through play, the child’s natural medium of communication, for optimal growth and development. (p.16)

*Child-centered play therapy (CCPT) expert* is defined as a mental health professional who holds a doctoral degree in a mental health discipline, possesses graduate level training in CCPT, and contributes regularly to professional literature in play therapy.

*Communalities* refer to the total amount of variance in each item that is explained by the extracted factors in exploratory factor analysis.

*Concurrent criterion validity* is the degree to which the measure to be developed can be empirically associated with other standard measurements that were administered at the same time (Springer et al., 2002).

*Construct validity* is the theoretical relationship that one variable holds to other variables which may be determined through convergent and divergent validity analysis (Springer et al., 2002).

*Content validity* can be defined as the degree to which items in an instrument represent the complete domain of items that would define a given construct (Springer et al., 2002).

*Internal consistency* is defined by Springer et al. (2002) as the degree to which questions are correlated to one another.
Sensitivity is defined as the ability of instrument to identify true positive cases, determined by calculating the number of true positive (TP) decisions/number of actual positive cases.

Specificity is defined as the ability of an instrument to identify true negative cases, determined by calculating the number of true negative (TN) decisions/number of actual negative cases (Metz, 1978).
One of the first people to advocate for the study of play with children was Rousseau (Lebo, 1982). Rousseau viewed children as more than miniature adults; he viewed childhood as a time of development and growth. He saw great value in children’s play and games. He encouraged teachers to enter the world of the child to understand their pupils and become proper companions in their pupils’ play. However, Rousseau’s views on play were concerned with the role of the teacher, and he did not emphasize the therapeutic implications of play.

The first instance of play being used in the context of therapeutic intervention was Sigmund Freud’s case of Little Hans (1909/1955). Freud did not treat Little Hans directly, but he asked Hans’s father to describe his play to gain insight into Hans’s unconscious concerns and conflicts. These insights aided Freud in making parenting recommendations to Hans’s father. Sigmund Freud believed repetitive play has foundations in unconscious concerns and has a role in mastery and abreaction.

The incorporation of play into therapy was achieved when Hug-Hellmuth (1921) utilized play by visiting children’s homes and participating in their play in a nondirective manner. Hug-Hellmuth’s writings indicated no specific techniques for use in home visits. However, Hug-Hellmuth emphasized the importance of the material in children’s play as a way to uncover intrapsychic conflicts.

With the advent of Klein’s (1960) formulation of the principles of infant analysis, play in child mental health services gained a set of fixed rules. Klein believed the child’s superego was
already developed. Klein’s interventions in child analysis consisted of making direct interpretations to the child to reduce anxiety caused by an inappropriately severe superego. Klein utilized play because it allowed direct access to the unconscious for the child. In Klein’s view, free play with a selection of toys and dialogue was analogous to free association with adults. Klein believed play to be a natural medium of expression for children whose cognitive capacities were not adequately suited for expressing the complexities of the thoughts and feelings they experienced (Klein, 1960).

In contrast to Klein, Anna Freud (1946) used play in a different manner. Anna Freud realized that the foundational techniques of traditional analysis, such as dream interpretation and free analysis, were completely foreign to children. She was aware that children were usually unwilling participants and were brought to analysis by their parents. Thus, Anna Freud used free play, the natural medium of communication for children, to establish a therapeutic relationship. Once the relationship had been established, she shifted to techniques such as dream analysis and other such verbal interchanges typically used in adult psychoanalysis (A. Freud, 1946).

In the late 1930s, structured play therapy and release play therapy developed from some notable practitioners, such as Levy (1938), Hambridge (1955), and Solomon (1938). Structured play therapy consisted of three major tenets that were shared among different practitioners: (a) a psychoanalytic framework, (b) at least a partial belief in the cathartic value of play, and (c) the active role of the therapist in determining the course and focus of therapy (O’Connor, 1991). Levy developed a technique, called release play therapy, for children experiencing a specific traumatizing event. In release play therapy, the child is given a limited selection of toys, with the goal being to recreate the traumatic event. Levy believed that through repetitive play of a traumatic event, a child would assimilate associated negative thoughts and feelings. Like Levy,
Hambridge directed children to act out traumatic events; however, Hambridge was more directive than Levy. Hambridge directly recreated the event to aid the child’s abreaction after the initial relationship-building phase in therapy and then allowed the child free play to recuperate from acting out the trauma. Solomon developed active play therapy to be used with impulsive/acting out children. Solomon postulated that helping a child express anger and fear through play would result in abreaction because the child could express feelings without consequences. The therapist’s role involved targeting socially appropriate behaviors and separating anxiety over past trauma and present-life situations (Solomon, 1938).

Relationship therapy evolved many of the play techniques developed from the philosophy of Otto Rank, who emphasized birth trauma in development (O’Connor, 1991). Rank emphasized relationships between the patient/therapist and the patient’s life in the here and now. Major theorists of the relationship therapy movement included Moustakas, Taft, and Allen, and they focused on the relationship of client/counselor, its safety, and its applications to other interpersonal interactions. According to Lebo (1982), while relationship therapy started as a movement in its own right, it has since merged with the nondirectional/client-centered attitude that has arisen in play therapy.

Child-Centered Play Therapy

In the 1940s, Rogers developed the client-centered approach to therapy which evolved from his experiences working with children and their parents (Raskins & Rogers, 2005). Axline (1947), one of Roger's students, adapted the client-centered approach to work with children and calling it play therapy. According to Axline, play therapy is a therapeutic environment in which a child uses play. Play is the natural medium for children to express themselves just as adults express themselves through talk. Axline’s approach involved the use of a playroom, which
served as a stable environment for weekly play therapy sessions. Axline developed relationships with children, and she communicated empathy, unconditional positive regard, and genuineness. Axline’s nondirective method was based on the assumption that children have the ability to solve their own problems, but that their forward-moving process makes movement toward mature behavior innately more desirable than immature behavior. Play therapy results in children being given a permissive environment in which they are able to explore and grow at their own pace (Axline, 1947).

Axline (1947) outlined eight principles of conducting play therapy with children, including the following: (1) a warm relationship is established; (2) there is unconditional acceptance of the child; (3) permissiveness in the relationship that allows the child free expression of feelings; (4) the therapist is alert to the child’s expression of feelings and reflects them to the child in such a way that he or she gains insight; (5) the therapist maintains a respect for the child’s ability to solve problems and promotes decision making and responsibility in the child; (6) the therapist does not attempt to direct the child’s action or conversations; (7) the therapist does not attempt to hurry the child along and recognizes the gradual process of therapy; and (8) the therapist only establishes limits that are necessary for anchoring the child to reality and instilling awareness in the child of his or her reasonability in the relationship (Axline, 1947).

Ginott (1975) was a therapist whose contributions of limit setting in play therapy have played a major role in CCPT. Ginott is notable for his contributions to limit setting in play therapy (O’Connor, 1991). Ginott believed that limit setting helped reestablish children’s views of themselves in relation to adults as people and as children who are protected by adults through limit setting. According to Ginott, children who manifest acting-out behaviors demonstrate a lack of trust that adults do act consistently and feel the need to test limits with adults. Ginott believed
that limits were a key element in therapy, helping to reinforce consistency for the caregivers in a child’s life as well as allowing the therapist to maintain a positive attitude toward the child through protecting the relationship using limit setting (O’Connor, 1991).

Landreth (2002) supported a child-centered approach and integrated the nondirective techniques of Axline (1947) and the limit setting techniques of Ginott (1975) into a consistent approach that included trained therapists utilizing a nondirective fashion in a playroom with developmentally appropriate materials. Landreth’s child-centered approach incorporated some of the basic relationship-building skills advocated by Axline, such as tracking, reflections of feeling, and reflections of content in the context of a nondirective and non-evaluative stance by the therapist. In addition to the methods of Axline, Landreth utilized the limit-setting philosophy of Ginott through an original model of limit setting and returning responsibility labeled ACT. ACT reminds the therapist to acknowledge feelings, communicate limits, and target alternatives.

Landreth’s view of play therapy involves a trained therapist who facilitates the development of a safe relationship in which the child can express and explore feelings, thoughts, experiences, and behaviors through play. The ACT model allows for the development of self-acceptance, self-awareness, self-responsibility, and ultimately self-growth (Landreth, 2002). The evolution of non-directive play therapy first presented by Axline, and most recently redefined by Landreth, led to the intervention labeled CCPT. CCPT has recently been manualized for the purposes of moving CCPT research further toward evidence-based status (Ray, 2009).

**Contemporary Schools of Play Therapy**

*Adlerian Play Therapy*

Adlerian play therapy is a contemporary theoretical approach to play therapy developed by Kottman (1997) that integrates Adler’s individual psychology and accepted play therapy
methods. Adlerian play therapy utilizes the concept that all people are born with the ability to connect with others and have a desire to move from a position of inferiority to superiority. Adlerian play therapists often conceptualize children through the four goals of misbehavior commonly manifested in children: attention, power/control, revenge, and proof of inadequacy. Often in Adlerian play therapy, the counselor helps the client move from the goals of misbehavior to more appropriate goals termed the crucial C’s: connected, capable, [feeling they] count, and courage (Kottman, 1997).

Adlerian play therapy consists of four distinct stages: (a) building an egalitarian relationship, (b) exploring the client’s lifestyle, (c) helping the client develop insight into lifestyle, and (d) providing reorientation/re-education (Kottman, 2002). During the first phase, the play therapist uses relationship-building responses to form an egalitarian relationship with the client. The second phase, exploring the client’s lifestyle, involves a more directive role on the part of the therapist to discover information about the child’s attitudes, perceptions, thinking process, and feelings. The third phase, insight, involves nondirective, facilitative action on the play therapist’s part and challenging long-held beliefs about the world. The final phase, reorientation, requires the counselor to become an active encourager and teacher as the child experiments with new behaviors, attitudes, and perceptions of the world (Kottman, 1997).

Cognitive Play Therapy

Cognitive-behavioral play therapy is a mode of therapy in which cognitive and behavioral interventions are used within play therapy, as presented by Knell (1997). Knell identified several theoretical components of cognitive behavioral play therapy. First, she posited that all behavior is learned and reinforced; thus, if one can identify factors that reinforce and maintain inappropriate behaviors, it is possible to modify the behavior. The theoretical component of
psychopathology is also important in cognitive behavioral therapy, consisting of three components (a) cognitions influence feelings and behavior, (b) beliefs and perceptions influence how one perceives events in life, and (c) most people experiencing problems are currently experiencing distorted or irrational thoughts (Knell, 1997).

Cognitive play therapy consists of the following four phases: (a) assessment, (b) introduction/orientation to play therapy, (c) middle stages, and (d) termination (Knell, 1997). Assessment involves the use of clinical interviews, observations, assessment instruments, and other informal assessments to determine the child’s level of functioning, development, and perception of the problem. Introduction/orientation to play therapy involves giving the child a clear, nonjudgmental explanation of the presenting problem and explaining the play therapy process (Knell, 1997). This process also includes initial feedback, treatment planning, and determining the role of parents in therapy. The middle phase utilizes cognitive-behavioral interventions to teach the child new coping strategies to help him/her generalize newly learned behaviors to situations and environments outside the playroom. The termination phase includes talking with the child about plans for handling situations after termination and reinforcing the changes that have been made (Knell, 1997).

**Gestalt Play Therapy**

Gestalt play therapy is based on principles of Gestalt therapy as adapted by Carroll and Oaklander (1997). Gestalt play therapy incorporates four major theoretical constructs: (a) the I/Thou relationship, (b) organismic self-regulation, (c) contact-boundary disturbances, and (d) awareness/experience. The I/Thou relationship is based on the works of Buber (2008) and involves the meeting of individuals in a relationship with a sense of equality and as little of a power differential as possible. This relationship is characterized by complete honesty and lack of
pretenses as the therapist honestly engages the child. The therapist is careful not to lose his/her boundaries while actively engaging the child and his/her world (Carroll & Oaklander, 1997).

Organismic self-regulation refers to the organism seeking out methods of achieving and maintaining homeostasis in Gestalt play therapy (Carroll & Oaklander, 1997). As the environment around individuals changes, so do their needs and their methods for achieving those needs. As catastrophic events occur in a person’s life, he/she may react differently in trying to meet his/her needs. Although these strategies are not always effective, he/she continues to seek ways to meet these needs (Carroll & Oaklander, 1997).

Contact-boundary disturbances occur as individuals try to make contact with others and the environment at the boundary of self (Carroll & Oaklander, 1997). Disturbances can occur when people direct energy toward the self that they would like to direct towards others (retroflection); when people run away from strong feelings (deflection); when people merge views or beliefs with someone else to the point of denying own feelings (confluence); when people deny personal experiences and attributing them to others (projection); or when people take in conditional or negative messages from others (introjections). As therapy progresses, children develop an increased awareness of their experiences and self in play sessions (Carroll & Oaklander, 1997).

Gestalt play therapy has seven major phases: (a) develop I/Thou relationship, (b) evaluate and establish contact, (c) strengthen child’s sense of self and self-support, (d) encourage emotional expression, (e) help the child learn to provide self-nurturing, (f) focus on the child’s process, and (g) finalize the therapy (Carroll & Oaklander, 1997). Establishing the I/Thou relationship requires the therapist to provide genuine respect as the therapist lets go of all expectations, entering fully into the world of the child. In the contact phase, the therapist allows
the child to establish contact with the therapist and the materials. The therapist provides play and art experiences to encourage contact if the child exhibits difficulty making contact with the therapist (Carroll & Oaklander, 1997).

Therapists help strengthen the sense of self through activities designed to stimulate senses, increase awareness of body, and help children cognitively define who they are by talking about their attitudes, beliefs, and opinions (Carroll & Oaklander, 1997). In the phase of encouraging emotional expression, aggressive energy is important. Aggressive energy is defined as the energy needed to promote action. Children in play therapy often use aggression with abundance, resulting in difficulty in interpersonal interactions. Children can also suppress aggression, resulting in overly passive behavior. Through play, storytelling, dance, art, and sensory awareness activities, children become aware of their emotions and can express them. The counselor helps children focus on their processes through using sensory awareness exercises and persuading the client to pay attention to feelings as they experience certain emotions or engage in certain behaviors (Carroll & Oaklander, 1997).

Finalizing therapy occurs when children have worked through the aforementioned stages as their developmental level allows. The overall goals of Gestalt play therapy are to restore the child’s sense of self and enable the child to accept previously unacceptable parts of the self, learn to support the self, and be able and willing to experience pain and discomfort.

Effectiveness of Play Therapy

In 2005, Bratton, Ray, Rhine and Jones conducted a meta-analysis of 93 studies examining the outcome of play therapy with a wide range of clients. Bratton et al. determined through the meta-analysis of play therapy (which included a variety of different approaches) that the mean effect size of play therapy clients was .80 for children. Children receiving play therapy
performed an average of three-fourths of a standard deviation better on standardized instruments than children not receiving play therapy. For the purposes of developing an instrument to measure the efficacy of CCPT, Bratton et al. recognized the importance of exploring the areas in which play therapy has proved effective and the methodology of studies. Examination of play therapy studies provides important insights in the development of standardized instrumentation for CCPT studies and may improve CCPT research. Bratton et al.’s meta-analysis explored the effectiveness of play therapy with a wide range of difficulties, including aggressive behaviors, emotional maladjustment, and locus of control, which are discussed with more specificity in the following section. For the purposes of presenting CCPT, only a few studies are presented in depth.

Attention-Deficit/Hyperactivity Disorder (ADHD)

Ray et al. (2007) conducted a study to determine the effects of CCPT on ADHD behaviors and teacher stress when applied to children identified as exhibiting ADHD behaviors. Sixty were children recruited from a Title I elementary school in the southwest United States. Thirty-one of the children participated in the CCPT treatment group, and 29 children participated in the reading mentoring group. Children in the play therapy group received 16 sessions of CCPT provided by a therapist trained at the graduate level in CCPT procedures; children in the reading mentoring group received reading mentoring (either a child reading to the mentor or the mentor reading to the child) for 16 weeks. Children were pretested with the Index of Teacher Stress (Abidin, Greene, & Konold, 2004) and the Conners Teacher Rating Scale (Conners, 2001). The Index of Teacher Stress scale for ADHD as well as the Conners Teacher Rating Scale total ADHD score indicated that the groups improved an equal amount over time. Scores relating to emotional liability, anxiety, and student characteristics that caused stress in the student-teacher
relationship showed a statistically significantly decrease over time for the CCPT group but not for the reading mentoring group.

**Aggressive Behaviors**

Seeman et al. (1964) conducted research regarding play therapy and aggression with children. Children were sampled from a primarily upper-middle class school, with approximately 150 children. Children were administered the Tuddenham Reputation Test (Tuddenham, 1952), and teachers completed a Teacher Rating Scale (Radke-Yarrow, 1946). The 16 children with the lowest rating were selected for the intervention, with 8 placed in the experimental group and 8 selected for the control group. Children were administered the assessments at the beginning of therapy, at the end of the school year, and 1 year after the second testing. The experimental group received once weekly individual play sessions, with the median number of sessions being 37 (Seeman et al., 1964). Seeman et al. found the teacher ratings of aggression were significantly lower for the play therapy group than for the control group, according to the data from the Teacher Rating Scale.

Dogra and Veeraghavan (1994) investigated the effects of nondirective play therapy and parent counseling with children who had been diagnosed with conduct disorder. Children were selected from a group of 29 children (ages 8-12) who were currently receiving services at a child guidance clinic at a New Delhi hospital for conduct disorder. Ten children were assigned to the experimental group which included nondirective play therapy and parent counseling for 8 weeks and for a total of 16 sessions. Ten children were assigned to the control group which received no extra treatment, but were allowed to stay at the hospital. Children were pretested with the Picture-Frustration Test (Pareek & Rozenwig, 1959) and the Child Behavior Rating Scale (Cassel, 1981). Both measures demonstrated that children receiving play therapy showed
improved aggressive tendencies, development, and family environments. Specifically, children receiving the psychological intervention demonstrated a decrease in impunitive behaviors, which is correlated with family environment and thus might have resulted from parental counseling.

**Self-Concept**

Post (1999) conducted a study to ascertain the effects of play therapy on the self-esteem, self-concept, and locus of control in at-risk fourth, fifth, and sixth graders. The sample was obtained from an inner-city school in the southeastern United States and was composed of 180 children. One hundred sixty-eight children participated in the study; the children received from 1 to 25 individual play therapy sessions, with a median of 4 sessions received per child. Each child was administered the following assessments in group format: Coopersmith Self-Esteem Inventory (Coopersmith, 1981), Intellectual Achievement Responsibility Scale-Revised (Crandall, Katkovsky, & Crandall, 1965), and the State Trait Anxiety Inventory for Children (Spielberger, Gorsuch, & Lushene, 1968). The counselors had taken an introduction to play therapy course and received weekly supervision in the Landreth model. Sessions consisted of counselors utilizing the skills of tracking, reflection of content, reflection of feelings, returning responsibility, facilitation of decision making, limit setting, and enlarging the meaning.

The students’ pretest and posttest scores demonstrated that there was a significant difference between the experimental group and the control group in self-esteem. Post (1999) indicated that, while there were small gains for self-esteem in the experimental group, self-esteem experienced large losses in the control group. Therefore, play therapy may be necessary for maintenance of self-esteem in at-risk children.

**Culturally Adapted Play Therapy**

Garza and Bratton (2005) examined the effects of CCPT with children who were
identified by parents as being either Hispanic or Mexican. A total of 30 children were recruited from a school in the Southwest United States for participation in the study. Fifteen of the children participated in CCPT for 16 sessions, and 15 of the children participated in a small-group guidance curriculum for 16 sessions. Both therapists in the study were trained in CCPT, had master’s degrees in counseling, and were bilingual. The CCPT was adapted by utilizing culturally sensitive toys, and the therapists responded to the children in whatever language the children chose to use in the sessions (i.e., if a child spoke in Spanish, then the therapist responded in Spanish). Pretesting and posttesting were conducted with the Behavior Assessment System of Children (BASC) Parent Report Form and the Teacher Report Form (Reynolds & Kamphaus, 1992). Results indicated that children receiving play therapy improved in internalizing, externalizing, and anxiety at a greater degree than children participating in the guidance group.

*Emotional Maladjustment*

Brandt (1999) examined the effects of play therapy with young children (aged 4-6) who were referred by parents or teachers for adjustment problems. The sample included 26 children selected from training clinics. A total of 13 children were utilized for the experimental group, and 13 children were utilized for the control group. Children in the study were administered the following assessments: the Joseph Pre-School and Primary Self-Concept Screening Test (Joseph, 1979), the Parenting Stress Index (PSI; Abidin, 1983), and the CBC (Achenbach & Rescorla, 2001). After the pretest, the children in the treatment group participated in 7 to 10 weekly 45-minute play therapy sessions. There were no significant differences from pretest and posttest scores on the measures when data were analyzed with a MANOVA. Brandt (1999) reported, however, a large effect size when univariate ANOVAs were conducted. Brandt stated that the
MANOVA results were possibly due to the small sizes of the group that power was lost leading to no significant difference between groups being found. Analysis of mean change scores for the Externalizing/Internalizing Behaviors score on the CBC indicated a significant decrease in externalizing and internalizing behaviors in the experimental group (Brandt, 1999).

As seen in these previous studies, common assessments for play therapy included the PSI (Abidin, 1983), the CBC (Achenbach & Rescorla, 2001), and the BASC (Reynolds & Kamphaus, 2004). These assessments tend to be focused on problem behaviors of children, rather than internal factors such as self-direction or self-acceptance which constitute the objectives of CCPT.

Child Assessment

To properly address the need for a play therapy instrument, it is important to examine the assessments commonly used with children. An examination of the following assessments provides a background, represents what child assessments are currently being used, and demonstrates the existing need for developing a specific play therapy assessment instrument. The list of assessments covered in this section was derived from Jerome Sattler’s (2006) Child Assessment: Emotional and Clinical Foundations, a landmark text in child assessment providing a list of the most relevant and widely used assessments for children.

_Piers-Harris Children’s Self-Concept Scale_

The Piers-Harris Children’s Self-Concept Scale (PHCSCS II; Piers & Herzberg, 2002) is an instrument that measures self-concept, which was defined by the scale’s authors as a relatively stable set of attitudes reflecting both description and evaluation of one’s own behaviors and attributes. The scale is intended for children from 7 to 18 years old. The PHCSCS II consists of 60 items written at a second-grade level to indicate how children feel about themselves.
Respondents are asked to mark *Yes* to questions that apply to them and *No* to questions that do not apply to them. The PHCSCS II consists of one overall total scale of self-concept and six subscales. The following are the scales included in the PHCSCS II: *Total* is a general measure of self-concept; Behavioral Adjustment measures admission or denial of problematic behaviors; Intellectual and School Status reflects a child’s assessment of academic and intellectual abilities as compared to peers; Physical Appearance and Attributes measures a child’s perception of physical appearance and leadership abilities; Freedom from Anxiety indicates the degree to which a child is free from anxiety and dysphoric mood; Popularity reflects a child’s perception of his or her social functioning; Happiness and Satisfaction measures a child’s feelings of happiness and satisfaction with life (Piers & Herzberg, 2002). The PHCSCS II includes two validity scales: Response Bias, which measures tendencies to agree or disagree with items regardless of content; and Inconsistent Responding, which measures response patterns that indicate random or inattentive responding (Piers & Herzberg, 2002).

The PHCSCS II was standardized with a sample of children recruited from elementary, middle, junior high, and high schools across the United States (Piers & Herzberg, 2002). The sample consisted of 1,396 children distributed relatively equally from 7 to 18 years old (Piers & Herzberg, 2002). The ethnic representation among the standardization sample is relatively similar to the U.S. Census, with the exception of the underrepresentation of Asians and Hispanics.

Piers and Herzberg (2002) sought to establish reliability through internal consistency and test-retest measures. The Cronbach’s alpha, which measures the intercorrelation of items presumed to be measuring the same concepts, was calculated for the Total scale of self-concept and all six of the subscales. With three exceptions, the alpha scores for the total and subscales
were .70 or above, indicating good internal consistency (Piers & Herzberg, 2002). The Popularity scale showed: for children aged 7 to 8 years, the Cronbach’s Alpha equaled .60 and for children aged 17 to 18 years, the Cronbach’s Alpha was .62 (Piers & Herzberg, 2002). Additionally, the Physical Appearance and Attributes scale had an alpha of .65 for children aged 17 to 18 years (Piers & Herzberg, 2002). These alpha scores indicate that these specific subscales should be interpreted with caution with the specified age groups.

Test-retest reliability was not conducted with the current version of the PHCSCS-II; however, some data remain available from the original version of the PHCSCS-II (Piers & Herzberg, 2002). The most recent test-retest study was conducted in 1982 with Grades 7 to 8 at a public school. The sample had 99 students, a test-retest interval of 5 months, and a Pearson’s r correlation coefficient of .81, indicating very good test-retest reliability (Piers & Herzberg, 2002).

Validity studies were conducted in regard to content validity, construct validity, and convergent validity (Piers & Herzberg, 2002). The original PHCSCS was developed with an initial pool of 164 items to reflect several categories of self-concept. The pool was reduced by deleting items with poor ability to discriminate between low and high scores on the entire set of items. After the deletions, 80 items were retained. The developers of the PHCSCS-II (Piers & Herzberg, 2002) deleted 20 items. The deleted items and the revised instrument were sent to a clinical judge to determine whether the current items adequately overlapped the deleted items to determine if their presence in the assessment was necessary. The judge determined that 16 of the items had adequate overlap, but 4 items were not overlapped with existing items on the instrument. The test developers determined that the four items referred to specific abilities more than to general feelings of self-concept and were deemed unnecessary (Piers & Herzberg, 2002).
Construct validity was established through inter-scale correlations and factor analysis (Piers & Herzberg, 2002). Each subscale was compared to the total self-concept scale and the other subscales within the PHCSCS-II (Piers & Herzberg, 2002). Correlations among many subscales were high, because some items were part of multiple subscales (e.g., some items contributed to scores on both the Freedom from Anxiety scale and the Happiness scale). All subscales were shown to have at least a .70 correlation with the total self-concept score.

Exploratory factor analysis with oblimin rotation was conducted with the standardization data. The analysis yielded six factors weighted with items that included (a) representation of feelings of happiness and being important to others; (b) troublesome behaviors at school; (c) freedom from anxiety, worry, and nervousness; (d) perceptions of being good at schoolwork; (e) dissatisfaction with physical appearance; and (f) perception that one has many friends. These factors correlated very well with the established subscales for the PHCSCS-II (Piers & Herzberg, 2002).

Convergent validity was established through comparison to instruments that measure angry and aggressive attitudes as well as instruments measuring psychological symptoms (Piers & Herzberg, 2002). The PHCSCS-II (Piers & Herzberg, 2002) was compared to the Attitudes Toward Guns and Violence Questionnaire (AGVQ; Shapiro, 2000) and the Aggression Questionnaire (AQ; Buss & Warren, 2000). Because aggression is often correlated with interpersonal behavior problems, the scores would be expected to correlate with total self-concept. The PHCSCS II total score and four of six domains showed negative correlations with the AGVQ total score. The behavior score on the PHCSCS-II most strongly correlated with the AGVQ, with a correlation coefficient of .46. The correlation between the AQ was also
demonstrated through strong correlations, with the total self-concept score and three of six domains on the PHCSCS-II (Piers & Herzberg, 2002).

*Behavior Assessment System of Children-2*

The Behavior Assessment System of Children-2 (BASC-2; Reynolds & Kamphaus, 2004) uses multiple sources of information to evaluate the self-perceptions and clinical and adaptive behaviors of people ages 2 to 25 years (Reynolds & Kamphaus, 2004). The entire BASC-2 consists of a teacher rating scale (TRS), a parent rating scale (PRS), a self-report scale (SRP), a structured developmental history (SDH), and a student observation system (SOS; Reynolds & Kamphaus, 2004). The different forms that compose the BASC-2 may be given either individually or in any combination (Reynolds & Kamphaus, 2004). The BASC-2 yields a wide range of information that can be used for such purposes as clinical diagnosis, evaluation for educational services, manifest determination (ascertaining the origin of a student’s behavior problems), assessment of sensory impairments, evaluation of student progress, and forensic evaluation (Reynolds & Kamphaus, 2004).

The Teacher Rating Scale (TRS) is a measure of children’s behaviors in the school setting. The TRS comes in three different forms, preschool (for ages 2-5), child (for ages 6-11), and adolescent (for ages 12-21; Reynolds & Kamphaus, 2004). The form uses descriptors of behaviors and a 4-point Likert scale, with responses ranging from *Never* to *Almost Always*, and it takes teachers about 10 to 15 minutes to complete (Reynolds & Kamphaus, 2004). The form yields five broad composite scores including Adaptive Skills, Externalizing Problems, Internalizing Problems, School Problems, and Behavioral Symptoms Index. The Behavior Symptom Index assesses the overall level of problem behaviors.
The Parent Rating Scale (PRS) is a measure of children’s adaptive and problem behaviors in the community and home setting, uses a 4-point Likert scale like the TRS, takes approximately 10 to 20 minutes to complete, and is written at a fourth grade reading level (Reynolds & Kamphaus, 2004). The form yields five broad composite scores, including Emotional Symptoms Index, Inattention/Hyperactivity, Internalizing Problems, Personal Adjustment, and School Problems. The PRS uses similar scales as the TRS, which yields information about Bullying, Anger Control, Developmental/Social Functioning, Negative Emotionality, and Resiliency (Reynolds & Kamphaus, 2004). In addition to these scales, the PRS uses the F-index, Response Pattern Index, and Consistency Index, which present information about the validity of the assessment results (Reynolds & Kamphaus, 2004).

The Self Report of Personality (SRP) is a measure of self-perception of personality that contains statements which require responses in true/false format or statements in a 4-point Likert format (Reynolds & Kamphaus, 2004). The SRP takes approximately 20 to 30 minutes to complete and is written at a third grade reading level (Reynolds & Kamphaus, 2004). The SRP has three forms: a child form (for ages 8-11), an adolescent form (for ages 12-21), and a young adults attending postsecondary school form (for ages 18-25). There is considerable overlap among the three forms. The child and adolescent forms have the same composite scores: Emotional Symptoms Index, Inattention/Hyperactivity, Internalizing Problems, Personal Adjustment, and School Problems (Reynolds & Kamphaus, 2004). The SRP also has primary scales which outline characteristics and behaviors that compose the composite scales (Reynolds & Kamphaus, 2004). The SRP, like the TRS and PRS, utilizes a content scale that aids in the interpretation of the primary scales through the use of such subscales as Anger Control, Ego
Strength, Mania, and Test Anxiety (Reynolds & Kamphaus, 2004). Like the TRS and PRS, the SRP utilizes multiple validity scales (Reynolds & Kamphaus, 2004).

The Structured Developmental History (SDH) is an extensive history and background survey that can be completed through an interview with caretakers of the child or as a take-home survey for parents (Reynolds & Kamphaus, 2004). The SDH is used to gather information about the child’s social, medical, and family history. Events in a child’s family, medical, and social history can have a significant impact on the child’s current functioning, and information gathered from the SDH can be of value even in the absence of other BASC-2 components (Reynolds & Kamphaus, 2004).

The Student Observation System (SOS) is a systematic recording system for the direct observation of students (Reynolds & Kamphaus, 2004). The system utilizes a time-sample method which has observers record behavior for 3 seconds with 30-second intervals between each recording during a total of 15 minutes of observation (Reynolds & Kamphaus, 2004). The SOS can be used to measure the effectiveness of behavioral, educational, or psycho-pharmacological interventions (Reynolds & Kamphaus, 2004).

The original BASC was developed after a comprehensive review of behavior-rating and self-report instruments (Reynolds & Kamphaus, 1992). The goal of the BASC-2 (Reynolds & Kamphaus, 2004) was to include both adaptive and maladaptive behaviors derived from consultations with clinicians who have extensive experience with child and adolescent behavioral problems. The original items were developed by surveying 20 teachers and 500 students. Surveys instructed respondents to create a list of five positive behaviors and a list of five negative behaviors. Practicing clinicians used these results to develop the test items. These
new items and the original items were pilot tested with 6,000 teacher reports, 8,000 parent reports, and 12,000 student self-reports (Reynolds & Kamphaus, 2004).

Standardization for the TRS, PRS, and SRP included 13,000 participants ranging from 2 to 18 years old and coming from 357 sites in 257 cities in 40 states across the United States (Reynolds & Kamphaus, 2004). The demographics of the standardization, regarding ethnicity, sex, and age closely, resembled the U.S. Census data. For the TRS, three types of reliability data were obtained: internal consistency, test-retest reliability, and interrater reliability (Reynolds & Kamphaus, 2004). The internal consistency measure addressed how homogenous a set of questions is in measuring a behavioral dimension. This was measured through using the coefficient alpha. The BASC-2 (Reynolds & Kamphaus, 2004) reported relatively high internal consistency data for the TRS, with a coefficient alpha of .90 for the Behavioral Symptoms Index and Externalizing Problems Composite; a coefficient alpha in the middle .90s for School Problems and Adaptive Skills; and a coefficient alpha in the high .80s to low .90s for the Internalizing Problems Composite (Reynolds & Kamphaus, 2004). Test-retest occurred through teachers rating the same child twice over several weeks, with an interval of 8 to 65 days between ratings. The composite scales garnered correlation coefficients of .80 to .90 (Reynolds & Kamphaus, 2004). For individual scales the median was .82, .86, and .81 for pre-school, child, and adolescent scales, respectively (Reynolds & Kamphaus, 2004). For interrater reliability, multiple ratings of the same subject by different raters were obtained to determine the agreement. The interrater reliability was lower, with correlations of .65, .56, and .53 for preschool, child, and adolescent scales, respectively (Reynolds & Kamphaus, 2004).

Validity for the TRS was established using factor analysis and concurrent validity (Reynolds & Kamphaus, 2004). The TRS was compared to the CBC for concurrent validity.
Correlations on clinical scores ranged from .78 to .81, and correlations between externalizing problems ranged from .75 to .85 (Reynolds & Kamphaus, 2004). Correlations for Internalizing Problems ranged from a high of .80 to a low of .64 (Reynolds & Kamphaus, 2004). The TRS was also compared to the Conners Teacher Rating Scale (Conners, 1997) for 59 children (for ages 6-11) and 45 adolescents (for ages 12-18). The correlations of the BASC-2 and the Conners Teacher Rating Scale (Conners, 1997) were moderately high, with the global index achieving a correlation of .84 (Reynolds & Kamphaus, 2004). However, it is of note that the correlation of anxious-shy was rather low due to a difference in conceptualization and behaviors observed between the instruments. Confirmatory factor analysis was conducted on the various scales and was found to have adequate loading on many of the scales. For scales on externalizing problems the correlations ranged from .83 to .98; for internalizing problems the Somatization and Anxiety scales contributed less to this factor, with correlations ranging from .28 to .59 and .43 to .64, respectively (Reynolds & Kamphaus, 2004). Both the School Problems and Adaptive Skills composites had high loading correlations of .74 to .94 and .64 to .88, respectively (Reynolds & Kamphaus, 2004).

Reliability for the PRS was developed using internal consistency, test-retest, and interrater reliability (Reynolds & Kamphaus, 2004). Coefficient alphas were calculated for internal consistency, and composite score reliabilities were very high; the Adaptive Skills had correlations in the middle .90s (Reynolds & Kamphaus, 2004). The Behavioral Symptoms Index scores and reliabilities scores for internalizing/externalizing behaviors were very high ranging from .89 to .95 for child and adolescents (Reynolds & Kamphaus, 2004). Test-retest reliability was calculated for 87 preschoolers, 77 children, and 88 adolescents. Teachers rated children with an intervals of 9 to 70 days between ratings. The correlations for the composite scores were in
the low .80s to the low .90s (Reynolds & Kamphaus, 2004). Interrater reliability was established through having multiple respondents rate the same child/adolescent. The correlations obtained were lower than those obtained through coefficient alpha and test-retest with median reliabilities of .74, .69, and .77 for preschool, child, and adolescent levels (Reynolds & Kamphaus, 2004).

Validity was calculated for PRS using factor analysis and concurrent validity (Reynolds & Kamphaus, 2004). The factor loading for externalizing behaviors was high, ranging from .72 to .90 (Reynolds & Kamphaus, 2004). Factors for internalizing behaviors were high for the Anxiety scale (.82-.94) and the Depression scale (.77-.88), but Somatization loaded comparatively lower with correlations of .40-.54. The factor loading for Adaptive Skills was strong in the areas of Social Skills (.78-.87), Leadership (.85), Activities of Daily Living (.63-.86), and Functional Communication (.85-.89). However, Adaptability had only a moderate loading, ranging from .39 to .54. In addition to factor analysis, concurrent validity was established by comparing the BASC-2 to the CBC (Achenbach & Rescorla, 2001), the Conners Parent Rating Scale (Conners, 1997), and the Behavior Rating Inventory of Executive Functioning (Gioia, Isquit, Guy, & Kenworthy, 2000). When compared to the CBC the correlations on the total problems correlated from .73 to .84, on internalizing problems from .74 to .83, and on externalizing problems from .65 to .75, indicating overall good concurrent validity (Reynolds & Kamphaus, 2004). When compared to the Conners Parent Rating Scale, the Global Index achieved a correlation of .76, with overall good correlation among the scales with the exception of the Anxiety scale (Reynolds & Kamphaus, 2004). The good correlation was most likely due to the previously discussed difference between the behaviors the BASC-2 (Reynolds & Kamphaus, 2004) and the Conners Parent Rating Scale (Conners, 1997) in measures for anxiety. Finally, when the BASC-2 was compared to the Behavior Rating Inventory of Executive
Functioning (Gioia, et al., 2000), the externalizing problems correlated at .58 to .67 for children and .80 to .86 for adolescents, with overall high correlations for other scales (Reynolds & Kamphaus, 2004).

The SRP was tested for reliability using both internal consistency and test-retest (Reynolds & Kamphaus, 2004). Internal consistency was examined through calculating the coefficient alpha, which yielded scores of middle .90s for the Internalizing Problems composite and Emotional Symptoms Index (Reynolds & Kamphaus, 2004). Scores were in the middle to upper .80s for School Problems, Inattention/Hyperactivity, and Personal Adjustment composites (Reynolds & Kamphaus, 2004). Test-retest reliability was confirmed by having individuals complete the same self-rating form twice over a period of several weeks. Test-retest reliabilities generally fell in the upper .70s to low .80s, with median reliabilities for individual scales at .71, .75, and .85 child, adolescent, and college age, respectively (Reynolds & Kamphaus, 2004).

Validity was conducted for the SRP using both factor analysis and concurrent validity (Reynolds & Kamphaus, 2004). Confirmatory factor analysis was conducted on the SRP. Factor loading for the Internalizing Problems scale was generally high, ranging from .68-.88. Factor loading for School Problems was moderate with Attitude to School (.67-.74) and Attitude to Teachers (.83); however, Sensation Seeking loaded relatively low with a .35 (Reynolds & Kamphaus, 2004). The scales of Alcohol Abuse, School Maladjustment, and Sensation Seeking were removed from the instrument due to low loading scores on all factors (Reynolds & Kamphaus, 2004). After these changes, a factor was added for Attention/Hyperactivity, which led to an improved fit. Concurrent validity was conducted with the ASEBA Youth Self Report (YSR; Achenbach & Rescorla, 2001). Correlations on the YSR for the Internalizing Problems were .80 (adolescent) and .60 (young adult). The correlations between the Total Problems (YSR)
and Emotional Symptom Index (BASC) were .75 (adolescent) and .59 (young adult). The Adolescent form demonstrated higher correlations than the Young Adult forms (Reynolds & Kamphaus, 2004).

*Eyberg Child Behavior Inventory*

The Eyberg Child Behavior Inventory (ECBI) is an instrument that consists of 36 items that measure disruptive behaviors in children between the ages of 2 and 16 (Eyberg & Pincus, 1999). The ECBI is scored on two different scales, the Intensity scale and the Problems scale. The Intensity scale asks the respondent to rate the occurrence of a behavior on a 7-point scale ranging from *Never* (1) to *Always* (7). The scores of the Intensity scale are then summed to yield a total intensity score from 36 to 252. The Problem Scale asks parents to respond to the question, “Is this a problem for you?” by either circling *Yes* or *No*. The Yes responses are totaled from a range of items of 0-36 to indicate the problem score.

The ECBI was restandardized in 1999 with parents of children currently receiving services at six outpatient pediatric clinics (Eyberg & Pincus, 1999). A total of 798 children, aged 2 to 16 years were represented, 52% of the sample was male, and 48% of the sample was female. The sample included 74% Caucasian children, 19% African American, 3% Hispanic, 1% Asian, 1% Native American, and 2% Mixed-Race/Not Defined (Eyberg & Pincus, 1999). A total of 53% of children lived with their biological parents, 15% lived with one biological parent and one step-parent, 26% lived with their mothers only, 1% lived with their fathers only, and 5% lived with foster parents or other family members (Eyberg & Pincus, 1999). The economic class of the sample was evenly divided, with 21% falling into low, 25% falling into middle-low, 22% falling into middle-middle, 22% falling into middle-high, and 10% falling into high (Eyberg & Pincus, 1999).
Reliability was established for the ECBI through internal consistency using Cronbach’s Alpha with scores of .95 for the Intensity scale and .93 for the Problem scale (Eyberg & Pincus, 1999). Test-retest reliability was utilized for the purposes of establishing reliability with a 3-week interval. The test-retest reliability scores for the Intensity scale were .86 and .88 for the Problems scale (Eyberg & Pincus, 1999). Over a 10-week interval the test-retest reliability yielded scores of .75 for the Intensity scale and Problems scale (Eyberg & Pincus, 1999).

The ECBI’s validity was supported through its ability to differentiate between clinical and nonclinical groups (Eyberg & Pincus, 1999). The EBCI demonstrated concurrent validity with the CBC, in which Problems scale correlated with the Externalizing scale, with a score of .85 with a sample of preschool children (Boggs, Eyberg, & Reynolds, 1990). Additionally, the Intensity scale was correlated with the Externalizing scale of the CBC, with a score of .85 for children from a preschool sample (Eyberg & Pincus, 1999).

Behavior Dimension Rating Scale

The Behavior Dimensions Rating Scale (BDRS) is a self-administered and scoring instrument that measures patterns of behavior related to emotional problems (Bullock & Wilson, 1989). The scale is composed of 43 items, for which there are two opposite behaviors described, and the rater selects a position, based on a 7-point continuum, which best matches the child they are rating (Bullock & Wilson, 1989). The BDRS includes the four subscales of Aggressive/Acting Out, a measure characterized by fighting and being socially aggressive; Irresponsible/Inattentive, a measure characterized by inattention to rule-breaking, which may account for an individual’s ability to meet the demands of a situation; Socially Withdrawn, a measure indicating behavior manifested through solitary play, timidity, and passivity; and
Fearful/Anxious, a measure characterized by anxiety and mistrustfulness (Bullock & Wilson, 1989).

The BDRS (Bullock & Wilson, 1989) was standardized on 1,942 subjects in kindergarten through Grade 11. Two separate samples were used to construct the final data set: students in regular education and students who were identified as having serious emotional disturbances. The sample included students from the four major regions of the United States (Northeast, Midwest, South, and West) and from urban areas, urban fringe areas, and rural areas (Bullock & Wilson, 1989). Two procedures were used to establish reliability for the BDRS: internal consistency reliability and test-retest (Bullock & Wilson, 1989). Internal consistency reliability was established through analysis of data collected from the normative sample, using Cronbach’s Alpha, which yielded alphas of .80-.90. Test-retest reliability was established through rating 240 students twice by the same observer with an interval of 3 to 4 weeks. The Pearson’s $r$ correlation coefficients calculated for the test-retest yielded results of .82-.90, indicating good reliability (Bullock & Wilson, 1989).

Validity was established using construct validity, criterion validity, and convergent validity (Bullock & Wilson, 1989). Seven expert judges with advanced degrees who were currently involved in the field of emotional disturbance were given the BDRS to determine whether subscale titles were good descriptions of the items contained in scale and whether they were good descriptions of behaviors exhibited by children in schools (Bullock & Wilson, 1989). Six of seven judges agreed with the subscale classification of all the items. All seven agreed on the names of the subscales. All judges suggested additional items, of which 13 were incorporated (Bullock & Wilson, 1989).

Criterion validity was established through examination of BDRS scores and the
participant’s status in regards to being labeled emotionally disturbed by the school (Bullock & Wilson, 1989). The data collected indicated that the four subscales and total BDRS scale significantly differentiate children labeled emotionally disturbed from those not having that label (Bullock & Wilson, 1989). The data show that the BDRS was able to identify an average of three out of four children identified as being emotionally disturbed (Bullock & Wilson, 1989).

Construct validity was established using exploratory factor analysis, confirmatory factor analysis, and multi-trait multimethod analysis (Bullock & Wilson, 1989). Prior to exploratory factor analysis, the data were grouped into three sets of 600 randomly assigned individuals. Each set of data was subjected to a principal component factor analysis with a four-factor solution with varimax rotation specified. The results indicated that across the three groups, the factor loadings were all above .30, with 70% of the items loading at .50 or above. Confirmatory factor analysis was conducted to test the hypotheses that factors would be stable between emotionally disturbed and non-emotionally disturbed populations, invariance of female and male responses, and invariance between elementary and secondary school responses (Bullock & Wilson, 1989). Results of factor analysis indicate invariability of responses across these three population groups (Bullock & Wilson, 1989).

Convergent validity was examined by comparing the BDRS with the Revised Behavior Problem Checklist (RBPC; Quay & Peterson, 1983) and the Walker Problem Behavior Identification Checklist (WPBIC; Walker, 1983). Scales were organized on the other instruments to correlate with similar subscales on the BDRS (Bullock & Wilson, 1989). The BDRS scales of Aggressive/Acting Out and Irresponsible/Inattentive were found to have convergent validity with the RBPC and the WPBIC (Bullock & Wilson, 1989). Using a same-trait/different-method correlation, the Aggressive subscale had a .80 correlation with the WPBIC and a .83 correlation
with the RPBC, and the BDRS had a .68 correlation with the WPBIC and a .81 correlation with the RPBC (Bullock & Wilson, 1989). However, the Socially Withdrawn BDRS scale was weakly supported (BDRS/WPBIC = .48 and BDRS/RPBC = .60), and the Fearful Anxious scale was weakly supported as well (BDRS/WPBIC = .59; Bullock & Wilson, 1989). Bullock and Wilson (1989) indicated the BDRS’ weak support might have been due to (a) relatively lower reliability of the other instruments, (b) inexact matches between behavioral traits, and (c) strong correlations of the first three subscales.

*Parent Child Relationship Inventory*

The Parent Child Relationship Inventory (PCRI) is an instrument that assesses parents’ attitudes towards parenting and their children (Gerard, 1994). The instrument samples a broad range of behaviors focusing on attitudes towards the experience of being parents and parents’ attitudes toward their relationships with specific children. According to Gerard (1994), this instrument is not a replacement for qualitative assessment of the parent-child relationship but rather supplements qualitative assessment with normative data.

The PCRI is a 78-item questionnaire written at a fourth grade reading level that utilizes a 4-point Likert-scale (Gerard, 1994). The instrument may be administered in individual or group settings in approximately 15 minutes (Gerard, 1994). The PCRI uses seven scales and two validity indicators (Gerard, 1994). The seven scales include: (a) the Parental Support scale, a measure of emotional support a parent receives; (b) the Satisfaction With Parenting scale, a measure of the degree of pleasure and fulfillment derived from being a parent; (c) the Involvement scale, which examines a parent’s interaction with and knowledge of their child; (d) the Communication scale, which measure a parent’s perception of how effective he or she communicates with a child; (e) the Limit-setting scale, which examines a parent’s experience of
disciplining that specific child; (f) the Autonomy scale, which measure a parent’s ability to promote independence in a child; (g) the Role Orientation scale, which measures a parent’s attitudes about gender roles in parenting; (h) the Social Desirability scale, which is a validity scale utilizing certain items that are rarely scored positively- a high score on this scale indicates a parent’s attempts to unrealistically portray the parent-child relationship positively; and (i) the Inconsistency indicator, which is a measure consisting of 10 high correlated pairs of items (Gerard, 1994). A high score on this subscale indicates random responses or inattention in responding (Gerard, 1994).

In developing the PCRI, a literature review revealed that former studies found the following three dimensions to be important in assessing parenting: an affective dimension, a dimension centering on control and discipline, and a dimension that generally reflects overprotection or punishment (Gerard, 1994). A factor analysis of a preliminary version of the PCRI was conducted, which indicated five major dimensions of counseling, and 14 clinical scales, which resulted in a 345-item version of the PCRI (Gerard, 1994). Due to the impracticality of a 345-item instrument, item selection studies were conducted. Selection studies were used including: rating of items by expert judges, qualitative feedback from professionals, and item analysis (Gerard, 1994). Item analysis required the following steps, after Gerard (1994) consulted with expert judges and received qualitative feedback from professionals, (a) eliminating items that were either almost universally answered positively or negatively; (b) retaining only items ranked 1 to 9 (out of 24) by the expert judges; (c) dropping items that did not have a .30 correlation or higher with its scale; (d) computing a differential reliability index for each item, accomplished through comparison of item-scale correlation to the magnitude of correlation between item and social desirability scale; (e) giving items to expert judges again,
asking for dichotomous decisions to keep or reject an item; and (f) eliminating items not contributing to scale reliability and removing of one scale.

The PCRI was standardized using a sample of 1,100 parent reports from schools or daycare centers (Gerard, 1994). The sample data indicated that the sample for the PCRI was generally better educated and less diverse than the U.S. population as a whole (Gerard, 1994). Reliability of the PCRI was established using internal consistency and test-retest (Gerard, 1994). The standardization sample was used to estimate PCRI internal consistency, using the alpha coefficient statistic. The median value of the alpha coefficient was .82, with no scale having a coefficient below .70, indicating good overall internal consistency (Gerard, 1994). Two test-retest administrations were conducted for the PCRI, one with a short 1-week interval and one with a longer 5-month interval. The test-retest with the 1-week interval was conducted with 22 individuals. Because of the small sample size the Pearson’s r values were quite varied (ranging from .68 to .93); however, the mean correlation was .81 (Gerard, 1994). The 5-month interval test-retest was conducted with 82 parents and yielded the mean correlation of .55, which was lower due to the longer interval test-retest time but still fell within the acceptable range for attitude and personality measures (Gerard, 1994).

Validity studies were conducted through factor analysis and predictive validity (Gerard, 1994). Several confirmatory factor analyses were conducted using data from the normative sample. The three-factor model was applied to White mothers, White fathers, and all White parents together. The results were indicated in terms of gamma, a goodness of fit index, overall correlation with factors. Predictive validity indicates an instrument’s ability to predict performance on other relevant measures. Using 35 couples undergoing court-ordered mediation the PCRI and the Personality Inventory for Children (PIC; Wirt, Lachar, Klindinst, Seat, &
Broen, 1977), an inventory which assesses a child’s behavior, affect, and cognitive ability, were administered (Gerard, 1994). Results indicated that the PCRI was a full standard deviation below the normative sample, and the PIC (Wirt et al., 1977) scores were a standard deviation below the normative sample for the Family Disturbance scale. Overall, these studies indicated positive validity for the PCRI (Gerard, 1994).

_Parenting Stress Index_

The PSI is an assessment that measures stress in the parent-child relationship (Abidin, 1995). Stress is measured by examining the parent’s perception of the child, their attitudes toward being a parent, and external sources of stress (Abidin, 1995). The PSI is a 120-item self-administering questionnaire that may be administered to parents of children ranging from 1 month old to 12 years of age (Abidin, 1995). The PSI has a defensive responding measure, a life stress measure, a total stress score, and 13 subscales spread across two domains, the Child Domain and the Parent Domain (Abidin, 1995).

The Child Domain consists of the following scales: Distractibility/Hyperactivity, a measure of parental perception of children displaying behaviors associated with attention-deficit disorder with hyperactivity; Adaptability, a scale that represents children who are perceived to have difficulty in adjusting to changes in the physical and/or social environment; Reinforces Parent, a measure of parental experiences of the children as sources of reinforcement and encouragement; Demandingness, a scale that represents the degree to which parents feel the children place many demands upon them; Mood, a measure associated with children whose emotional functioning shows evidence of dysfunction; and Acceptability, which indicates parents perceive their children to have physical, intellectual, and emotional characteristics that do not meet their expectations for their children (Abidin, 1995).
The Parent Domain subscales consist of: Competence, a measure that indicates parenting difficulties due to lack child development knowledge or child management skills, by not finding the role of parent as reinforcing as hoped, and due to relative inexperience; Isolation, a measure which evaluates the degree to which parents are isolated from social and family support systems; Attachment, a measure that suggests that parents may not feel emotionally close to their child or has difficulty observing and understanding the child’s feelings accurately; Health, a measure that indicates health problems that may be the result of or cause of parental stress; Role Restriction, a measure that evaluates the degree to which parents feel that the role of parent restricts freedom and prevents the development of or maintenance of personal identity; Depression, a measure in which high scores indicate the significant presence of symptoms of depression; and, finally, the Spouse subscale, which indicates a lack of emotional and active support from the spouse in parenting (Abidin, 1995).

The PSI was standardized with 2,633 mothers who were recruited primarily from a well-child care pediatric clinic in central Virginia (41%; Abidin, 1995). Additional sites of recruitment were public school daycare centers (20%), health maintenance programs in Massachusetts (10%), private and public clinics in New York City (12%), private clinics in North Carolina (7%), private and public clinics in Georgia (6%), and public schools in Wisconsin (4%; Abidin, 1995). Mothers recruited for the study had a mean age of 30.9 and were predominately White at 76%, with 11% African Americans, 10% Hispanic, and 2% Asian mothers participating (Abidin, 1995). Normative data were collected for 200 fathers, with a mean age of 32 (Abidin, 1995). The ethnic makeup of the father sample was 95% White and 5% African American (Abidin, 1995).

Reliability for the PSI was established using internal consistency and test-retest methods.
The Cronbach’s Alpha was calculated for all subscales, domains, and total stress scores. The subscales as calculated from the normative sample in the Child Domain had coefficients ranging from .70 to .83, and the Parent domain had coefficients ranging from .70 to .84 (Abidin, 1995). The reliability for the two domains and the total stress score were .90 or greater (Abidin, 1995). These coefficients indicate a high degree of reliability. Test-retest methods were used with 30 mothers at a pediatric clinic who re-tested with a 1 to 3 month interval. The correlation coefficients were .63 for the Child domain, .91 for the Parent domain, and .96 for the Total Stress score, indicating overall stability across time for the PSI (Abidin, 1995). Validity was established through factor analysis (Abidin, 1995). A factor analysis for the Child Domain and the Parent Domain indicate that the six-factor solution and the seven-factor solution, respectively, were responsible for the variance among items in the two different domains (Abidin, 1995).

In a study regarding the effect of an instructional guide for reducing the stress of hearing parents of hearing-impaired children, Adams and Tidwell (1989) discovered that the PSI total stress score was significantly correlated with the Child Behavior Scale (Ladd & Profilet, 1996) and the Eyberg Child Behavior Inventory (Eyberg & Pincus, 1999), suggesting that perceptions of child behavior are correlated with parent stress. Ethier, Lacharite, and Couture (1995) found that when compared with the PSI, the Beck Depression Inventory (Beck, 1990) correlated with parental neglect, physical and psychological violence in the home, and sexual abuse for both negligent and control group mothers.

*Child Behavior Checklist*

The CBC is a form used to gather information regarding demographic data, adaptive and maladaptive behaviors, and competencies at school and home for children ages 6 to 18 years (Achenbach & Rescorla, 2001). The CBC includes question about school, social, and activity-
based competencies as well as 112 items regarding behaviors that parents or caregivers observe in the home or school setting (Achenbach & Rescorla, 2001).

The CBC yields four different sets of scales: the Syndrome scales, the DSM-Oriented scale, Competence scales, and Internalizing/Externalizing/Total Problems scales (Achenbach & Rescorla, 2001). Scores on the CBC fall into three categories: normal/adaptive; borderline, which indicates a score that is of concern; and clinical, which indicates a need for immediate intervention.

The Syndrome scale yields eight scales including: Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-breaking Behaviors, and Aggressive Behavior (Achenbach & Rescorla, 2001). The DSM-oriented scale has scales including Affective Problems, Anxiety Problems, Attention-Deficit/Hyperactivity Problems, Conduct Problems, Oppositional Defiant Problems, and Somatic Problems (Achenbach & Rescorla, 2001). The Competence scale indicates the child’s competence in the areas of socialization, academics, extracurricular activities, and total problems. The final scale indicates a child’s level of functioning regarding internalizing problems (i.e., withdrawing behaviors, depressive behaviors, etc.), externalizing behaviors (i.e., aggressive behaviors), and total problems (Achenbach & Rescorla, 2001).

To obtain the normative sample the CBC developers contracted Temple University’s Institute for Survey Research to carry out its national sampling frame to establish a normative group for the CBC (Achenbach & Rescorla, 2001). The CBC sample had 1,753 respondents. In terms of the SES, 33% of the sample was in the upper class; 51% of the sample was in the middle class; and 16% of the sample was in the lower class; (Achenbach & Rescorla, 2001). Sixty percent of the sample was Caucasian; 20% was African American; 9% was Latino; and
12% was biracial or undefined (Achenbach & Rescorla, 2001).

To establish reliability, Achenbach and Rescorla (2001) utilized internal consistency, test-rest, and cross-informant agreement. Achenbach and Rescorla utilized Cronbach’s Alpha to establish internal consistency among items in a scale. The Cronbach’s Alpha for the competence scale ranged from .63 to .79, indicating good reliability (Achenbach & Rescorla, 2001). The Cronbach’s Alphas for the Syndrome scales were .78 to .97, indicating very good reliability; and for the DSM-oriented scales, the Cronbach’s alphas ranged from .72 to .91 (Achenbach & Rescorla, 2001).

Test-retest was utilized at an interval of 8 to 16 days and using the same parents who filled out the original assessment (Achenbach & Rescorla, 2001). The test-retest was then assessed using Pearson’s $r$ correlation coefficient. The $r$ for the total problems ranged from .91 to .95, and the $r$ means for the Problems scales and Total Problems scale were not lower than .90, indicating a strong reliability (Achenbach & Rescorla, 2001). There was some decline in Problems scores; however, it accounted for less than 3% of variance and can easily be explained by practice effect (Achenbach & Rescorla, 2001).

Cross-informant agreement is an examination of differences between different reporters using the same instrument (Achenbach & Rescorla, 2001). For mothers and fathers of the same children, the mean $r$ was .69 for competence scales, .76 for problem-based scales, and .73 for DSM-oriented scales (Achenbach & Rescorla, 2001). These correlation coefficients indicated a high level of reliability among cross-informant comparison. However, mothers tended to rate children higher than fathers on problem-based scales and DSM-oriented scales, but this difference accounted for less than 4% of variance, which was considered small (Achenbach & Rescorla, 2001).
Validity was established through content validity, criterion-related validity, and construct validity. For criterion validity, Achenbach and Rescorla (2001) compared the CBC to several similar instruments including the Conners Parent Rating Scale (Conners, 1997) and the Behavior Assessment System for Children (Reynolds & Kamphaus, 1992). The CBC yielded correlation coefficients with the Conners Parent Rating Scale ranging from .71 to .85 and indicating a high level of correlation (Achenbach & Rescorla, 2001).

Several implications for the development of instruments are evident from this review of the literature on child and adolescent assessment. The primary implication is that large and diverse sample sizes are important. Secondly, all the instruments’ developers used not only rigorous methodology to determine the validity and reliability of their instruments but also multiple measures to determine the psychometric properties of the instruments. Additionally, none of these instruments are designed for specific use in play therapy, and most of them are designed to assess problem behaviors and help identify children struggling with certain types of behavioral difficulties. None of the aforementioned instruments measures the precise objectives of CCPT. These considerations are important for developing an instrument.

Play Therapy and Assessment

In seeking to develop an instrument to measure the effectiveness of play therapy, it is of vital importance to survey the discipline to see what instruments have already been developed and the methodology and psychometrics of these instruments. The following is a review of literature about instruments specifically designed to measure aspects of play therapy. The instruments discussed in this section can be differentiated into two separate groups: instruments designed to assess either the natural or directed play of children in a nonclinical setting, and instruments designed to assess children in play therapy sessions.
Play Therapy-Based Instruments

Children’s Play Therapy Instrument

The Children’s Play Therapy Instrument (CPTI) was developed to assess the activity of a child in a play session both to provide additional criteria for diagnosis and to measure progress/outcomes (Kerenberg, Chazan, & Normadin, 1998). The CPTI operates from a psychoanalytic framework, and thus may be of limited use for practitioners that do not utilize or value psychoanalytic concepts in play therapy (Chazan, 2000). The CPTI segments child psychotherapy sessions into four different sections for the purposes of describing and quantifying play in the context of individual child psychotherapy (Chazan, 2000). There are three major steps in the use of the instrument: the segmentation of the session, the description of the session, and the optional third stage of using CPTI as a measure of change (Kerenberg et al., 1998).

The child’s activity is segmented into four categories: (a) pre-play, activities which are considered to be preparation for play; (b) play activity, which may be exhibited either declaration of intent, definitions of roles in play, or other initiative taking in play, focused attention, or the use of toys to engage in developing a story/narrative; (c) non-play, which refers to any various behaviors that do not specifically apply to the aforementioned criteria for play activity; and (d) play interruption, which is any activity that results in the child leaving the room (Chazan, 2000).

The second portion of the CPTI is the description of the play activity segment using the following dimensions: descriptive, structural, and functional (Kerenberg et al., 1998). The descriptive dimension includes subscales that describe the play observed in terms of the domain in which play occurred (regular surroundings, miniatures, the body, etc.), script descriptions, and category of play. The structure of play is a description of (a) affect, specifically range, type, and regulation of emotion; (b) cognition, which describes role play, how people/objects are depicted,
and the transformation of roles in play; (c) narration, a description discussing topic and theme of the play as well as use of language; and (d) development, which centers on comparing a child’s play to other children in terms of age, gender, and social level (Chazan, 2000). Function of play is an analysis of the child’s play as a method of using different coping strategies. The child’s observable behaviors are classified as adaptive, neurotic, borderline, and psychotic.

The CPTI can be used to measure progress throughout therapy in these different areas (Kerenberg et al., 1998) and to provide pretest and posttest scores for research subjects (Chazan, 2000). In the initial interrater reliability study, three raters rated eight different videotaped clinical play therapy sessions. They achieved good agreement on the segmentation portion of the CPTI (kappa = 0.72), acceptable to excellent on dimensional analysis using the interclass correlation coefficient (ICC = 0.52 - 0.89), and acceptable to excellent for nominal categories of the scale (kappa = 0.42 - 1.00). While the CPTI is a promising instrument for research, difficulties still remain. This instrument fails to measure activity outside of psychotherapy sessions, and might not be able to detect if in-session behaviors are generalized to life at home and school. Also, this instrument must be completed by a trained professional, as opposed to a self-report instrument that could be filled out by other significant people in the child’s life (Chazan, 2000). It is important to note that this instrument is only available through the authors and requires extensive training before a therapist can confidently conduct the assessment.

Carmichael Therapist/Client Interaction Matrix

The Carmichael Therapist/Client Interaction Matrix was designed to provide a graphical representation of the relationship between different types of therapist responses and client responses in play therapy (Carmichael, 1993). Empirical instruments regarding play therapy have historically centered on the outcome of play therapy, and those studies focusing on therapeutic
process have not utilized clearly defined constructs on observed behaviors. This observational matrix utilizes a set of therapeutic responses and client behavioral outcomes (Carmichael, 1993). The counselor responses, in order of least desirable to desirable, include analyzing, judgmental statements, information giving, silence, tracking statements, open-ended questions or statements, reflections of feeling, clarifying statements or limit setting, and summarizing. The behavioral outcomes identified are as follows in order from least desirable: resistance, silence, information, exploration, rapport, emotions/feelings, problem identify, generating alternatives, and taking responsibility (Carmichael, 1993).

The Carmichael Therapist/Client Interaction Matrix is used to analyze counselor verbal behaviors and client’s behaviors; observations are numbered 1 through 9, with 1 representing least desirable behavior and 9 representing the most desirable behavior (Carmichael, 1993). Every 10 seconds, a score is given the first number, representing the therapist’s verbal behavior, and the second number, representing the client’s behavior. Three hundred recordings are tallied for a 50-minute session. At the end of the sessions, the scores are counted and the resultant number is recorded in the appropriate box where the two numbers intersect (Carmichael, 1993).

The intersection of counselor tracking statements (scored as a 5) and client behavior of rapport (scored as a 5) is what Carkhuff labeled interchangeable, meaning that the interaction was neither therapeutic nor harmful (Carmichael, 1993). Four quadrants are assigned to the matrix Q1, the upper right quadrant; Q2, the upper left quadrant; Q3, the lower right quadrant; and Q4, the lower left quadrant. The Q1 is the most desirable quadrant, and the quadrants proceed in order with Q4 being the least desirable quadrant (Carmichael, 1993).

The instrument was tested using 32 videotaped sessions with five counselor-client dyads from a university training clinic. Observers in training were first given written descriptions of the
different responses of therapists and clients. Initial instruction periods included the primary researcher, and the observers in training scored two introductory sessions. When ratings differed from the primary researcher, the criteria for scoring were clarified. In the second round of instruction two sessions were rated independently, with a 90% inter-rater reliability. When the 32 matrices were submitted to analysis, and after the 5-5 cell responses were excluded from statistical analysis, the data were found to have a $p < .0001$, positive correlations $r = .387$ (Carmichael, 1993).

**Play Therapy Observational Instrument**

The purpose of the Play Therapy Observational Instrument (PTOI) is to develop a methodology to encourage the empirical study of play therapy and to observe and rate children’s in-session behavior (Howe & Silvern, 1981). The instrument developers sought to meet six criteria in order to develop a useful and accurate instrument. The authors decided that the instrument should focus on behaviors that were deemed important by many schools of play therapy; behaviors relevant to psychodiagnosis, therapy process, and outcomes; behaviors concerning which there are ongoing debates about interrelationships; behaviors about which interjudge reliability must be established; empirical demonstrations of behaviors clustering together theoretically; and behavior clusters that prove to be stable over time (Howe & Silvern, 1981).

A review of literature during the development of the PTOI, yielded four a priori dimensions of in-session play therapy behavior: (a) emotional discomfort, (b) competence in relation to people and things, (c) use of maladaptive coping strategies, and (d) use of fantasy play to express personal issues. Both analytically oriented and client-centered play therapists stress
the importance of emotional discomfort in relation to both self and others as critical for a therapist to observe and understand (Howe & Silvern, 1981).

The PTOI has five behavioral categories intended to represent the dimension of emotional discomfort: (a) frequency and degree of play disruption, (b) quality and intensity of affect, (c) frequency of conflicted play, (d) level of involvement in activities, and (e) degree of body stiffness (Howe & Silvern, 1981). For the competency dimension of the PTOI, two subcategories, activity-related competence and interpersonal and affect-related competence, were established (Howe & Silvern, 1981). Activity competence was assessed through the three behavioral markers of frequency with which possible versus impossible tasks were attempted, frequency with which appropriate toys are chosen for representing an idea, and frequency of movement to another activity without accomplishing the previous task. Interpersonal and affect-related competence is assessed through the observation of nine categories: (1) frequency of fair use of rules during play; (2) frequency of coherent speech/play; (3) frequency with which the therapist is invited into play; (4) frequency of clear articulation; (5) frequency of coherent talk about feelings, worries, and troublesome events in first person; (6) frequency of decision making without hesitation; (7) frequency of unnecessary calls for help; (8) frequency of attention-seeking behavior or demands for closeness with therapist; and (9) frequency and degree of frustration tolerance (Howe & Silvern, 1981). Maladaptive coping strategies were established as a dimension.

Howe and Silvern (1981) stated that a child’s level and style of defensiveness would be expressed in terms of competency and emotional comfort. Thus, it is difficult to determine whether this category stands alone or whether it is intertwined with the previous two dimensions. Descriptions of play therapy behaviors can be categorized as mechanical, rigid, mistrustful,
uncooperative, infantile, guarded, or repetitive. Howe and Silvern identified the following behaviors to reflect the dimension of maladaptive coping strategies: frequency of regression in response to anxiety; frequency of withdrawal; frequency with which the child becomes engaged in socially acceptable tasks following socially unacceptable ones; frequency of inappropriate expressions of aggression towards therapist; frequency of stereotyped phrases; frequency of stereotyped, repetitive plots expressed in play; frequency with which play is concentrated on things versus people and animals; and frequency of rejection of therapist intervention through hostility or withdrawal.

The final dimension identified is that of fantasy play. It is assumed that the use of fantasy play for expression is related to emotional discomfort (Piaget, 1962). Play therapy theoretical literature identifies two sources of relief through fantasy play: the provision of catharsis and mastery over feelings of anxiety or guilt through recreating previously overwhelming situations. The following five behavioral indicators were identified for fantasy play: (a) infrequency of abrupt fluctuations between reality and fantasy, (b) number of roles enacted in play, (c) number of different scenes from fantasy stories, (d) inventive use of structured toys or use of creative toys, and (e) frequency in use of toys (Howe & Silvern, 1981).

Two undergraduate students were trained to rate the 31 behaviors outlined in the PTOI in a 20-hour training program that included a trainer who helped the students identify relevant behaviors and practice ratings. The raters then independently rated 76 twelve-minute segments of videotaped play sessions. The sample of children was evenly distributed between male and female clients, ranging from ages 4 to 10 years, with therapy duration ranging from 2 weeks to 1 year (Howe & Silvern, 1981).
The interjudge reliability was placed under the stringent criterion of an interclass correlation of at least .48 and interrater agreement within a one-point range of 80% or better across the 76 segments (Howe & Silvern, 1981). Thirteen of 31 items met this stringent criterion, and 7 had very high agreement; however, they scored low in interclass correlations (Howe & Silvern, 1981). The 13 items that met the criterion were grouped into scales to utilize Scott’s Scale Score Analysis, to assess correlations between each item and the scale as a whole. Four scales met the criteria of reliability of .70 or better, homogeneity of .30 or better, and correlations between item and scale at .50 or better. The stability of scores over two play session was assessed. The averaged score was correlated with average scale scores for fantasy play scale $r = .70$, for social inadequacy $r = .79$, for emotional discomfort $r = .68$, and for maladjustment $r = .83$, indicating relatively stable scores over a 2-week period (Howe & Silvern, 1981).

**Trauma Play Scale**

The purpose of the Trauma Play Scale (TPS) is to detect differences in the play therapy behaviors of children with a history of trauma when compared to children without a history of trauma (Findling, Bratton, & Henson, 2006). The instrument was designed to be a developmentally responsive observation-based instrument to aid clinicians in accurately assessing the play behaviors believed to be evident in traumatized children.

The TPS is composed of five subscales: intense play, repetitive play, play disruption, avoidant play, and negative affect (Findling et al., 2006). The five subscales are averaged to produce a total scale called the Average Trauma Play Score (Findling et al., 2006). Intense play is described as play in which a child seems deeply absorbed and in which extreme cases takes on a driven and joyless quality. Repetitive play is defined as play in which the child returns to certain behaviors, toys, or themes throughout play sessions. Play disruptions are defined as
sudden shifts from meaningful play to other activities as a response to the child’s anxiety or emotional discomfort in acting out a specific pattern of play. Avoidant play behavior is defined as play behaviors in which the child is avoiding contact with the therapist, or in extreme cases, the child distrusts and rejects the relationship with the therapist. Negative affect is defined as the child expressing negative (e.g., anxious, angry, sad, etc.) or flat affect during the session.

Findling et al. (2006) decided upon an observational design due to children lacking the verbal and cognitive abilities necessary for accurate completion of self-report assessments. Findling et al. conducted a literature review from which their five subscales were derived and then used archival materials with various versions of the TPS to ensure that the identified behaviors were the most salient. Focus groups for the instrument were conducted, and a cycle of submission, review, feedback, and revision was completed 6 times over the course of 8 months. For the pilot study, 5 raters were trained to use the scale with 8 consecutive play therapy sessions with 12 child-therapist combinations. Interrater reliability was attained at 97% at the initial training session and at 98% during the midpoint training session (Findling et al., 2006). Raters attained a mean correlation coefficient of .80 across all data rated during the midpoint session. Intra-rater reliability had coefficients ranging from .85 - .98 (Findling et al., 2006). The analysis of variance conducted using the series level average TPS score evidenced statistically significant group differences. Thus, in the use of the instrument, children with a significant trauma history were differentiated from children who did not (Findling et al., 2006). Myers (2008) compared two groups of children using the TPS. The first group included 6 children currently in play therapy with a history of trauma from the original TPS development study (Findling et al., 2006), and the second group included 7 children who, according to parent report, had no history of interpersonal trauma. Raters, who were blind to the trauma history of the children, completed the
TPS ratings on 8 consecutive sessions for each child. One way analysis of variance statistics were conducted on the results which indicated strong effect sizes for group membership, indicating the TPS’ ability to differentiate between traumatized and non-traumatized children.

*Nova Assessment of Psychotherapy*

TheNova Assessment of Psychotherapy (NAP) play therapy scale is an instrument designed to promote the progress of research and allow the clinician to monitor therapeutic progress and outcome (Faust & Burns, 1991). The NAP allows the clinician test user to capture a balanced amount of both verbal and nonverbal data from the client and the play therapist through watching play therapy sessions either live or through video recording (Faust & Burns, 1991).

The NAP consists of behavioral codes for both the child and the play therapist. Children are coded on positive nonverbal behavior such as cooperative play or attempting to fix or repair the relationship and negative nonverbal behavior such as aggressive behavior or expression of negative affect (Faust & Burns, 1991). Children are also coded on positive verbal behavior, such as social conversations or apologies, and negative verbal behaviors, such as argumentative verbalizations or “bossy” behavior. Codes were developed for play therapist behaviors falling into the categories of facilitation (i.e., reflections of content or feeling) and channeling behaviors (i.e., limit setting or questioning; Faust & Burns, 1991).

The development of the NAP consisted of four major phases: (a) scale design and operationalization, (b) initial application of the scale, (c) training of observers and scale refinement, and (d) reliability studies (Faust & Burns, 1991). To avoid a compilation of behaviors with little correlation or meaning, the scale developers’ decision to include a code was based on the appearance of the behavior in professional literature and the relative import of the behavior in literature (Burns & Faust, 1991). Because of a strong need for an objective
observational measure, the codes were given operational definitions, and each observation interval was designated to be 7 seconds long. The developers utilized this molecular approach to provide information in regard to progress, effectiveness of therapy, and therapist competence.

During the second phase of scale development the NAP was applied to both videotaped play therapy sessions and in vivo child play therapy sessions. This application was conducted to ascertain the occurrences of the code in sufficient quantity to result in significant frequency to aid in research or clinical assessment applications (Faust & Burns, 1991). The third phase involved the training of raters to use the NAP. The raters were beginning doctoral students who were trained to rate videos with intervals of every 7 seconds of video and who were blind to the experimental hypothesis and the therapy process. Coders were assigned pairs for study cases, and reliability was continued to be calculated for each case (Faust & Burns, 1991). The fourth phase of the scale development involved collection of data and statistical analysis. The interrater reliability for each of eight codes selected for the clinical version of the NAP was found to be 95% or above (Faust & Burns, 1991). Future plans for the NAP include factor analysis for appropriateness of codes and development of normative data.

As is evident from the literature review of play therapy assessments, there have been several attempts to measure play therapy behavior in a manner useful both to clinicians and to researchers. However, most of the instruments developed for use in play therapy are observational measures that carry the inherent difficulty of training as well as limited utility for practitioners who have no practical ways to observe sessions without disrupting the integrity of therapeutic interventions. Thus, while some progress has been established, much work needs to be done in the area of play therapy assessment (Faust & Burns, 1991).
Assessments for Children’s Natural/Directed Play

Functional Emotional Assessment Scale

The Functional Emotional Assessment Scale (FEAS; Greenspan, DeGangi, & Wieder, 2001) is a criterion-referenced scale that measures six domains which researchers find pertinent in the assessment of social-emotional functioning in young children. The domains for the FEAS include: (a) self-regulation and interest in the world; (b) forming relationships, attachment, and engagements; (c) two-way purposeful communication; (d) behavioral organization, problem-solving, and internalization; (e) representational capacity and elaboration of symbolic thinking; and finally, (f) emotional thinking/development and expression of thematic play (Greenspan et al., 2001).

The domain of self-regulation and interest in the world assesses the ways in which both child and caregiver self-regulate and show a balanced interest in the world, which is assessed through specific behaviors such as the ability to maintain concentration on toys while not ignoring the playmate, ability to self-regulate by remaining calm and focused, range of affect displayed in play, and ease of movement utilized in play. The FEAS domain of Forming Relationships, Attachment, and Engagement is defined as “the caregiver and child’s ability to show an emotional investment in the animate world” (DeGangi & Greenspan, 2001, p. 170). Behaviors that are assessed through this domain include but are not limited to: (a) level of relaxation/anxiety of caregiver in caregiver-child interactions; (b) level of affectionate touching the caregiver initiates; (c) child and caregiver display of either positive or negative emotions when near each other or interacting; and lastly, (d) the maintenance of visual or verbal contact between child and caregiver. The scale Two-Way Purposeful Communication focuses on child-
caregiver interaction patterns. These patterns may be assessed through patterns of caregiver-child interactions, capacity of caregiver to play at developmentally appropriate levels, caregiver ability to play interactively as opposed to parallel play, and ability of child to organize and execute play. DeGangi and Greenspan (2001) measured specific behaviors in the Behavioral Organization, Problem Solving, and Internalization domain, which include caregiver-child reciprocal interactions, ability of caregiver to set limits on child, patterns of caregiver elaborating on child's play, and patterns of caregiver providing support in behavioral organization through allowing child to assert him or herself through play.

Representational Capacity and Elaboration of Symbolic Thinking is measured through assessment of the following child and caregiver patterns: patterns of play in which play represents representational interactions, child using different play theme expressions, child using toys to communicate needs/wishes/feelings, and child engaging in play drama with two or more uncorrelated ideas represented in play (Greenspan et al., 2001). Emotional Thinking or Development/Expression of Thematic Play examines the child-caregiver patterns in which representation concepts and emotional ideas are demonstrated within a play sequence. Behavioral patterns, which are focuses of assessment for this domain, include: (a) incorporation of causality into play, (b) elaboration of emotional themes, and (c) pretend play sequences made up of two or more logically connected ideas that are grounded in reality.

The administration of the FEAS may be conducted at home or in a school or clinic setting, although it may be useful to conduct the FEAS in multiple settings to gain more information. The administration begins by the examiner asking the caregiver to play with the child for 15 minutes. At the conclusion of the 15-minute play time, the examiner may wish to facilitate different play interactions with the child that may not have been observed during the
free-play time with the child's caregiver. During the validation study of the FEAS, three different sets of toys are utilized (often making each set available for 5 minutes to facilitate a variety of play behaviors): a symbolic play kit (including telephones, dolls, cars, plates and silverware, puppets, and doll houses); a tactile play kit (including textured balls, furry blanket, porcupine toys, furry puppets, and a bin with dried beans and action figures); and a movement play kit (including a large plastic dome, a trampoline, scooter board, and suspended swing; Greenspan et al., 2001).

Accurate scoring of the FEAS requires videotaping observations. The FEAS can be scored during the observation but requires considerable experience and should not be attempted without the examiner’s having practiced on at least 10 videotaped scorings with a reliability of at least 80% between live and videotaped scorings (Greenspan et al., 2001). The FEAS contains six different assessment protocols for different age ranges (7 to 9 months old, 10 to 12 months old, 13 to 18 months old, 19 to 24 months old, 25 to 35 months old, and 3 to 4 years old). The FEAS protocol includes both a child and a caregiver section in which the caregiver is scored on skill in supporting child's play and emotional development and the child is assessed on his/her play interaction, specifically the range and depth of capabilities for each developmental capacity. DeGangi and Greenspan (2001) utilized a 2-point scale in scoring the FEAS, which is defined as follows:

0 = behavior not seen at all or observed only briefly; skill not mastered

1 = behavior present some of the time or observed several times; skill partially mastered

2 = behavior is consistently present or observed many times; skill mastered. (p.196)

The score for each domain is then totaled and compared to criterion-scores to assess for being at risk or indicative of relational problems. DeGangi and Greenspan indicated that the FEAS should
be conducted as part of a larger battery of assessments, including measures of family functioning, sensory processing, attention, self-regulation, and developmental functions.

The FEAS validation studies were conducted with 468 children ranging from age 7 months to 4 years old. In developing construct validity, evidence was gained at three levels: item, subscale, and total score for caregiver and child. The means for the normal group and the clinical group were calculated for each age range. A discrimination index that indicated the difference between group-item performance was calculated for differences between the Normal Group and the Regulatory Disorder Group and between the Normal Group and the Pervasive Developmental Disorder Group. Magnitude and effect size was calculated for each discrimination index, with small (.2 - .39) to medium (.4 - .59) effect sizes for items and large effect sizes (.60+) in the means. The vast majority of the subtests discriminated between normative and clinical samples.

Concurrent validity was examined between the FEAS scores for symbolic and tactile play with the Test of Sensory Functions in Infants (DeGangi & Greenspan, 1989) and the Test of Attention in Infants (DeGangi, Poisson, Sickle, & Wiener, 1995) for a subsample of 84 children with regulatory disorders who were 7 to 18 months in age. The correlations proved insignificant, which the authors interpreted as indicating that the FEAS is measuring information distinct from the diagnostic information gathered in the instruments used for concurrent validity.

Inter-observer reliability was conducted with 46 children rated among five different observers. Observers 1 and 2 rated all 46 children, Observers 3 and 4 coded 20 children, and Observer 5 rated 15 children. For the caregiver scale, the reliability ranged from .896 to .916 and from .91 to .9786 for the total child scores. In addition to the previous reliability study, the DeGangi et al. (1995) conducted a study in which one observer scored instrument during the observation and one observer scored the instrument from a videotape of the same observation.
The reliability scale for this study was .83 for the caregiver scale, .89 for the child scale, and .88 for the total child scores.

In addition to reliability scores, the FEAS researchers determined rates of false-normal and false-delayed results. The false normal rate ranged from 5% to 28% for the total scale for various age ranges, from 5% to 32% for the child scale and between 5 to 25% for the caregiver scale. The false-delayed rates were significantly higher ranging from 26% to 63% for the total scale. Regarding these rates DeGangi and Greenspan (1989) observed a lower error rate (i.e., fewer misclassifications) for delayed children than for normal children. However, given the serious consequences of false normal errors, the error rates for false-delayed are tolerable.

Measure of Empathy in Adult Child Interactions (MEACI)

The Measure of Empathy in Adult Child Interactions (MEACI) was originally developed by Guerney, Stover, and De Merit in 1968. Guerney et al. attempted to develop an instrument that would measure the empathy of adults with children. To measure their instrument Guerney et al. used a sample of eight mothers and their young children aged 6 years old to 8 ½ years old. The parents were taken to a play room at a Rutgers clinic and given the instructions to play with their child for 30 minutes in the way they would at home. While they played with their child, the interaction was observed by two raters behind a two-way mirror. The parents’ behavior was originally scored on a bipolar 7-point Likert scale every 5 minutes. The MEACI has since been modified to use a 5-point Likert scale. The Likert was labeled highest level of empathic communication: (a) accepting without judgment; (b) permissive, alert, but not responding verbally as above; (c) mildly unaccepting; (d) moderately directing, taking the lead, or distant; (e) moderately critical or withdrawn; and (f) openly rejecting.
To establish reliability Guerney et al. (1968) had two raters after training rate eight sessions, and each of the six 5-minute ratings for each session was used. The Pearson’s $r$ correlation indicated a .80 interrater reliability. The similarity of the raters’ responses was high, with 44% or responses being identical, 46% of responses being one point apart, and 10% being two points apart. The researchers also compared the ratings of the mothers to the proportion of reflective responses to the total responses, which has been identified by Stover and Guerney in 1967 as an indication of taking on an empathic role. A Pearson's $r$ correlation indicated a .73 correlation between the proportion of reflective responses and scores on the MEACI. Bratton (1993) modified the MEACI with personal permission from Guerney for use in her study, *Filial Therapy with Single Mothers*, using reliability statistics from the previously run reliability studies by Stover and Guerney (1967). The MEACI has continued to be used in filial research, including studies on child-teacher relationship training (Brown, 2000), performance of adolescents involved in the peer assistance leadership program (Hilpl, 2001), and parental empathy and acceptance (Poon, 1998). The MEACI has been further refined with permission from Louise Guerney and published in the CPRT Treatment Manual (Bratton, Landreth, Kellam, & Blackard, 2006).

*Constructs in Play Therapy Assessment*

There are several broadly defined objectives in CCPT including the following: development of positive self-concept, greater self-responsibility, more self-direction, greater self-acceptance, more self-reliance, self-determined decision making, greater feelings of control, sensitivity to the process of coping, an internal source of evaluation, and a greater sense of trusting self (Landreth & Sweeney, 1997). These constructs form the basic constructs of CCPT.
Current assessments utilized in CCPT research do not appear to address the stated objectives that are present in CCPT literature. Assessments such as the BASC, CBC, and the EBCI focus on the specific behaviors of children that may cause difficulty in functioning and provide a method of tracking increase/decrease of these behaviors. However, CCPT theory emphasizes that change occurs in the child through the facilitation of growth in the areas of self-concept, self-direction, self-acceptance, self-reliance, self-determination, self control, coping, internal locus of control, and self-trust. There is a clear theoretical gap between an instrument that measures behaviors and a therapy that purports itself to be a tool not for behavior modification but rather for an environment in which self-direction, self-reliance, and self-acceptance are facilitated. Thus, there is a strong need for a play therapy assessment instrument that is rooted in the philosophy and objectives of CCPT and adequately measures the outcome of the intervention.

Assessment Instrument Construction

It is of importance, when developing an instrument, to conduct validation and reliability studies. This study utilized a system proposed by Springer, Abell, and Hudson (2002) for developing rapid assessment instruments (RAI). RAIs are instruments which allow clinicians to quickly and accurately assess and monitor change in clients (Springer et al., 2002). Springer et al. divided the process of instrument development into two major steps, the first being the conceptual design of the instrument, which consists of (a) identifying and defining constructs, (b) selecting the measurement tool format, (c) writing the items, and (d) submitting items for expert review based upon both content appropriateness and measurement design. The second step of RAI design is psychometric validation, which is accomplished through (a) determining appropriate components for reliability and validity analysis, (b) designing the study, (c)
administering the new tools to the sample, and (d) analyzing the data to assess the weaknesses and strengths of the RAI.

The first step is to identify and define the constructs (Springer et al., 2002). Defining the construct is important and often difficult. The construct should be defined in such a manner that is clear, differentiated from other similar constructs, and clearly bound to operationalized definitions. The second step of conceptual design involves decisions regarding how to measure and for whom. RAIs generally take one of two formats in terms of audience, self-reporters, or observers. A self-report instrument is a self-administered instrument that asks the test-taker to answer statements about themselves, whereas the observer instrument asks an individual to answer questions about another individual with whom they have contact and observe on a frequent basis (e.g., a teacher observing a student in their class). Additional considerations regarding the proposed audience for an instrument are differences in culture that may affect the instrument, reading level of instrument, and capacity of the audience to endure the proposed length of the instrument (Springer et al., 2002).

When writing items a developer must make certain that, when brainstorming items, the construct is sufficiently represented through the questions (Springer et al., 2002). For example, if an instrument was measuring depression, the developer might use questions that represent multiple criteria for depressive episodes from the DSM-IV TR. If questions regarding only sadness were addressed, then significant dimensions of depression such as lack of motivation or changes in appetite or sleep patterns might not be represented by a shallow sampling of the construct. Secondly, a developer must ensure that questions stay within the realm of the defined construct and do not wander into the realm of other similar but distinctly different constructs. For
example, if measuring depression, the developer should ensure that questions do not wander into the realm of anxiety, which may at times have similar criteria (Springer et al., 2002).

A secondary concern regarding items is the actual format of the items. Springer et al. (2002) delineated several concepts of importance when formatting questions for RAIs: magnitude, frequency, duration, and switch. Frequency measures how often an aspect of behavior occurs, magnitude measures how large or serious a feeling/experience seems to the reporter, duration measures how long a behavior persists, and switch is a dichotomous measure which determines the presence or absence of a behavior. RAIs typically used three types of unweighted, continuum answer formats: Likert scale, semantic differential, and dichotomous. Likert scales partition a continuum of answer options into equal-interval answers that can each be discretely and uniquely labeled. Likert scales have a practical maximum of seven responses; thus, a different scale needed to be utilized if more than seven items on a continuum are required. A potential difficulty in using a Likert scale is the neutral option, which may accurately describe the feelings of the test-taker but yield little clinically significant data, which some test developers respond to by eliminating a mid-point/neutral response choice. However, such an action may remove an accurate response for the test-taker. Semantic differential items are designed to provide a greater range of choices and thus a greater range of sensitivity than the Likert-scale. Semantic differential items generally exceed the seven-item practical maximum that the Likert scale has and use two anchor points with opposing statements (i.e., one side saying strongly agree and one side saying strongly disagree with eight points in between). Finally, dichotomous questions measure the presence or absence of a trait utilizing a yes/no or true/false question format (Springer et al., 2002).

The two major psychometric properties that must be measured in any assessment are
validity and reliability. Reliability is the extent to which the instrument yields similar results over multiple independent administrations. Springer et al. (2002) promoted the use of three different methods to establish reliability: test-retest, internal consistency (split-half), and internal consistency (coefficient alpha). Test-retest is acquired through multiple independent administrations of the test, and the correlation coefficient between the two administrations (usually the Pearson’s $r$ correlation) is used as a measure of stability. One potential concern in using test-retest to measure reliability is the effects of measuring with time intervals that are too long or too short. When the time interval is too long, meaningful change can occur which can skew the reliability study, and if too little time has passed, the second administration of the test may be influenced by practice effect. Because of the potential threats to the accuracy of studies using test-retest, Abell, Springer, and Kamata (2009) recommended using test-retest with caution with the exception of the following two conditions: (1) situations in which the construct to be measured is relatively stable over time and (2) situations in which the construct is additionally measured by an objective observer.

Another method of measuring reliability is internal consistency using the split-half method (Springer et al., 2002). Usually test developers are not concerned with each individual score on an item, but rather how each item relates to larger content domains. Split-half is accomplished by splitting the instrument questions into equal parts, summing the total scores for each part, and then comparing the total score correlation. Another method of determining internal consistency is using the coefficient alpha method. The Cronbach’s Alpha coefficient computes the mean of all possible split-half correlations and yields a scale reflecting the positive relationship of all items composed of it (Springer et al., 2002).
Validity may be determined through multiple methods including face/content validity, factor analysis, construct validity, and criterion-related validity (Abell et al., 2009). Face validity and content validity are both forms of validity accomplished through review of the instrument by others. Face validity consists of providing the instrument to others to make sure that the instrument is clear, readable, and free of grammar and spelling errors, and in essence looks like a professional and valid instrument. Content validity on the other hand is when the instrument is sent to professionals in the field to determine whether the instrument’s questions accurately represent the domains that are identified (Springer et al., 2002).

Factor analysis may yield information about the validity of an instrument and the associated constructs. Factor analysis yields information regarding how item responses cluster together, what items cluster around certain factors, and how many factors are necessary to explain the relationship among items. Springer et al. (2002) discussed two different kinds of factor analysis: exploratory factor analysis and confirmatory factor analysis. Exploratory factor analysis is often used when the test developer lacks a clear hypothesis as to the factors on which the items are expected to correlate. For RAIs to be used in counseling assessments, it is rare for developers to lack a hypothesis, and thus many developers utilize confirmatory factor analysis. Confirmatory factor analysis is used when there is a strong literature base or strong empirical basis for the ultimate structures of a scale. Structural modeling is the method of choice for using confirmatory factor analysis (Springer et al., 2002).

Another kind of validity is construct validity, which can be determined in two different ways: convergent and divergent validity (Springer et al., 2002). Convergent validity examines how the factors developed in the new instrument compare to theoretically relevant variables. This is most often accomplished through comparing the newly developed instruments to
currently established instruments using correlation coefficients such as Pearson’s $r$. Divergent validity is comparing the constructs of the new instrument with variables that are theoretically dissimilar, with the expectation that the scores would have no correlation or negative correlation with the dissimilar variables. This is usually accomplished by similar methods such as convergent validity, but with expectations that the correlation coefficient results in nonsignificant or negative results (Springer et al., 2002).

Criterion validity is accomplished through either concurrent or predictive validity (Springer et al., 2002). Concurrent validity refers to the instrument being compared with outside measures at the time of the instrument administration. There are currently two different types of concurrent validity, known instruments and known groups (Abell et al., 2009). Known instruments concurrent validity refers to administering two instruments to a group, the new instrument and an already established instrument, and the expectation is that the new instrument would correlate with the established one. Known groups refers to a group which is composed of subjects that currently possess the construct and subjects that do not possess the construct, and it is assumed that the instrument would differentiate among the different members of the group. Predictive validity refers to the ability of an instrument to predict performance of measurements in the future. For example, an achievement measure such as the Graduate Record Exam should predict successful or poor grade point average performance in graduate courses.

A final point that is necessary to explore in this section is the use of a parent-report form to assess outcomes in CCPT. Landreth (2002) emphasized that play is the language of children, which bridges the concrete experience and abstract thought. Abstract thought is a capacity that is not normally reached until formal operations, generally when the child is around 12 years old (Piaget, 1962). The aforementioned constructs that formed many of the questions of the
instrument have a decidedly ethereal nature as opposed to a concrete nature, which would make it rather difficult for children without the capacity for abstract thought to answer in a reliable and valid manner. In addition, the use of words would be theoretically inconsistent when measuring a therapy that focuses on play-based forms of expression. Thus it is neither philosophically consistent nor practical to develop a child self-report instrument for the purposes of this study. Thus, a parent report instrument was thought to be the most efficient and appropriate measure of a child’s progress in therapy because of a child’s lack of abstract thought, limit language ability, and preference for play rather than talk as primary method of emotional communication.

Conclusion

This literature review has reviewed the history and philosophy of CCPT. CCPT progressed from Freud’s initial analysis of a child through play, and now CCPT, as well as many other theoretical approaches. Currently, CCPT exists as a major school of play therapy with the primary objectives of therapy being the development of self-acceptance, self-awareness, self-responsibility, and ultimately self-growth through non-directive and non-evaluative methods.

This literature review also examined the major child assessments in use today. Many of the traditional pen and paper assessments focus on a child’s behavior with emphasis on undesirable or maladaptive behavior at home or school. Currently, assessments focusing on a child’s play exist, however most require observation and specialized training. Thus, the instrument being developed in this study meets a need in developing a psychometrically sound and practical instrument with a philosophy that is compatible with CCPT.

Finally, this review of literature discussed the common psychometric properties examined when instruments are developed, specifically reliability and validity. The types of validity examined in instrument development include face validity, content validity, factor
validity, criterion validity, and predictive validity. Reliability estimates include test-retest, internal consistency (coefficient alpha), and internal consistency (split-half). All of these measures are integral to designing an instrument and provide methods with which one assesses its psychometric properties.
CHAPTER 3

METHODS AND PROCEDURES

The purpose of this study was to develop an instrument to measure the effectiveness of individual CCPT with children ages 3 to 10 years. Currently, no universal instrument exists to measure the efficacy of CCPT. According to Kazdin (2005), there are many problematic issues surrounding evidence-based assessment. These include lack of a “gold standard” to differentiate from functional and dysfunctional, the use of multiple measures to examine clinical issues, and the involvement of multiple respondents. A universal assessment for assessing the efficacy of CCPT would further research endeavors in the constantly growing body of CCPT research as well as provide a useful tool to clinicians for assessing a client’s progress when being treated through CCPT.

Research Objectives

1. Development of an instrument to measure constructs of CCPT demonstrating initial adequate internal consistency and content validity.

2. Development of a parent scale that demonstrates acceptable internal consistencies with appropriate sample population.

3. Development of a parent scale that demonstrates acceptable construct validity through concurrent criterion measures.

4. Development of a parent scale that demonstrates acceptable exploratory factor analysis with appropriate sample.

5. Development of a parent scale that demonstrates acceptable responsiveness to intervention.
Instrument Development

There were several steps in developing the Child Interpersonal Relations and Attitudes Assessment (CIRAA). In this section, the various steps that comprised the development of the instrument are described. First, several procedures were taken to develop the instrument and generate items. Second, steps were taken to ensure face validity. Third, a pilot study and analysis of initial pilot study data were conducted. Fourth, a sample of 136 children from local elementary schools and from local mental health clinics were administered a battery of instruments, including the CIRAA. Finally, analyses were conducted to establish factor structure, scale reliability, inter-item reliability, concurrent validity, and scale sensitivity.

To develop the instrument and generate items, a literature review of CCPT was conducted. In the literature review, special attention was given to objectives and goals of CCPT. Two graduate students with advanced training in assessment and play therapy conducted interviews with parents at a local mental health clinic, who were identified as having children and whose children were identified as “achieving progress.” Children were identified as achieving progress according to scores on regularly administered CBC and PSI Index forms. Pretest and Posttest scores were compared for each child, and the child was considered to be achieving progress when those scores moved from clinical to non-clinical in at least one area. Two clinicians conducted interviews with 7 of the 12 identified parents. Seven of the parents responded to requests for phone interviews or interviews at the clinic. However, 5 of the 12 did not respond to the phone messages. The interviewers were doctoral level students within a counselor education program, who held master’s degrees in counseling with completed graduate coursework and supervision in play therapy, and whose graduate coursework included statistics and counseling research. The interviewers used a semi-structured interview format with a
protocol including nine questions about changes the parent may have observed since their child began participating in CCPT. The following questions were developed by the research team and used in the interview protocol:

1. What changes have you noticed in your child since play therapy?
2. How did you know that play therapy was working?
3. What is different about your children since play therapy?
4. What specific behaviors have changed?
5. What change, if any, are there in your child’s attitudes?
6. What is different at home since your child has begun participating in play therapy?
7. Are there any things that other significant adults in your child’s life have noticed since beginning play therapy?
8. What have teachers reported, if anything, since your child began participating in play therapy?
9. Can you think of any significant differences in your child since play therapy began?

Once the clinicians finished conducting the interviews, a research team consisting of one doctoral level faculty member, a registered play therapist supervisor and experienced play therapy researcher, and the two interviewers discussed the results of the interviews. Whenever a certain category of a response (i.e., “my child seems less aggressive”) was noted as a response in at least 3 of the 7 interviews, the response was considered for inclusion as a construct for use in the instrument. Whenever a category corresponded with an existing construct in CCPT literature, the response was placed in that category rather than constructing a new category. For example a parent’s response, “He seems more proud himself. He used to ask me if I liked his pictures, but now he shows them to me and tells me that he’s proud of his pictures,” would be categorized in the Self-Acceptance category, derived from Landreth (2002), rather than as part of a new
category. The following five categories were derived from the literature review and parent interviews: social skills, self-concept, disruptive behaviors, self-direction/self-responsibility, and coping skills.

Following literature review and the parent interviews, items were developed for the instrument. Items were written as statements about a child’s behavior for parents to rate on a 5-point Likert scale, with responses ranging from strongly agree to strongly disagree. Items were developed for each of the five categories following the literature review and parent interviews. Table 1 depicts the items.
<table>
<thead>
<tr>
<th>Disruptive Behavior</th>
<th>Self-Directed/Self Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My child destroys school property.</td>
<td>33. My child apologizes for hurting the feelings of others.</td>
</tr>
<tr>
<td>2. My child hits other children.</td>
<td>34. My child will admit when he/she was wrong.</td>
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<tr>
<td>3. My child visits the principal’s office often for disciplinary reasons.</td>
<td>35. My child will do chores without being asked.</td>
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<tr>
<td>4. My child is frequently off task during class.</td>
<td>36. My child blames others for mistakes.</td>
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<tr>
<td>5. My child often receives reports of problem behavior from his/her teacher.</td>
<td>37. My child responds well to discipline.</td>
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<tr>
<td>8. My child hits/kicks me.</td>
<td>40. My child clings to me when he/she enters a new situation.</td>
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<tr>
<td>9. My child’s teacher often reports he/she talks during class.</td>
<td>41. My child does not like to make decisions for him/herself.</td>
</tr>
<tr>
<td>10. My child has temper tantrums.</td>
<td>42. My child prefers for their parent/sibling to speak for them, rather than speaking for him/herself.</td>
</tr>
<tr>
<td>11. My child yells frequently.</td>
<td>43. My child seems independent.</td>
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<tr>
<td>12. My child has friends.</td>
<td>44. My child often asks me to help them with things he/she can do him/herself.</td>
</tr>
<tr>
<td>13. My child has physical fights with other students at school.</td>
<td><strong>Self-Acceptance</strong></td>
</tr>
<tr>
<td>14. My child has verbal fights with other Students at school.</td>
<td>45. My child shows me art projects he/she is proud of.</td>
</tr>
<tr>
<td>15. My child has fights with other members of his/her family.</td>
<td>46. My child tells me things he/she is proud of.</td>
</tr>
<tr>
<td>16. My child shares with other children.</td>
<td>47. My child is well-liked by others.</td>
</tr>
<tr>
<td>17. My child is involved in extracurricular activities with other children.</td>
<td>48. My child likes him/herself.</td>
</tr>
<tr>
<td>18. My child goes over to other children’s houses to play.</td>
<td>49. My child’s feelings are easily hurt.</td>
</tr>
<tr>
<td>19. My child has children over to his/her house to play.</td>
<td>50. My child can name things he/she likes about him/herself.</td>
</tr>
<tr>
<td>20. My child is invited to social events by other children.</td>
<td>51. My child complains no one likes them.</td>
</tr>
<tr>
<td>21. My child plays with other children at recess.</td>
<td>52. My child talks about accomplishments of which he/she is proud.</td>
</tr>
<tr>
<td>22. My child complains few people like him/her.</td>
<td><strong>Coping Skills</strong></td>
</tr>
<tr>
<td>23. My child participates in group activities at school.</td>
<td>53. My child has difficulty calming down when upset.</td>
</tr>
<tr>
<td>24. My child gets along with other children.</td>
<td>54. My child is often sad for a prolonged period of time.</td>
</tr>
<tr>
<td>26. My child prefers being alone.</td>
<td>56. My child is often upset by minor things.</td>
</tr>
<tr>
<td>27. My child prefers being with other children.</td>
<td>57. My child is very dependent on me.</td>
</tr>
<tr>
<td>28. My child is anxious about being around other children.</td>
<td>58. My child is difficult to comfort or console.</td>
</tr>
<tr>
<td>29. My child is excited to be around other children.</td>
<td>59. When my child cries it is often for a long time.</td>
</tr>
<tr>
<td>30. My child is teased by other children.</td>
<td>60. My child seems to worry a lot.</td>
</tr>
<tr>
<td>31. My child complains other children are mean to him/her.</td>
<td>61. My child becomes anxious over small matters.</td>
</tr>
<tr>
<td>32. My child has been called a bully by other children.</td>
<td>62. My child clings to me when he/she enters a new situation.</td>
</tr>
<tr>
<td></td>
<td>63. My child frequently comes home from school in a bad mood.</td>
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</tbody>
</table>
To ensure face validity, the instrument was sent to 10 doctoral students and 2 master’s student in a counseling program with graduate coursework in play therapy. The students were asked to provide feedback regarding usability, readability, and adherence to theoretical factors. Their feedback was used to enhance the instrument with respect to ease of use and readability.

Ten experts in the area of CCPT were identified from various universities in the United States, and they were sent the instrument via an electronic survey program for evaluation. Expert evaluation was conducted according to procedures suggested by Springer et al. (2002). The experts all possessed previous training in CCPT, held doctoral degrees in a mental health discipline, were current faculty members at counseling programs at the university level, and had histories of contributing to CCPT literature. The experts were given instructions to evaluate the instrument for readability, clinical utility, adherence to psychometric standards, and the relevance of each question to the factors. Feedback from the 10 experts was used to add, delete, and modify questions for readability, clinical utility, and relevance to identified factors of CCPT.

Eight of the 10 CCPT experts responded to the survey. CCPT experts who responded to the survey indicated that an item “accurately described the construct,” “moderately described the construct,” or “did not describe the construct.” Thirty-five of the items were described as accurately describing the construct by more than 85% of the respondents. The remaining 29 items were identified as accurately describing the construct by less than 85% of the respondents.

To further ensure the content validity of the instrument, a focus group was conducted with four university faculty and four doctoral students. The four university faculty members invited to the focus group all held doctoral degrees in counseling, the registered play therapist supervisor credential, and they taught basic and advanced courses in CCPT. The four doctoral
students who participated in the focus group all held master’s degrees in counseling and previously completed at least three didactic courses and four clinical courses in CCPT. The members of the focus group were provided a handout separating the items by the five categories of items (disruptive behavior, social skills, self-direction/self-responsibility, self-acceptance, and coping skills). Within each category, items were further broken down by items well-accepted by the survey of CCPT experts (85% or greater rated items as “accurately represents construct”) and items that were of questionable by the survey of CCPT experts (less than 85% rated items as “accurately represents construct”). Focus group members provided feedback regarding items that were candidates for deletion, items that were candidates for being added to the instrument, and modifications to items for various reasons (better representation of constructs, multicultural sensitivity, and equality among positively-keyed and negatively keyed items). Following the focus group meeting, items were added, deleted, and modified suggested by the focus group. As a result, the modified instrument included a total of 52 items, listed in Table 2, to be used in the pilot study. In addition to the 52 items, the instrument included a demographics section which allowed respondents to report the age, grade, gender, and ethnicity of the child in a free-response format.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My child shares with other children.</td>
</tr>
<tr>
<td>2.</td>
<td>My child is invited to social events by other children.</td>
</tr>
<tr>
<td>3.</td>
<td>My child plays with other children at recess.</td>
</tr>
<tr>
<td>4.</td>
<td>My child complains few people like him/her.</td>
</tr>
<tr>
<td>5.</td>
<td>My child gets along well with others when doing group projects at school.</td>
</tr>
<tr>
<td>6.</td>
<td>My child gets along with other children.</td>
</tr>
<tr>
<td>7.</td>
<td>My child displays jealousy of other children.</td>
</tr>
<tr>
<td>8.</td>
<td>My child is anxious about being around other children.</td>
</tr>
<tr>
<td>9.</td>
<td>My child is teased by other children.</td>
</tr>
<tr>
<td>10.</td>
<td>My child complains other children are mean to him/her.</td>
</tr>
<tr>
<td>11.</td>
<td>My child teases other children.</td>
</tr>
<tr>
<td>12.</td>
<td>My child can calm down when upset.</td>
</tr>
<tr>
<td>13.</td>
<td>My child is often sad for prolonged periods of time.</td>
</tr>
<tr>
<td>14.</td>
<td>My child often seems to be inconsolable.</td>
</tr>
<tr>
<td>15.</td>
<td>My child is often upset by minor things.</td>
</tr>
<tr>
<td>16.</td>
<td>When my child cries, it is often for a long time.</td>
</tr>
<tr>
<td>17.</td>
<td>My child becomes anxious over small matters.</td>
</tr>
<tr>
<td>18.</td>
<td>My child handles difficult situations well.</td>
</tr>
<tr>
<td>20.</td>
<td>My child apologizes for hurting others feelings.</td>
</tr>
<tr>
<td>21.</td>
<td>My child will admit when he/she was wrong.</td>
</tr>
<tr>
<td>22.</td>
<td>My child blames others for mistakes.</td>
</tr>
<tr>
<td>23.</td>
<td>My child responds well to discipline.</td>
</tr>
<tr>
<td>24.</td>
<td>My child enjoys doing things for him/herself.</td>
</tr>
<tr>
<td>25.</td>
<td>My child often chooses what to do when we are together.</td>
</tr>
<tr>
<td>26.</td>
<td>My child is confident.</td>
</tr>
<tr>
<td>27.</td>
<td>My child volunteers to help out around the house.</td>
</tr>
<tr>
<td>28.</td>
<td>For his/her age, my child is able to enter new situations with confidence.</td>
</tr>
<tr>
<td>29.</td>
<td>My child does not like to make decisions for him/herself.</td>
</tr>
<tr>
<td>30.</td>
<td>My child often asks me to help him/her with things he/she are capable of doing.</td>
</tr>
<tr>
<td>31.</td>
<td>My child often compares him/herself unfavorably to others.</td>
</tr>
<tr>
<td>32.</td>
<td>My child shows me projects he/she is proud of.</td>
</tr>
<tr>
<td>33.</td>
<td>My child is overly sensitive.</td>
</tr>
<tr>
<td>34.</td>
<td>My child is satisfied more often than not.</td>
</tr>
<tr>
<td>35.</td>
<td>My child tells me things he/she is proud of.</td>
</tr>
<tr>
<td>36.</td>
<td>My child is able to express his/her feelings when he/she is feeling upset.</td>
</tr>
<tr>
<td>37.</td>
<td>My child likes him/herself.</td>
</tr>
<tr>
<td>38.</td>
<td>My child’s feelings are easily hurt.</td>
</tr>
<tr>
<td>39.</td>
<td>My child can name things he/she likes about him/herself.</td>
</tr>
<tr>
<td>40.</td>
<td>My child complains no one likes him/her.</td>
</tr>
<tr>
<td>41.</td>
<td>My child talks about accomplishments of which he/she is proud.</td>
</tr>
<tr>
<td>42.</td>
<td>My child exhibits self-control.</td>
</tr>
<tr>
<td>43.</td>
<td>My child often receives reports of disruptive behavior from his/her teacher.</td>
</tr>
<tr>
<td>44.</td>
<td>My child often acts without thinking.</td>
</tr>
<tr>
<td>45.</td>
<td>My child hits/kicks family members.</td>
</tr>
<tr>
<td>46.</td>
<td>My child has temper tantrums.</td>
</tr>
<tr>
<td>47.</td>
<td>My child yells frequently.</td>
</tr>
<tr>
<td>48.</td>
<td>My child expresses his anger without hurting others.</td>
</tr>
<tr>
<td>49.</td>
<td>My child has physical fights with other children.</td>
</tr>
<tr>
<td>50.</td>
<td>My child has verbal fights with other students at school.</td>
</tr>
<tr>
<td>51.</td>
<td>My child responds to parent discipline obediently.</td>
</tr>
<tr>
<td>52.</td>
<td>My child disrupts family events/outings.</td>
</tr>
</tbody>
</table>
Pilot Study

Following the modification of the instrument a pilot study was conducted. Pett et al. (2003) suggested conducting a pilot study with a sample approximately one-tenth the size of the intended sample for the major study. Following Pett et al.’s guidelines, 20 parents of children currently receiving counseling services at a local mental health clinic were enlisted to test pilot the instrument. The sample consisted of 11 girls and 9 boys, ages ranging from 3 to 9 with a mean age of 6.85 years. The children in the study were primarily Caucasian with 19 of the participants identifying themselves as Caucasian and 1 of the participants self-identifying as “Other.” The Cronbach’s Alpha was conducted for the sample, yielding a reliability estimate of .85, which according to Bernstein and Nunnaly (1994) meets the requirements of reliability estimates for basic research on test development.

Exploratory factor analysis was conducted for the pilot sample data. Velicer and Fava (1998) indicated that factor analysis with subject to variable (STV) ratios lower than 3:1 are generally inadequate. Factor analysis results were, overall, inconclusive; however, four items, Items 3, 5, 25, and 51 were deleted due to low loading (less than .40), a requirement per Thurstone’s (1947) guidelines for parsimonious factor extraction. Thurstone’s guidelines, while established in 1947, still compose the current ideal of parsimonious factor extraction (Pett et al., 2006). This modification resulted in the instrument which was used in the main study (see Table 3).
### Table 3

*Items used in CIRAA for Main Study*

1. My child shares with other children
2. My child is invited to social events by other children
3. My child complains few people like him/her
4. My child gets along with other children
5. My child displays jealously of other children
6. My child is anxious about being around other children
7. My child is teased by other children
8. My child complains other children are mean to him/her
10. My child can calm down when upset
11. My child is often sad for prolonged periods of time
12. My child often seems to be inconsolable
13. My child is often upset by minor things
14. When my child cries, it is often for a long time
15. My child becomes anxious over small matters
16. My child handles difficult situations well
17. My child enjoys trying new things.
18. My child apologizes for hurting others feelings
19. My child will admit when he/she was wrong
20. My child blames others for mistakes
21. My child responds well to discipline
22. My child enjoys doing things for him/herself
23. My child is confident
24. My child volunteers to help out around the house.
25. For his/her age, my child is able to enter new situations with confidence.
26. My child does not like to make decisions for him/herself
27. My child often asks me to help him/her with things he/she are capable of doing.
28. My child often compares him/herself unfavorably to others.
29. My child shows me projects he/she is proud of
30. My child is overly sensitive
31. My child is satisfied more often than not
32. My child tells me things he/she is proud of
33. My child is able to express his/her feelings when he/she is feeling upset.
34. My child likes him/herself
35. My child’s feelings are easily hurt
36. My child can name things he/she likes about him/her self
37. My child complains no one likes him/her.
38. My child talks about accomplishments of which he/she is proud
40. My child often receives reports of disruptive behavior from his/her teacher
41. My child often acts without thinking
42. My child hits/kicks family members
43. My child has temper tantrums
44. My child yells frequently
45. My child expresses his anger without hurting others.
46. My child has physical fights with other children.
47. My child has verbal fights with other students at school.
48. My child disrupts family events/ outings
Sample

In deciding upon a sample size, the Whitaker and Worthington (2006) guidelines for sample size were used, for which less than 100 subjects or a 3:1 STV ratio is generally inadequate. Using this guideline a sample was collected that consisted of 136 parents of children from two locations, children attending a local elementary school and those receiving services from a local mental health clinic. Two samples were collected. A sample of 97 children was obtained from children referred for counseling services through the local school district and at a local mental health clinic. A normal sample of 39 children was collected from parents who responded to a flyer circulated in the local schools. Children in the study represented a variety of ethnic groups. The distribution of ethnicities was as follows: 66 Caucasian children, 30 Hispanic children, 24 African-American children, 10 children identified as Bi-racial or “Other,” 2 children identified as Asian-American, and 4 children who did not identify an ethnic group. The ages of the children ranged from 3 to 10 with the median age being 6½ years old. Table 4 presents the sample’s demographic information.
Table 4

Demographic Characteristics of Participants (n = 136)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>90</td>
<td>66.2</td>
</tr>
<tr>
<td>Female</td>
<td>46</td>
<td>33.8</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>66</td>
<td>48.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>30</td>
<td>22.1</td>
</tr>
<tr>
<td>African-American</td>
<td>24</td>
<td>17.6</td>
</tr>
<tr>
<td>Asian American</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td>Non-Identified</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td>5</td>
<td>29</td>
<td>21.3</td>
</tr>
<tr>
<td>6</td>
<td>34</td>
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<td>7</td>
<td>35</td>
<td>25.7</td>
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<tr>
<td>8</td>
<td>17</td>
<td>12.5</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>6.6</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not in School</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Pre-Kindergarten</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>41</td>
<td>30.2</td>
</tr>
<tr>
<td>Grade 1</td>
<td>33</td>
<td>24.3</td>
</tr>
<tr>
<td>Grade 2</td>
<td>24</td>
<td>17.6</td>
</tr>
<tr>
<td>Grade 3</td>
<td>21</td>
<td>15.4</td>
</tr>
<tr>
<td>Grade 4</td>
<td>7</td>
<td>5.1</td>
</tr>
<tr>
<td>Grade 5</td>
<td>2</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Measures

Parents filled out the CIRAA, the CBC, and the PSI.

Child Behavior Checklist

The CBC is a 120-item instrument intended to gather information about adaptive behaviors, maladaptive behaviors, and competencies at school and home for children ages 6 to 18 (Achenbach & Rescorla, 2001). The CBC includes questions about school, social, and activity-based competencies as well as 112 items regarding behaviors that parents or caregivers observe in the home or school setting (Achenbach & Rescorla, 2001).

The CBC yields four different sets of scales: the Syndrome scales, the DSM-Oriented scale, Competence scales, and Internalizing/Externalizing/Total Problems scales (Achenbach & Rescorla, 2001). Scores on the CBC fall into three categories: normal/adaptive; borderline, which indicates a score that is of concern; and clinical, which indicates a need for immediate intervention. Details regarding the validity and reliability of the CBC were addressed earlier in the literature review.

Parenting Stress Index

The PSI is an assessment that measures stress in the parent-child relationship (Abidin, 1995). Stress is measured by examining the parent’s perception of the child, their attitudes towards being a parent, and external sources of stress (Abidin, 1995). The PSI is a 120-item self-administering questionnaire that may be administered to parents of children ranging from 1 month to 12 years of age (Abidin, 1995). The PSI has a defensive responding measure, a life stress measure, a total stress score, and 13 subscales spread across two domains, the Child domain and the Parent domain (Abidin, 1995). Details regarding the validity and reliability of the PSI were addressed earlier in the literature review.
Data Collection Procedures

Before proceeding with the collection of data, approval was obtained to conduct this research study from the University of North Texas Institutional Review Board. Copies of the 52-item instrument were copied, as well as the university approved informed consent form and prepared them for distribution.

Clinical Sample Procedures

At the beginning of the school year, parents of children identified as disruptive by teachers or counselors and referred for play therapy for a separate research study running concurrently were sent packets containing the CBC, PSI, CIRAA, an informed consent document, and a letter explaining the study. The letter sent to parents explained that they would be provided with $10.00 in research incentives once the assessments were returned to the researchers. Once parents returned the assessments, they were assigned a code number and entered into a coding sheet. Ninety-seven parents returned the assessments to the researchers. Then all the items of the CIRAA as well as the subscale scores for the CBC and PSI were entered into SPSS. Referred children were randomly assigned to one of three treatment conditions, including a CCPT intervention consisting of 16 individual CCPT sessions. In order to conduct a preliminary check on the responsiveness of the CIRAA, for 15 children who participated in CCPT, the post-testing packet included the CBC, PSI, CIRAA, and letter with instructions for parents to complete the assessments.

Normal Sample Procedures

In addition to the clinical sample, a normal sample was collected to broaden the diversity of the sample. To recruit for the normal sample, flyers were distributed to children in five local elementary schools to advertise the study. Parents who expressed interest were sent a packet that
included informed consent documents, the CIRAA, and a letter explaining the study, including that they would be provided $10.00 in research incentives. In order to gain a non-clinical sample, letters to the parents stated that researchers were looking for the perceptions of average parents of average children. The same security procedures and data entry procedures were used for the normal sample as for the clinical sample. Thirty-nine CIRAAAs were collected from the normal sample.

Data Analysis

Exploratory factor analysis was conducted with entire sample of 136 children aged 3-10 years. Inadequate sample size can detrimentally affect instrument development studies in two major ways: (1) when the sample size contains an inadequate subject-to-variable ratio patterns of covariance may be unstable leading chance to affect item inter-correlations, and (2) the development sample may not accurately represent the intended population (Worthington & Whitaker, 2005). Recommendations for sample size in instrument development studies vary widely, and strict guidelines have almost disappeared (Costello & Osbourne, 2005). Costello and Osbourne (2005) stated that smaller sample sizes (i.e., less than 150) can be adequate with strong item communalities, and furthermore, that 3:1 STV ratio (i.e., question on the CIRAA) is the lower limit for acceptable sample size.

Exploratory factor analysis is a method for identifying latent variables from the variance among observed variables. The decision to use exploratory factor analysis as opposed to confirmatory factor analysis was made for several reasons. Henson and Roberts (2005) stated that the main difference between exploratory versus confirmatory factor analysis is that exploratory factor analysis helps establish theory by reducing a large number of variables to a manageable set of factors. Confirmatory factor analysis’ purpose is to confirm an a priori theory
for which there is a significant rationale. While confirmatory factor analysis is considered to be a
stronger and more robust analysis, Gorsuch (1983) stated that, “exploratory methods should be
reserved for those areas that are truly exploratory, that is, areas where no prior analyses have
been conducted” (p.134). Thus, because this study represented the initial testing of an instrument
and no prior data existed for the CIRAA, exploratory factor analysis was selected as the
appropriate analysis. The varimax rotation, an orthogonal rotation , was utilized for factor
analysis. An orthogonal method was chosen because the factors were considered to be
uncorrelated, which is an indicator for using an orthogonal method (Pett, Lackey, & Sullivan,
2003).

The data were measured for suitability for factor analysis using both Kaiser-Meyer-Olkin
(KMO) and Bartlett’s test of sphericity. The KMO value was .86, exceeding the recommended
value of .6 (Kaiser, 1970, 1974). The Bartlett’s test of sphericity (Bartlett, 1954) reached
significance, \( (p < .0005) \) supporting the factorability of the correlation matrix. These indices
indicated that the data were suitable for exploratory factor analysis. The determinant of the data
set was calculated to ensure that the correlation matrix was not an identity matrix. An identity
matrix indicates there is no interrelationships among items, and thus factor analysis would be
inappropriate(Pett, Lackey, & Sullivan, 2003). The determinant was calculated to be \( 3.84 \times 10^{-14} \)
indicating that the items were correlated, therefore, the analysis proceeded.

Items were retained based upon two different criteria: the strength of factor loadings, and
the absence of cross-loading on factors. Items with factor loadings lower than .40 are generally
considered too weak to interpret (Thurstone, 1947). Additionally, Thurstone (1947) stated that
items that load on two factors at a level of .40 or higher should be avoided for parsimonious
factor definition; according to Pett et al. (2006), these values still constitute the ideal for parsimonious factor definition.

Factors were identified based upon the Kaiser rule (1960), Catell’s scree plot analysis (1966), and parallel analysis (PA). Kaiser (1960) stated that factors with eigenvalues equal to or greater than 1 should be retained. There is broad consensus in the literature that the Kaiser rule is among the least accurate methods for selecting the number of factors to retain (Velicer & Jackson, 1990). In a Monte Carlo analysis run by Costello and Osbourne (2005), data for which the Kaiser rule (1960) was used retained 36% more factors than necessary. Thus, several other methods were utilized in this study in addition to the Kaiser rule.

Catell’s scree plot was utilized as a criterion for factor retention in this study. A scree plot is a graphical representation of eigenvalues for each factor which is available in most major statistical analysis programs. The scree plot involves looking on the graph for the point at which the data curve “flattens out.” Data points above the curve are retained as factors.

PA was utilized in this study for factor retention and is frequently identified as one of the most accurate methods of factor retention (Hayton, Allen, & Scarpello, 2004). PA is based on the assumption that components from real data with a valid factor structure should demonstrate higher eigenvalues than any eigenvalues extracted from random data with comparable sample size and variable sets. The first step of conducting PA in this study was to generate a set of random data with the same sample size and number of variables as the collected data set. Second, eigenvalues were extracted from the random data set using principal components analysis 50 times. Eigenvalues from the real and random data sets were plotted. The data points from the real data set were only retained when they exceeded the values of the random data set.
Following performing these three methods of factor reduction, reliability studies were conducted on the entire data set. To establish reliability for the entire scale and for subscales, Cronbach’s alpha was used to measure internal consistency. This statistic was chosen over the more popular test-retest method of establishing reliability because as a progress measure the total score of the CIRAA is expected to change over time, and thus test-retest reliability would capture less reliability than internal consistency. In addition to calculating Cronbach’s Alpha for scales and subscales, inter-item reliability was calculated. Inter-item reliability coefficients were measured for items within each subscale using the criteria (Clark & Watson, 1995) of .15 - .40 as acceptable criteria. Inter-item reliabilities were compared for items that were not in the same scale then interpreted.

To determine criterion validity, correlations between the CIRAA and two common child assessments, the CBC and PSI, were conducted. A sample of 80 children were administered both the CBC (6-18) and the CIRAA. Only 80 CBC’s were collected from the total sample of 136 because the instrument is only valid for children aged 6 to 18 years old, and several children did not meet the age criteria. A Pearson’s product moment correlation ($r$) was conducted on the total score of the CIRAA and the Total Problems score on the CBC (6-18). Additionally, a sample of 101 children were administered both the PSI and the CIRAA. Only 101 of the instruments from the sample were used due to PSIs being either not returned with the research packets or improperly filled out. A Pearson’s product moment correlation ($r$) was conducted on the Total Stress score of the PSI and the total score of the CIRAA.

To determine a clinical cut-off score, receiver operator characteristic (ROC) curve analysis was conducted. ROC curve analysis requires a total score for the CIRAA, and a criterion to measure positive cases of clinical behavior and negative cases of clinical behavior. ROC curve
analysis generates clinical cutoff, the rate at which the instrument is able to accurately identify true positive (TP) cases and true negative (TN) cases, as well as the overall discriminatory power of the instrument. ROC curve analysis yields a specificity value which indicates the # of TP cases identified/ total # of TP cases, thus providing the rate at which a clinical test accurately identifies a TP case (Metz, 1978). ROC curve analysis also generates a specificity score, which indicates the number of TN cases identified/total # of TN cases, which provides the rate at which a clinical test accurately identifies TN cases. Clinical scores on the PSI child domain and the CBC total problems score were used as the criterion for a TP case in the ROC curve analysis. The analysis provided a range of clinical scores and the percentage of accuracy with which they could predict either TP or TN cases.

To determine the responsiveness of the CIRAA to evaluate progress in play therapy, a pretest and posttest instrument was administered to children participating in CCPT. Children’s parents were administered the instrument before sessions began, and after the conclusion of 16 CCPT sessions. Because various support has been developed in play therapy research for the effectiveness of CCPT with children who were identified as exhibiting disruptive behavior (Ray, Blanco, Sullivan, & Holliman, 2008), it was assumed that the children in the CCPT group of the sample would respond positively to the intervention. It was assumed that the CIRAA would demonstrate the effects of treatment by statistically significant decrease in total scores. To further determine the ability of the CIRAA to measure treatment effects, t-tests with the child domain of the PSI and the total problems score of the CBC were conducted to compare to the results of the t-test with the CIRAA.
CHAPTER 4

RESULTS

The results were generated via factor analysis. The factor solution and other analyses are presented in this chapter.

Data Screening

While factor analysis does not assume normality, non-normal distributions of data can have substantial effects upon exploratory factor analysis results (Bandalos & Finney, 2010). Non-normal distributions can result in factors that are artifacts of sample distribution and completely uncorrelated with item content. The kurtosis and skewness of each variable were screened. The criteria suggested by Bandalos & Finney (2010) was employed, which indicated that scores exceeding 2.0 for skewness and 7.0 for kurtosis suggest an outlier. In general, skewness for the variables in the CIRAA ranged from -0.024 to 1.938, and kurtosis statistics ranged from 0.042 to 2.103. There were three variables that did not fall in the aforementioned ranges and demonstrated extreme values. These three items were deleted from the factor analysis to prevent the creation of artifact factors that did not significantly contribute to the instrument development.

Factor Retention

Three major methods were utilized in attempting to determine the number of factors to retain. Initial factor analysis was conducted using principal components analysis. The Kaiser-1 criterion suggests retaining all factors with eigenvalues that exceeded 1.0. This analysis yielded 48 factors whose eigenvalues exceeded 1.0. As indicated by Costello and Osbourne (2005), the Kaiser-1 criterion often overestimates the number of factors to retain. Additionally, retaining 48 factors on the current assessment would result in an instrument which would have held only 1
item per factor. Thurstone (1947) defined a stable factor as one that has at least three highly 
loading factors, thus further analyses were run to determine factor retention. Next the Catell 
(1966) scree plot test was used with the data. The scree plot analysis provided a visual 
representation of eigenvalues, because scree plot visually displays the eigenvalues for each of the 
potential factors for an instrument. The scree plot test criteria indicated retention of all factors 
above the “elbow” or the point at which the data points formed a straight line. The scree plot test, 
as pictured in Figure 1, showed approximately 4 data points before the “elbow” occurred. 
However, it was clear that the scree plot test, because it was based upon visual analysis, could be 
a subjective test. Thus, a third analysis was conducted to definitively determine the number of 
factors to be extracted from the items.
Figure 1. CIRAA scree plot.
Parallel analysis (PA) was conducted and yielded a set of eigenvalues based on a random data set that was compared to the eigenvalues from the CIRAA instrument. The values from the random set and the eigenvalues from the exploratory factor analysis of the CIRAA are presented in Table 5.

Table 5

Parallel Analysis Results

<table>
<thead>
<tr>
<th>Factor Number</th>
<th>Random λ</th>
<th>CIRAA λ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.37</td>
<td>14.92</td>
</tr>
<tr>
<td>2</td>
<td>2.21</td>
<td>2.75</td>
</tr>
<tr>
<td>3</td>
<td>2.10</td>
<td>2.30</td>
</tr>
<tr>
<td>4</td>
<td>2.00</td>
<td>2.02</td>
</tr>
<tr>
<td>5</td>
<td>1.91</td>
<td>1.08</td>
</tr>
<tr>
<td>6</td>
<td>1.83</td>
<td>1.41</td>
</tr>
</tbody>
</table>

An analysis of the data from the random eigenvalues showed that the first four factors had values that exceed the eigenvalues generated from random data. Therefore, based upon the results generated from the scree plot and PA, four factors were retained for the CIRAA.

Item Retention and Factor Rotation and Interpretation

An analysis of the correlation matrix was conducted following the factor retention analyses, exploratory factor analysis was conducted using principal components analysis with Varimax rotation and a 4 factor solution. Following the factor analysis, items were analyzed using a 3-point criteria for retention. Items were analyzed according to communality scores, strength of factor loading, and lack of multi-dimensional loading. Items were excluded one at
time for poor loadings or loading on multiple factors. Items 2, 5, 6, 9, 12, 14, 16, 17, 19, 21, 23, 26, 27, 31, 34, 35, 43, and 45 were excluded. After excluding an item, I re-ran the exploratory factor analysis to check for item loadings and variance explained. This resulted in all remaining items loading strongly on only one factor each, with a total percentage of variance explained of 53.83%. Table 6 provides a description of the four factors, all 30 items grouped according to their factor loadings, and the mean and standard deviation scores for each item.

With the overarching theme of behaviors that are relevant to play therapy constructs, I used input from faculty advisors and previous focus group data, to label the four factors according to the content of the items contained within each factor. The factors (see Table 6) included Self Control (Factor 1), Interpersonal Relationships (Factor 2), Coping Skills (Factor 3), and Internal Locus of Evaluation (Factor 4). These factors were labeled from conceptualization of contributing items in the context of a CCPT framework.

Factor 1, labeled Self Control, was based on the precept from Landreth (2002) stating, “In response to the feeling of permissiveness established in the playroom, the safety to be fully one’s self, and the careful use of therapeutic limits…children learn self control and responsible freedom of expression” (p. 90). Thus, it was assumed through the process of CCPT that self control begins to be a normal characteristic of the child’s daily life.
Table 6

*Descriptive Statistics for CIRAA Final 4-Factor 30 Item Solution Rotated to Varimax Criterion with Kaiser Normalization (n = 136)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Self Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.shares with others</td>
<td>1.98</td>
<td>0.85</td>
<td>.702</td>
<td>-.003</td>
<td>-.054</td>
<td>.146</td>
<td>.517</td>
</tr>
<tr>
<td>4. gets along</td>
<td>1.99</td>
<td>0.89</td>
<td>.622</td>
<td>.318</td>
<td>.036</td>
<td>.137</td>
<td>.507</td>
</tr>
<tr>
<td>18.apologizes</td>
<td>2.57</td>
<td>0.94</td>
<td>.480</td>
<td>.139</td>
<td>.318</td>
<td>.303</td>
<td>.443</td>
</tr>
<tr>
<td>20.blames others</td>
<td>3.14</td>
<td>1.16</td>
<td>.567</td>
<td>.247</td>
<td>.209</td>
<td>-.057</td>
<td>.430</td>
</tr>
<tr>
<td>39.self-control</td>
<td>2.96</td>
<td>1.16</td>
<td>.613</td>
<td>.231</td>
<td>.388</td>
<td>.119</td>
<td>.594</td>
</tr>
<tr>
<td>40.school report</td>
<td>2.82</td>
<td>1.15</td>
<td>.746</td>
<td>.116</td>
<td>.183</td>
<td>.042</td>
<td>.605</td>
</tr>
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<td>41.impulsive</td>
<td>3.32</td>
<td>1.29</td>
<td>.678</td>
<td>.215</td>
<td>.365</td>
<td>.032</td>
<td>.640</td>
</tr>
<tr>
<td>42.hit/kicks</td>
<td>2.28</td>
<td>1.34</td>
<td>.607</td>
<td>.223</td>
<td>.169</td>
<td>.294</td>
<td>.533</td>
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<td>44.yells</td>
<td>2.73</td>
<td>1.28</td>
<td>.614</td>
<td>.321</td>
<td>.260</td>
<td>.111</td>
<td>.559</td>
</tr>
<tr>
<td>46.fights</td>
<td>2.12</td>
<td>1.14</td>
<td>.680</td>
<td>.221</td>
<td>.000</td>
<td>.283</td>
<td>.597</td>
</tr>
<tr>
<td>47.arguments</td>
<td>2.38</td>
<td>1.23</td>
<td>.682</td>
<td>.290</td>
<td>.064</td>
<td>.039</td>
<td>.554</td>
</tr>
<tr>
<td>48.disrupts events</td>
<td>2.94</td>
<td>1.27</td>
<td>.620</td>
<td>.318</td>
<td>.334</td>
<td>.165</td>
<td>.624</td>
</tr>
<tr>
<td><strong>Factor 2: Interpersonal Relationships</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. not liked</td>
<td>2.57</td>
<td>1.31</td>
<td>.143</td>
<td>.717</td>
<td>.090</td>
<td>-.064</td>
<td>.546</td>
</tr>
<tr>
<td>7. teased</td>
<td>2.59</td>
<td>1.24</td>
<td>.267</td>
<td>.732</td>
<td>-.096</td>
<td>.116</td>
<td>.631</td>
</tr>
<tr>
<td>8. mean to him/her</td>
<td>2.88</td>
<td>1.27</td>
<td>.224</td>
<td>.732</td>
<td>.035</td>
<td>.067</td>
<td>.638</td>
</tr>
<tr>
<td>11. sad</td>
<td>2.04</td>
<td>1.05</td>
<td>.238</td>
<td>.540</td>
<td>.103</td>
<td>.191</td>
<td>.419</td>
</tr>
<tr>
<td>28.comparss self</td>
<td>2.27</td>
<td>0.98</td>
<td>.130</td>
<td>.613</td>
<td>.252</td>
<td>.112</td>
<td>.469</td>
</tr>
<tr>
<td>30.sensitive</td>
<td>3.15</td>
<td>1.19</td>
<td>.136</td>
<td>.619</td>
<td>.340</td>
<td>-.052</td>
<td>.520</td>
</tr>
<tr>
<td>37.no one likes</td>
<td>2.51</td>
<td>1.25</td>
<td>.258</td>
<td>.813</td>
<td>.107</td>
<td>.089</td>
<td>.746</td>
</tr>
<tr>
<td><strong>Factor 3: Coping Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.calm down</td>
<td>2.68</td>
<td>1.19</td>
<td>.311</td>
<td>.136</td>
<td>.576</td>
<td>.139</td>
<td>.466</td>
</tr>
<tr>
<td>13. upset often</td>
<td>3.18</td>
<td>1.32</td>
<td>.378</td>
<td>.375</td>
<td>.496</td>
<td>.006</td>
<td>.529</td>
</tr>
<tr>
<td>15.anxious</td>
<td>2.85</td>
<td>1.23</td>
<td>.238</td>
<td>.393</td>
<td>.471</td>
<td>.000</td>
<td>.433</td>
</tr>
<tr>
<td>25.confident</td>
<td>2.50</td>
<td>1.09</td>
<td>.130</td>
<td>.398</td>
<td>.556</td>
<td>.140</td>
<td>.504</td>
</tr>
<tr>
<td>33.express self</td>
<td>2.32</td>
<td>1.14</td>
<td>.134</td>
<td>.073</td>
<td>.694</td>
<td>.184</td>
<td>.538</td>
</tr>
<tr>
<td>36.likes self</td>
<td>2.30</td>
<td>0.95</td>
<td>.040</td>
<td>-.041</td>
<td>.636</td>
<td>.094</td>
<td>.417</td>
</tr>
<tr>
<td><strong>Factor 4: Internal Locus of Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. does for self</td>
<td>2.09</td>
<td>0.95</td>
<td>.337</td>
<td>.024</td>
<td>.268</td>
<td>.431</td>
<td>.372</td>
</tr>
<tr>
<td>24.volunteers</td>
<td>2.40</td>
<td>1.12</td>
<td>.240</td>
<td>.157</td>
<td>.074</td>
<td>.431</td>
<td>.274</td>
</tr>
<tr>
<td>29.proud projects</td>
<td>1.58</td>
<td>0.72</td>
<td>.109</td>
<td>.013</td>
<td>-.131</td>
<td>.823</td>
<td>.721</td>
</tr>
<tr>
<td>32.tells proud</td>
<td>1.77</td>
<td>0.79</td>
<td>.025</td>
<td>.025</td>
<td>.321</td>
<td>.754</td>
<td>.684</td>
</tr>
<tr>
<td>38.accomplishments</td>
<td>1.85</td>
<td>0.78</td>
<td>.100</td>
<td>.100</td>
<td>.191</td>
<td>.770</td>
<td>.640</td>
</tr>
</tbody>
</table>
Factor 2: Interpersonal Relationships related to the precept in the play therapy that, Children sense the therapist’s respect, feel respected, and as an absence of evaluation and an ever present acceptance exits, they internalize the respect; thus, children learn to respect themselves. Once children have respect for themselves, they learn to respect others. (Landreth, 2002, p. 90)

Thus, it was assumed, though it was not an implicit objective, that CCPT results in improved relationships with the child’s peers.

Factor 3: Coping Skills was based on an objective in CCPT. Landreth (2002) outlined 10 broad objectives of CCPT, one of which was, “Becoming sensitive to the process of coping” (p.89). Furthermore, Landreth (2002) stated that children learn their feelings are acceptable. Once they have been expressed, feelings lose intensity and can be more easily controlled in an appropriate manner, and children are no longer controlled by their feelings.

Finally, Factor 4: Internal Locus of Evaluation, was composed of questions which focused on a child’s ability to evaluate what he/she likes or does not like as opposed to relying on adults for validation. This is a clear objective of CCPT that Landreth (2002) outlined as one of its broad objectives. Internal Locus of Evaluation was congruent with the precept that “As children experience being accepted just as they are with no conditional expectations from the therapist, they gradually, and in sometimes imperceptible ways, begin to accept themselves as worthwhile” (Landreth, 2002, p. 92).

Items were constructed in such a way that high responses indicated the presence of less desirable behavior from the perspective of a CCPT practitioner. For example, higher responses on the Self Control factor indicate a child who has difficulty controlling his/her behavior. Higher responses to items on Factor 2: Interpersonal Relationships indicated a child whose parents perceived him/her to have more difficulty in interactions with peers. Higher responses to items on Factor 3: Coping Skills indicated a child whose parents perceived as having more difficulty
dealing with unpleasant emotions or with situations which evoke emotions that are unpleasant to the child. Higher responses to items on Factor 4: Internal Locus of Evaluation indicates a child whose parents perceive to rely on others opinions to form their self-concept.

*Internal Consistency Reliability*

To establish the reliability of the CIRAA, Cronbach’s Alpha was conducted on the four factor solution of the CIRAA to establish reliability for the instrument, Cronbach’s Alpha was conducted on all four factors, and inter-item correlations were analyzed. The two primary goals of the reliability analysis were to establish overall reliability of the instrument and unidimensionality of factors. Clark and Watson (1995) warned against using Cronbach’s Alpha as the sole criterion for unidimensionality of scale, and encourage the use and reporting of inter-item correlation ranges and means. Thus, Cronbach’s Alpha coefficients, inter-item reliability means, and inter-item reliability ranges were reported for each factor.

The total alpha for the instrument was established to be .93, which according to Nunnaly and Bernstein (1994) met the criteria of acceptability for reliability of an instrument. Reliability was conducted on each factor of the instrument. Cronbach’s Alpha was conducted on Factor 1 (Self Control), which yielded an alpha of .91, which Nunnaly and Bernstein (1994) indicated to be an appropriate level of reliability for instruments used in treatment effects research and for making clinical decisions for individuals. Inter-item correlations for Factor 1 ranged from .286 to .706 (see Table 7), with a mean correlation of .47, which adhered to Clark and Watson’s (1995) guideline of a range of .15 to .50 for inter-item correlations for scale and a moderate mean for inter-item correlation. It is generally accepted that Cronbach’s Alpha reliability coefficient for individual scales are lower than whole-instrument reliability due to the general relationship of instrument length and alpha values (Clark & Watson, 1995).
### Table 7

**Inter-item Correlations for CIRAA Factor 1: Self Control**

<table>
<thead>
<tr>
<th>Item</th>
<th>4</th>
<th>18</th>
<th>20</th>
<th>39</th>
<th>40</th>
<th>41</th>
<th>42</th>
<th>44</th>
<th>46</th>
<th>47</th>
<th>48</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>.578</td>
<td>.409</td>
<td>.308</td>
<td>.365</td>
<td>.427</td>
<td>.363</td>
<td>.357</td>
<td>.361</td>
<td>.422</td>
<td>.324</td>
<td>.404</td>
</tr>
<tr>
<td>4</td>
<td>.391</td>
<td>.383</td>
<td>.444</td>
<td>.418</td>
<td>.395</td>
<td>.419</td>
<td>.480</td>
<td>.467</td>
<td>.436</td>
<td>.460</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>.436</td>
<td>.437</td>
<td>.286</td>
<td>.375</td>
<td>.460</td>
<td>.409</td>
<td>.412</td>
<td>.332</td>
<td>.499</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>.600</td>
<td>.617</td>
<td>.471</td>
<td>.626</td>
<td>.401</td>
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<td>42</td>
<td>.569</td>
<td>.628</td>
<td>.373</td>
<td>.635</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>44</td>
<td>.468</td>
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<td>.632</td>
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<tr>
<td>46</td>
<td>.644</td>
<td>.512</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>.474</td>
</tr>
</tbody>
</table>

*Note. All coefficients were significant at $p < .01$. *

A Cronbach’s alpha on Factor 2: Interpersonal Relationships yielded an .86, which was a very good level of reliability for a factor (Hair et al., 2006). Additionally, inter-item correlations for Factor 2 ranged from .308 to .686 (see Table 8), and a mean inter-item correlation of .46, which met the criteria for inter-item correlations.
Table 8

*Inter-item Correlations for CIRAA Factor 2: Interpersonal Relationships*

<table>
<thead>
<tr>
<th>Item</th>
<th>7</th>
<th>8</th>
<th>11</th>
<th>28</th>
<th>30</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>.445</td>
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<td>.308</td>
<td>.378</td>
<td>.385</td>
<td>.661</td>
</tr>
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<td>7</td>
<td></td>
<td>.640</td>
<td>.389</td>
<td>.421</td>
<td>.402</td>
<td>.584</td>
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<td>.365</td>
<td>.412</td>
<td>.417</td>
<td>.686</td>
</tr>
<tr>
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<td></td>
<td>.424</td>
<td>.410</td>
<td>.451</td>
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<tr>
<td>30</td>
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<td></td>
<td></td>
<td></td>
<td>.457</td>
</tr>
</tbody>
</table>

Note. All coefficients were significant at $p < .01$.

Cronbach’s Alpha was conducted on Factor 3: Coping Skills, which yielded a .77. This alpha value did not meet the requirement for reliability of factor. However, inter-item correlations ranged from .174 from .614 (see Table 9), with a mean inter-item correlation of .349 meeting Clark and Watson’s (1995) guidelines.

Table 9

*Inter-item Correlations for CIRAA Factor 3: Coping Skills*

<table>
<thead>
<tr>
<th>Item</th>
<th>13</th>
<th>15</th>
<th>25</th>
<th>33</th>
<th>36</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>.416</td>
<td>.327</td>
<td>.270</td>
<td>.465</td>
<td>.299</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>.614</td>
<td>.419</td>
<td>.320</td>
<td>.174</td>
</tr>
<tr>
<td>15</td>
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<td>.268</td>
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<tr>
<td>25</td>
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<td></td>
<td>.373</td>
<td>.299</td>
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<tr>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.358</td>
</tr>
</tbody>
</table>

Note. All coefficients were significant at $p < .01$. 
Cronbach’s Alpha was conducted on Factor 4: Internal Locus of Evaluation which yielded a .72, exceeding the lower limit generally agreed upon for instrument development research (Bernstein & Nunnaly, 1994). Inter-item correlations for Factor 4 ranged from .197 to .569 (see Table 10), with the mean inter-item correlation of .369 indicating overall excellent factor reliability.

Table 10

*Inter-item Correlations for Factor 4: Internal Locus of Evaluation*

<table>
<thead>
<tr>
<th>Item</th>
<th>24</th>
<th>29</th>
<th>32</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
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<td>.275</td>
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<td>.278</td>
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<tr>
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</tr>
<tr>
<td>29</td>
<td></td>
<td>.569</td>
<td>.568</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td></td>
<td>.558</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* All coefficients were significant at $p < .01$.

**Concurrent Validity**

To further assess the validity of the CIRAA, concurrent validity studies were conducted to assess the correlations of the CIRAA total score with two instruments that are widely used in play therapy research: the PSI and the CBC (6-18).

Concurrent validity was conducted with a clinical sample of 80 parents whose children were referred for play therapy through an intervention study at local elementary schools, specifically correlating the CIRAA and the CBC (6-18). A Pearson’s $r$ correlation coefficient was conducted with the total score for the CIRAA and the Total Problems score for the CBC. There was a strong positive correlation between the two variables, $r = .75$, $n = 80$, $p < .0005$,
with high levels of undesirable behavior correlated with high levels of clinical behaviors on the Total Problems score of the CBC.

Concurrent validity was conducted with a clinical sample of 101 parents whose children were referred for play therapy through an intervention study in local elementary schools. A Pearson’s $r$ product moment correlation coefficient was conducted with the total score for the CIRAA and the Child Domain score for the PSI. The Child Domain score was chosen as the second variable in the concurrent validity study as opposed to the total score for the PSI. This was done because the PSI total score is calculated by adding the scores of the Child Domain and the Parent Domain. The Parent Domain contains items related to parenting issues, habits, and issues in the personal lives of parents. These items were not represented in the CIRAA. Thus, only the Child Domain was chosen as the target correlation variable, because the Child Domain items related to child behaviors that cause stress in the parent-child relationship. There was a medium positive correlation between the two variables $r = .74$, $n = 101$, $p < .005$, with high levels of undesirable behaviors on the CIRAA correlating with high levels of clinical stress on the Child Domain of the PSI.

**ROC Curve Analysis**

ROC curve analysis was conducted to determine the ability of the CIRAA to accurately identify children with clinical behavior problems (see Figure 2). ROC curves were conducted with both the PSI and CBC. An ROC Curve analysis was done on a sample of 80 parents. The criterion for assessing a child as possessing clinical symptoms was scores on the CBC in the clinical range (i.e., $t => 60$). The Area under the curve, or AUC, is generally considered to measure the discriminatory power of the instrument. In interpreting the ROC curve, the guideline of .75 AUC for minimum clinical utility was used (Fan, Upadhye, & Worster, 2006). The ROC
curve analysis yielded an AUC .886, with a confidence interval of .813 to .958 (which is depicted in Figure 2.), which fell within acceptable bounds for discriminatory power.

![ROC Curve](image)

Diagonal segments are produced by ties.

*Figure 2. CIRAA and CBC ROC curve analysis results.*

A clinical cutoff score on the CIRAA of 2.52 was determined with an ability to detect TP cases with an accuracy of 85% and an ability to detect TN cases with an accuracy of 72%. In other words, with a clinical cutoff score of 2.52, the CIRAA also identified children who were identified by the CBC with clinical behavior 85% of the time. The CIRAA detected children identified by the CBC as being in the normal range 72% of the time. See Table 11.
An ROC curve analysis was also conducted with a 101 sample of parents who completed the PSI and CIRAA (see Figure 3). For this analysis, the PSI child domain scores served as the criteria for positive clinical status. The AUC was calculated to be .863, with a 95% confidence interval of .791 to .934 (See Figure 3), and this AUC was determined to exceed the minimum values needed for clinical utility as outlined by Fan et al. (2006).
The results of the ROC curve analysis indicated that a clinical cutoff score of 2.55 captured the highest percentage of accurately identified TP cases and accurately identified TN cases. Using the clinical cutoff score of 2.55 provided the ability to accurately predict clinical cases with a rate of 87% and accurately predict normal cases with a rate of 72%. This meant the clinical cut off score of 2.55 was useful to identify children scoring in clinical ranges on the Child Domain of the PSI 87% of the time. Additionally, using the clinical cut-off score of 2.55, the CIRAA was useful to identify children scoring in the normal range of the PSI on the Child Domain 72% of the time. See Table 12.

Figure 3. CIRAA and PSI ROC Curve analysis results.
Table 12

*ROC Curve Analysis of CIRAA Using PSI Child Domain Scores as Criterion*

<table>
<thead>
<tr>
<th>Clinical Cutoff Scores</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.38</td>
<td>.91</td>
<td>.57</td>
</tr>
<tr>
<td>2.42</td>
<td>.89</td>
<td>.63</td>
</tr>
<tr>
<td>2.47</td>
<td>.89</td>
<td>.65</td>
</tr>
<tr>
<td>2.52</td>
<td>.87</td>
<td>.70</td>
</tr>
<tr>
<td>2.55</td>
<td>.87</td>
<td>.72</td>
</tr>
<tr>
<td>2.58</td>
<td>.85</td>
<td>.76</td>
</tr>
<tr>
<td>2.62</td>
<td>.85</td>
<td>.79</td>
</tr>
</tbody>
</table>

Because the ROC curve analysis indicated clinical cut-off scores of 2.52 using the CBC as the criterion for clinical behavior and 2.55 using the PSI Child Domain as the criterion for clinical behavior, it was reasonable to conclude the clinical cut-off score of 2.5 would be acceptable. Approximately 48.9% of the sample demonstrated scores in the clinical range according to the CIRAA, and 51.1% of the sample indicated scores in the normal range according to the CIRAA. Thus a score of 2.5 and above on the CIRAA constitutes a clinical score.

**Responsiveness to Change**

To measure the responsiveness of the CIRAA to change, paired sample t-tests were conducted on the sample receiving play therapy and tested before therapy began and at the conclusion of 16 sessions. The dependent t-tests were conducted on pretest and posttest measures.
of the CBC, PSI child domain, and CIRAA in an effort to test the ability of the CIRAA to measure change resulting from play therapy.

The $t$-tests results led to determining no statistically significant decrease occurred in CIRAA scores from pretest ($M = 2.69, SD = .45$) to posttest ($M = 2.59, SD = .55$), $t(14) = .915$, $p = .375, \eta^2 = .05$. The eta squared statistic (.05) indicated an overall small effect size. Due to no significance from the $t$-test results, the ability of the CIRAA to measure change as compared to other instruments typically used in play therapy research, specifically the CBC and PSI, was questioned.

A $t$-test was conducted with pretest and posttest PSI child domain scores which indicated a non-statistically significant decrease in PSI child domain scores from pretest ($M = 112.8, SD = 21.89$) to posttest ($M = 108.06, SD = 6.67$), $t(14) = .992, p = .338, \eta^2 = .06$. The eta squared statistic (.06) indicated an overall moderate effect size. A $t$-test was also conducted with pretest and posttest CBC total problems scores which indicated a non-statistically significant decrease from pretest ($M = 60.27, SD = 5.866$) to posttest ($M = 57.09, SD = 9.65$), $t(10) = 1.118, p = .290, \eta^2 = .11$. The eta squared statistic (.11) indicated an overall moderate effect size. The results indicated that the CIRAA measured change at an overall rate similar to both the PSI and the CBC.
CHAPTER 5
DISCUSSION

Evaluation of CIRAA as a New Instrument

The development of a mental health instrument requires rigorous analysis to determine its exact psychometric properties. In addition to psychometric properties, a well-developed instrument is expected to have a consistent theoretical basis and have some degree of clinical and research utility. I attempted to establish the Child Interpersonal Relationships and Attitude Assessment (CIRAA) as an instrument which was grounded in theory, including an interview with the target audience and two focus groups with CCPT professionals. The CIRAA underwent rigorous analysis to determine the psychometric properties, specifically reliability and validity. The following section discusses the implications of the results of the analysis CIRAA underwent for instrument development.

**Validity**

The CIRAA demonstrated overall reasonable validity. As part of rigorous content validity methodology, I consulted CCPT experts on two different occasions. In addition to focus groups with experts, I interviewed parents to provide a more rigorous approach to content validity. Vogt, King, and King (2004) stated that conducting interviews with the target population of the assessment increases the likelihood of items with greater content validity being developed, although researchers rarely engage in such interviews.

The CIRAA met factor analysis standards for a parsimonious factor structure with acceptable factor loadings and no loadings on multiple factors. In addition to the factor analysis validity, the instrument demonstrated concurrent validity through strong correlations with the CBC and the PSI, two instruments frequently used in play therapy research.
Reliability

The results of the reliability analysis of the instrument suggested reasonable reliability for both total problems and subscales. Cronbach’s Alpah was conducted for the total scale and each subscale. As well, inter-item correlation means and ranges were calculated for each subscale to determine unidimensionality of each factor. All of these analyses indicated reasonable levels of reliability for both the total score and subscales. Additionally, the CIRAA instrument’s total score internal consistency coefficients achieved the Nunnaly and Bernstein (1994) criteria for reliability standards for both treatment effect instruments and for making clinical decisions for individuals.

Generalizability of Sample

The data collected were drawn from a sample including five schools located in one local school district from one town in the Southwest United States. The STV ratio for the sample size (4:1) was adequate for instrument development. Additionally, it should be noted that the cultural make-up of the participants consisted primarily of Caucasian, Hispanic, and African-American individuals. Although the sample represented the three largest ethnicities reported in the U.S., it cannot be generalized to populations that do not match the demographics of the instrument development sample (e.g. the instrument might not have the same clinical utility for identifying clinical behaviors in Asian-American children, due to the fact that subjects that identified themselves as Asian-Americans approximately .01% of the sample).

Utility of the Instrument

The mean age for children included in this study sample was 6½ years old. This demographic finding supports greater utility for the instrument, due to meta-analytic findings that that the mean age for children in play therapy research is 6.5 years (Bratton et al., 2005).
However, further research is needed before the instrument scores can be confidently generalized to all ages within the 3 to 10 year old age range. It should be noted that the sample size \( n = 136 \) represented the largest sample used for building a play therapy assessment instrument to date. For typical instrument development research, sample sizes should not drop below 100 to maintain stable factor structure.

The CIRAA provides clinicians with valuable information to be used for clinical decision making. Unlike many assessments, the CIRAA is quick to administer with only 30 multiple choice items for parents to answer. The instrument does not require any specialized training beyond a master’s degree in a mental health discipline and training in statistics and test administration and interpretation, which is a standard set of qualifications for using mental health assessments. Furthermore, the instrument does not require detailed administration. Rather, the instrument is, in essence, self-administered by the parent. The clinical cutoff score also provides practitioners an easy method of assessing a child’s progress in therapy according to CCPT objectives.

In regard to the responsiveness to change analysis, data was collected form parents whose children participated in a separate concurrent study on play therapy (Meany-Walen, 2010). It should be noted that because the intervention was school-focused, not parent-focused, it was not unexpected that parents reported no change. The intervention was school-based, meaning that services were delivered on elementary school campuses during normal class times. The school-based interventions in the study also involved little to no contact with parents with the exception of initial informed consent. When considering the responsiveness to change analysis, it is also important to note that less than 50% of the assessment packets delivered were returned, lowering sample size and affecting outcome.
Subjective Observations of Development Process

In addition to quantitative data discussed in the above section, a great deal of data was gathered through qualitative observations during the instrument development process. I noted many important issues that arose during parent interviews and the focus groups conducted with CCPT experts. These observations contributed significantly to both item generation and the philosophy of the instrument.

Parent interviews

Initial interviews that were conducted with parents yielded responses from parents that were quite similar to objectives of CCPT. Parents reported changes that they viewed as significant that were related to the development of an internal locus of evaluation, self-direction in interpersonal relationships, and higher degree of self control at home and school. This report markedly contrasted with the research team’s expectations that parents would be more focused on behavioral elements such as aggression, ADHD behaviors, etc. Parent interviews for the development of the instrument were highly useful and correlated well with the theoretical foundation of the instrument. In the further iterations of this instrument and companion instruments, such methods need to be regarded as integral to the exploratory process.

Focus groups

Focus groups conducted with CCPT experts yielded interesting results. One overarching theme of the focus group was the desire to balance the number of negatively and positively keyed items. This result was interesting because assessments have generally focused on negative or undesirable behaviors with the goal being the identification of behaviors for which intervention can be used to eliminate or remediate. However, in keeping with the philosophy of a non-evaluative and child centered therapy, the clinicians had strong feelings about balancing the
overall tone of the items. This balance was consistent with the model of developing assessments provided by Springer et al. (2002) who described the assessment instrument as a conversation with parents. If an instrument were negatively worded, it could ostensibly engender a negative tone within the parent, coloring their approach to the assessment and their approach to interacting with their child.

In addition to concerns about negatively keyed items, the focus group was concerned about the number of behaviorally oriented items. It is the general focus of assessment instruments and the mental health field to be concerned with behaviors. With the increasing incorporation of the medical model into training of counselors, there is a focus on decreasing symptoms as quickly as possible. Over recent decades, counseling has shifted from a concentration on humanistic approaches and theories to a medical-model based, managed-care approach in which efficient symptom reduction is the focus. However CCPT, was based on the work of Carl Rogers, who led the humanistic movement in the human services field positing a vastly divergent approach to counseling. CCPT values the intrinsic process, the individualized approach, and understanding more than efficient symptom reduction. As a result, the focus group members provided feedback regarding the implementation of more items focusing on internal processes as opposed to behaviors.

**Broader Use of CIRAA**

The result of this exploratory study has produced an instrument that can be very helpful for CCPT practitioners and utilized as a measure of progress for many interventions aimed at children. Measurement of self control, coping skills, interpersonal relationships, and internal locus of evaluation can provide important information for mental health providers working from a variety of modalities. Indeed, parent and clinician concerns about a child’s ability to control
self, cope with emotionally stressful events, develop healthy interpersonal relationships, and develop an internal locus of evaluation represent issues important in the life of a child (Landreth, 2002). These issues are of great concern for the CCPT practitioner and for anyone who spends time with children personally or professionally.

Clinical vs. Non-Clinical

Based on a sample of 89 children in the clinical sample PSI child domain score, approximately 49% of the sample started the study at clinical levels of stress and approximately 51% of the sample started the study at non-clinical levels of stress. Based on a sample of 67 participants in the clinical sample that completed the CBC (6-18), approximately 49% scored in the clinical range and 51% scored in the normal range.

Furthermore, in the normal sample, for a sample of 13 who filled out the CBC, 100% of those children fell in the normal range for the CBC total problems scale. However, for the 14 parents in the normal sample who filled out the PSI, 35% scored their children in the clinical range. While it is common practice in assessment instrument development to obtain a sample that includes both a clinical and normative sample, the data garnered from such an approach often provides less than accurate data regarding the status of a subject as “clinical” or “normal” when compared with data gained from assessments.

Parent Report Instrument

One of the difficulties surrounding assessment instruments for children is the question of who to use as the respondent for assessment instruments. Children often lack the linguistic ability or cognitive skills to comprehend and complete assessments. However, when parents, teachers, and other important adults in a child’s life fill out assessment instruments, a certain degree of separation from the experience of the child exists. Adults filling out self-report forms
have relatively full access to their thoughts, feelings, memories, and perceptions of their behaviors. However, parents filling out instruments on their children are limited in their perceptions of the child’s observable behavior, and when asked about the child’s feelings they have only behavioral indicators to guide them. For instance, one item on the instrument asks parents, “my child becomes anxious over small matters.” A parent cannot actively feel the anxiety of the child as the child does; a parent can only observe the behavioral indicators that anxiety may be present in the child. A parent may notice a child asking the same questions several times, the expressions on the child’s face, and the child’s tone of voice for assessing the presence of anxiety, but they are still merely using behavioral cues to determine their child’s feelings.

In essence, the difficulty with such instruments is the use of observed variables to determine information about latent variables. Observed variables are the behaviors one person can observe about another person and are believed to be linked to underlying variables which cannot be directly observed. Such unobservable variables are called latent variables. While using observed variables to estimate presence of latent variables seems less than ideal, for this study of the CIRAA, the use of observed variables to measure latent variables provided the best available method of assessing attitudes, beliefs, emotional states, and inner processes of children.

While the focus of this study was developing a parent-report instrument, parents represent just one part of the child’s life, albeit an important one. A full assessment of a child needs to include information from multiple sources, and no inferences should be made based on this study that parents are the only adults in a child’s life whose perceptions are valued in the process of for clinical or research assessment purposes. Further directions in play therapy
assessment must include developing compatible instruments to be used in conjunction with the CIRAA and to provide a complete view of the child’s world.

Conclusions and Implications

The instrument meets psychometric reliability guidelines for both treatment effect research and individual clinical decision making. The instrument can be used to identify children who are in need of more therapy to address the issues contained in the CIRAA or who have progressed to a point in which termination might be appropriate. Additionally, the instrument can be used to identify children who might benefit from services. Another strength of the instrument is that it relies on parents’ observations. Most practitioners do not have the opportunity to observe a child outside of school or therapy sessions. By relying on the responses of the parents, this instrument can provide valuable information about the child’s attitudes and relationships outside of therapy sessions. This opportunity can allow a check on a therapist’s perceptions of the child to see if those perceptions are congruent with parental perceptions of the child’s at-home behavior. The instrument could be used by school-based mental health professionals who provide interventions. A school counselor or Licensed Specialist in School Psychology who provides social-skills training or group format guidance may use this instrument to determine if behaviors are being generalized to home and events outside of school.

Recommendations for Future Study

To make the instrument stronger, a larger sample with more strictly defined categories is required. The major ethnic and cultural groups were well represented in the current sample, but ages varied widely with some years of age being represented by only a few subjects. A STV ratio of 4:1 is quite acceptable. The ideal (and frequently unreached) STV ratio standard is 10:1. By performing the future studies with a sample size equal to or in excess of 300 useable participant
responses, demographics such as age, gender, and ethnic/cultural identity would be evenly distributed. A sample size of approximately 310 would provide a very stable factor structure and promote the generalizability of the instrument.

Another area for further research is the strengthening of the factor structure defined by exploratory factor analysis. Confirmatory factor analysis on an additional sample may provide supporting evidence of a theoretical grounding for a factor structure.

Other steps necessary for further strengthening the instrument include concurrent and divergent validity studies for both total score and subscale scores. Using previously established instruments will establish the instrument as equivalent to established standards. Ideally, the next step for the CIRAA is administering the instrument to multiple sites regionally and to do so in conjunction with additional instruments for concurrent and divergent validity. Analyses to measure concurrent and divergent validity should include confirmatory factor analysis using structural equation modeling and Pearson’s product moment correlation. Further confirmatory factor analysis should provide added strength and validity that the factor structure found in this study is indeed valid.

Limitations

As previously mentioned, generalizability is a problematic issue with newly developed instruments. Applying CIRAA to samples whose demographics do not match the development sample should be done with caution. While the CIRAA represents the three major ethnic groups, there are several ethnic groups which are not represented or poorly represented, and further study is needed before CIRAA can be confidently applied to such groups. The CIRAA also varies in the distribution of ages, and thus children at extreme ends of the age range for the CIRAA (e.g. 3 years old and 10 years old) should be approached with caution.
Another limitation is that while the instrument demonstrated similar responsiveness to CCPT intervention as the PSI and CBC, there is currently no data about the CIRAA’s responsiveness to intervention with approaches other than CCPT. To confidently apply the results of the CIRAA to other interventions or non-play based interventions, further study is needed.

A final limitation is the clinical cutoff score. ROC curve analysis, which was used to generate clinical cutoff scores, is sensitive to the population with which it was developed. Therefore, using clinical cutoff scores with samples that vary drastically from the instrument development sample is not advised. ROC curve analysis would need to be conducted again with a divergent sample before clinical cutoff scores could be used.

Conclusion

The CIRAA yielded overall reasonable psychometric properties for a newly developed instrument. The results of the analyses of the CIRAA indicate overall reasonable reliability, with acceptable overall Cronbach’s alpha scores for the total scale as well as each subscale. Attention was also paid to inter-item correlation ranges and means, to provide a more rigorous and complete approach to reliability analysis. The CIRRA demonstrated reasonable validity with face validity, content validity, construct validity, and concurrent validity. The CIRAA represents a new development in CCPT research. It is the first parent report assessment developed specifically for CCPT, with both clinical and research applications. The instrument was developed in such a way that it adheres to the philosophy and beliefs about children of CCPT and other humanistic approaches to counseling children. It is also important to note that CCPT is the predominant modality of play therapy among play therapists making the CIRAA useful to large segment of the play therapy community (Lambert, LeBlanc, Mullen, Ray, Baggerly, White,
The CIRAA provides both clinicians and researchers in the CCPT field with a new, viable, and efficient option for assessing progress in the CCPT in a philosophically consistent manner.
APPENDIX A

PARTICIPANT RECRUITMENT MATERIALS
Dear parents,

Thank you for agreeing to participate in the study, A Comparison of Child Centered Play Therapy and Adlerian Play Therapy. We are very excited that you have agreed to work with us this semester. We ask that you fill out some questionnaires about your child at the beginning of the survey. As a thank you, we will provide $10 in target gift cards once you have returned the questionnaires. Once you have filled out the attached questionnaires please return them to your school counselor.

Be sure to do the following:

1. Read the instructions for each questionnaire
2. Fill out every item for each questionnaire
3. Complete all three questionnaires
4. Return the envelope to the school counselor

If you have any questions please contact your school counselor or you can call Ryan Holliman at 940-565-2066 or email at ryan.holliman@unt.edu

Thanks,

Ryan Holliman
University of North Texas Counseling Program is Offering You a Great Opportunity!

If you are willing to fill out three brief surveys about your child (in grades K-4) we will award you $10.00. The forms will take you less than 30 minutes to complete and you can do it at home.

To take advantage of this opportunity simply (1) Provide your contact information to your school counselor or (2) Send an email to Ryan.Holliman@unt.edu to indicate your interest in participating in this study.

We will only be accepting the first 100 Parents who contact us, so please act now!
APPENDIX B
INSTITUTIONAL REVIEW BOARD INFORMED CONSENT DOCUMENTS
University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Title of Study: Development of the Play Therapy Assessment System

Principal Investigator: Ryan Holliman, a doctoral candidate in the Department of Counseling and Higher Education at the University of North Texas, is the primary investigator for this project.

Co-Investigator: Dr. Dee Ray, a faculty member in the University of North Texas (UNT) Department of Counseling and Higher Education

Purpose of the Study: You are being asked to participate in a research study which involves investigation of your perception of your child’s behaviors at home and school. The information gathered through this study will be used to develop a psychometric instrument.

Study Procedures: You will be asked to answer background questions such as age, race, gender, and relationship to the child, as well as questions about your experience of your child’s behavior. This should take about 20 minutes of your time.

Foreseeable Risks: There are no significant foreseeable risks to any participant, but the possibility exists that participants may experience discomfort during completing instruments, such as length of time to complete or acknowledgement of child behavior problems. Any instruments completed by the parent are considered confidential, meaning that the researchers will not reveal anything that is said or written during the administration process. However, if the parent discloses child abuse, neglect, exploitation or intent to harm another person, the therapist is required by law to report to the appropriate authority.

Benefits to the Subjects or Others: Although this study may not be of any direct benefit to you, this study is expected to benefit others by providing information to assist the researcher in measuring the effects of play therapy to better enable mental health professionals to meet the needs of parents who are experiencing difficulties with their children.

Procedures for Maintaining Confidentiality of Research Records: This researcher will take all necessary precautions to protect your confidentiality by coding your signed consent forms, your demographic information, and your responses, and maintaining them in separate locations. When the results of this study are presented, only general demographic information will be disclosed, and therefore, your confidentiality will be maintained.

Questions about the Study: If you have any questions about the study, you may contact Ryan Holliman at 940-565-2066 or email at ryan.holliman@unt.edu or Dr. Dee Ray, UNT Department of Counseling, Development, and Higher Education, at telephone number (940) 565-2066.
Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Mr. Hollimon has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of Participant

Signature of Participant Date

For the Principal Investigator:

I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Principal Investigator Date

APPROVED BY THE UNT IRB 7/5/07 TO 7/28/10
University of North Texas Institutional Review Board

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**Study Procedures:** You will be asked to answer background questions such as age, race, gender, and relationship to the child, as well as questions about your experience of your child’s behavior. This should take about 20 minutes of your time.

**Foreseeable Risks:** There are no significant foreseeable risks to any participant, but the possibility exists that participants may experience discomfort during completing instruments, such as length of time to complete or acknowledgement of child behavior problems. Any instruments completed by the parent are considered confidential, meaning that the researchers will not reveal anything that is said or written during the administration process. However, if the parent discloses child abuse, neglect, exploitation or intent to harm another person, the therapist is required by law to report to the appropriate authority.

**Benefits to the Subjects or Others:** Although this study may not be of any direct benefit to you, this study is expected to benefit others by providing information to assist the researcher in measuring the effects of play therapy to better enable mental health professionals to meet the needs of parents who are experiencing difficulties with their children.

**Procedures for Maintaining Confidentiality of Research Records:** This researcher will take all necessary precautions to protect your confidentiality by coding your signed consent forms, your demographic information, and your responses, and maintaining them in separate locations. When the results of this study are presented, only general demographic information will be disclosed, and therefore, your confidentiality will be maintained.

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1 of 2
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- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of Participant

Signature of Participant Date

For the Principal Investigator:

I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understands the explanation.

Signature of Principal Investigator Date

APPROVED BY THE UNT IRB

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APPENDIX C

CIRAA DRAFTS USED IN FOCUS GROUPS, PILOT TEST, MAIN STUDY, AND FINAL INSTRUMENT
Focus Group Version of CIRAA

Please read each statement carefully. For each statement please focus on the child you are concerned about, and circle the response which best represents your opinion.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My child destroys school property</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>My child hits other children</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>My child visits the principal’s office often for disciplinary reasons</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>My child is frequently off task during class</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>My child often receives reports of problem behavior from his/her teacher</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>My child often acts without thinking</td>
<td>SA</td>
<td>A</td>
<td>N</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>My child breaks his/her toys</td>
<td>SA</td>
<td>A</td>
<td>N</td>
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<td>8</td>
<td>My child hits/kicks me</td>
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<td>My child’s teacher often reports he/she talks during class</td>
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<td>My child has physical fights with other students at school</td>
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<td>My child goes over to other children’s houses to play</td>
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<td>19</td>
<td>My child has children over to his/her house to play</td>
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<td>21</td>
<td>My child plays with other children at recess</td>
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123
23. My child complains few people like him/her
SA A N D SD
1 2 3 4 5

24. My child participates in group activities at school
SA A N D SD
1 2 3 4 5

25. My child gets along with other children
SA A N D SD
1 2 3 4 5

26. My child displays jealously of other children
SA A N D SD
1 2 3 4 5

27. My child prefers being alone
SA A N D SD
1 2 3 4 5

28. My child prefers being with other children.
SA A N D SD
1 2 3 4 5

29. My child is anxious about being around other children
SA A N D SD
1 2 3 4 5

30. My child is excited to be around other children
SA A N D SD
1 2 3 4 5

31. My child is teased by other children
SA A N D SD
1 2 3 4 5

32. My child complains other children are mean to him/her
SA A N D SD
1 2 3 4 5

33. My child has been called a bully
SA A N D SD
1 2 3 4 5

34. My child apologizes for hurting others feelings
SA A N D SD
1 2 3 4 5

35. My child will admit when he/she was wrong
SA A N D SD
1 2 3 4 5

36. My child will do chores without being asked
SA A N D SD
1 2 3 4 5

37. My child blames others for mistakes
SA A N D SD
1 2 3 4 5

38. My child responds well to discipline
SA A N D SD
1 2 3 4 5

39. My child enjoys doing things for him/herself
SA A N D SD
1 2 3 4 5

40. My child often chooses what to do when playing with me
SA A N D SD
1 2 3 4 5

41. My child clings to me when he/she enters a new situation
SA A N D SD
1 2 3 4 5

42. My child does not like to make decisions for him/herself
SA A N D SD
1 2 3 4 5

43. My child prefers for their parent/sibling to speak for him/her, rather than speaking for him/herself
SA A N D SD
1 2 3 4 5

44. My child seem independent
SA A N D SD
1 2 3 4 5

45. My child often asks me to help them with things he/she are capable of doing.
SA A N D SD
1 2 3 4 5
46. My child shows me art projects he/she is proud of  
SA    A   N   D   SD  
1     2     3     4     5

47. My child tells me things he/she is proud of  
SA    A   N   D   SD  
1     2     3     4     5

48. My child is well-liked by others  
SA    A   N   D   SD  
1     2     3     4     5

49. My child likes him/herself  
SA    A   N   D   SD  
1     2     3     4     5

50. My child’s feelings are easily hurt  
SA    A   N   D   SD  
1     2     3     4     5

51. My child can name things he/she likes about him/herself  
SA    A   N   D   SD  
1     2     3     4     5

52. My child complains no one likes him/her  
SA    A   N   D   SD  
1     2     3     4     5

53. My child talks about accomplishments of which he/she is proud  
SA    A   N   D   SD

54. My child has difficulty calming down when upset  
SA    A   N   D   SD  
1     2     3     4     5

55. My child is often sad for prolonged periods of time  
SA    A   N   D   SD  
1     2     3     4     5

56. My child often seems to be inconsolable  
SA    A   N   D   SD  
1     2     3     4     5

57. My child is often upset by minor things  
SA    A   N   D   SD  
1     2     3     4     5

58. My child is very dependent on me  
SA    A   N   D   SD  
1     2     3     4     5

59. When my child cries, it is often for a long time  
SA    A   N   D   SD  
1     2     3     4     5

60. My child seems to worry a lot  
SA    A   N   D   SD  
1     2     3     4     5

61. My child becomes anxious over small matters  
SA    A   N   D   SD  
1     2     3     4     5
CIRAA Pilot Study Administration

Respondent’s Name: ____________________  Child’s Name: ____________________  D.O.B.: __________  Age: _______
Grade: _______
Ethnicity of Child: ____________________  Date filled out: _______

Directions: Please read each statement about your child carefully. Please circle a response for each item indicating the degree to which you agree or disagree with the statement.

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<thead>
<tr>
<th></th>
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<th>SD=Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>My child shares with other children</td>
<td>1 2 3 4 5</td>
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<tr>
<td>2.</td>
<td>My child is invited to social events by other children</td>
<td>1 2 3 4 5</td>
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<tr>
<td>3.</td>
<td>My child plays with other children at recess.</td>
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<td>4.</td>
<td>My child complains few people like him/her</td>
<td>1 2 3 4 5</td>
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<tr>
<td>5.</td>
<td>My child gets along well with others when doing group projects at school.</td>
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<td>6.</td>
<td>My child gets along with other children</td>
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<td>7.</td>
<td>My child displays jealously of other children</td>
<td>1 2 3 4 5</td>
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<td>8.</td>
<td>My child is anxious about being around other children</td>
<td>1 2 3 4 5</td>
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<tr>
<td>9.</td>
<td>My child is teased by other children</td>
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<td>10.</td>
<td>My child complains other children are mean to him/her</td>
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<td>My child teases other children.</td>
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<tr>
<td>12.</td>
<td>My child can calm down when upset</td>
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<td>13.</td>
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<td>My child often seems to be inconsolable</td>
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<td>15.</td>
<td>My child is often upset by minor things</td>
<td>1 2 3 4 5</td>
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<td>16.</td>
<td>When my child cries, it is often for a long time</td>
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<td>17.</td>
<td>My child becomes anxious over small matters.</td>
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<td>18.</td>
<td>My child handles difficult situations well</td>
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<td>19.</td>
<td>My child enjoys trying new things.</td>
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<td>20.</td>
<td>My child apologizes for hurting others feelings</td>
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</tbody>
</table>
21. My child will admit when he/she was wrong
SA A N D SD
1 2 3 4 5

22. My child blames others for mistakes
SA A N D SD
1 2 3 4 5

23. My child responds well to discipline
SA A N D SD
1 2 3 4 5

24. My child enjoys doing things for him/herself
SA A N D SD
1 2 3 4 5

25. My child often chooses what to do when we are together.
SA A N D SD
1 2 3 4 5

26. My child is confident
SA A N D SD
1 2 3 4 5

27. My child volunteers to help out around the house.
SA A N D SD
1 2 3 4 5

28. For his/her age, my child is able to enter new situations with confidence.
SA A N D SD
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29. My child does not like to make decisions for himself/herself
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30. My child often asks me to help him/her with things he/she are capable of doing.
SA A N D SD
1 2 3 4 5

31. My child often compares him/herself unfavorably to others.
SA A N D SD
1 2 3 4 5

32. My child shows me projects he/she is proud of
SA A N D SD
1 2 3 4 5

33. My child is overly sensitive
SA A N D SD
1 2 3 4 5

34. My child is satisfied more often than not
SA A N D SD
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35. My child tells me things he/she is proud of
SA A N D SD
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36. My child is able to express his/her feelings when he/she is feeling upset.
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37. My child likes him/herself
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39. My child can name things he/she likes about him/her self
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40. My child complains no one likes him/her.
SA A N D SD
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41. My child talks about accomplishments of which he/she is proud
SA A N D SD
1 2 3 4 5

42. My child exhibits self-control.
SA A N D SD
1 2 3 4 5

43. My child often receives reports of disruptive behavior from his/her teacher
SA A N D SD
1 2 3 4 5
44. My child often acts without thinking  
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1 2 3 4 5  
45. My child hits/kicks family members  
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46. My child has temper tantrums  
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48. My child expresses his anger without hurting others.  
SA A N D SD  
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49. My child has physical fights with other children.  
SA A N D SD  
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50. My child has verbal fights with other students at school.  
SA A N D SD  
1 2 3 4 5  
51. My child responds to parent discipline obediently.  
SA A N D SD  
1 2 3 4 5  
52. My child disrupts family events/outings  
SA A N D SD  
1 2 3 4 5
CIRAA Main Study Administration

Respondent's Name: ____________________
Child's Name: ________________________
D.O.B.: ___________  Age: ________
Grade: ____________
Ethnicity of Child: _____________
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SA A N D SD
1 2 3 4 5

42. My child hits/kicks family members
SA A N D SD
1 2 3 4 5

43. My child has temper tantrums
SA A N D SD
1 2 3 4 5

44. My child yells frequently
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45. My child expresses his anger without hurting others.

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46. My child has physical fights with other children.

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47. My child has verbal fights with other students at school.

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48. My child disrupts family events/outing

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Responses:

Respondent's Name: ____________  Child's Name: ____________  D.O.B.: ________  Age: ________
Grade: ________
Ethnicity of Child: ____________  Date filled out: ________

Directions: Please read each statement about your child carefully. Please circle a response for each item indicating the degree to which you agree or disagree with the statement.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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|SA| A| N| D| SD|
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1. My child shares with other children
2. My child gets along with other children
3. My child complains few people like him/her
4. My child is teased by other children
5. My child can calm down when upset
6. My child is often sad for prolonged periods of time
7. My child is often upset by minor things
8. My child is often sad for prolonged periods of time
9. My child is often upset by minor things
10. My child is often sad for prolonged periods of time
11. My child is often sad for prolonged periods of time
12. My child is often sad for prolonged periods of time
13. My child is often sad for prolonged periods of time
14. My child is often sad for prolonged periods of time
15. My child is often sad for prolonged periods of time
16. My child is often sad for prolonged periods of time
17. My child is often sad for prolonged periods of time
18. My child apologizes for hurting others feelings
19. My child blame others for mistakes
20. My child enjoys doing things for him/herself
21. My child volunteers to help out around the house.
22. For his/her age, my child is able to enter new situations with confidence.
23. My child often compares him/herself unfavorably to others.
24. My child shows me projects he/she is proud of
25. My child tell me things he/she is proud of
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<td>33. My child is able to express his/her feelings when he/she is feeling upset.</td>
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| 36. My child can name things he/she likes about him/her self |   |   |   |   |   |
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| 1  | 2 | 3 | 4 | 5 |   |

| 37. My child complains no one likes him/her. |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 38. My child talks about accomplishments of which he/she is proud |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 40. My child often receives reports of disruptive behavior from his/her teacher |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 41. My child often acts without thinking |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 42. My child hits/kicks family members |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 43. My child yells frequently |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 44. My child has physical fights with other children. |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 45. My child has verbal fights with other students at school. |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |

| 46. My child disrupts family events/outings |   |   |   |   |   |
| SA | A | N | D | SD |   |
| 1  | 2 | 3 | 4 | 5 |   |
REFERENCES


